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**Giulia Mancini-Mezzacappa**



# Psychiatry

PreTest® Self-Assessment and Review

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**Psychiatry**  
PreTest® Self-Assessment and Review  
Ninth Edition

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# INTRODUCTION

*Psychiatry: PreTest® Self-Assessment and Review*, Ninth Edition, has been designed to provide medical students, psychiatric residents, psychiatrists, mental health professionals, and international medical graduates with a comprehensive and convenient instrument for self-assessment and review. The 500 questions provided have been designed to parallel the topics, format, and degree of difficulty of the questions contained in the United States Medical Licensing Examination (USMLE) Step 1.

Each question in the book is accompanied by an answer, a paragraph explanation, and a specific page reference to a standard textbook or other major resource. These books have been carefully selected for their educational excellence and ready availability in most libraries. A bibliography that lists all the sources used in the book follows the last chapter. Diagnostic nomenclature is that of the fourth edition of *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV).

One effective way to use this book is to allow yourself one minute to answer each question in a given chapter and to mark your answer beside the question. By following this suggestion, you will be training yourself for the time limits commonly imposed by examinations.

Since there are few absolutes in clinical practice, remember to simply choose the best possible answer. There are no “trick” questions intended. Rather, each question has been designed to address a significant topic. Some important topics are deliberately duplicated in other sections of the book when this is deemed helpful. All questions apply to the treatment of adults unless otherwise indicated.

When you have finished answering the questions in a chapter, you should then spend as much time as you need to verify your answers and to absorb the explanations. Although you should pay special attention to the explanations for the questions you answered incorrectly, you should read every explanation. Each explanation is designed to reinforce and supplement the information tested by the question. When you identify a gap in your fund of knowledge, or if you simply need more information about a topic, you should consult and study the references indicated.

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# EVALUATION, ASSESSMENT, AND DIAGNOSIS

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## Questions

**DIRECTIONS:** Each item below contains a question or incomplete statement followed by suggested responses. Select the **one best** response to each question.

- 1.** A 62-year-old female with a chronic psychiatric disorder claims that the comments of a well-known news anchorman have a special meaning that only she understands. She is convinced that when he reports on local events he is really trying to persuade her to start a “sinful relationship.” This is an example of
- a. A visual hallucination
  - b. An illusion
  - c. A delusion of persecution
  - d. A delusion of reference
  - e. Concrete thinking
- 2.** A medical student finds it hard to follow a patient’s train of thought because he gives very long, complicated explanations and many unnecessary details before finally answering the original questions. In his report, the medical student writes that the patient displayed
- a. Loose associations
  - b. Circumstantiality
  - c. Goal-oriented thought processes
  - d. Perseveration
  - e. Flight of ideas
- 3.** A delusion can best be defined as
- a. A false belief that meets specific psychological needs
  - b. A perceptual misrepresentation of a sensory image
  - c. A perceptual representation of a sound or an image not actually present
  - d. A viewpoint able to be changed when convincing evidence to the contrary is presented
  - e. A dissociative reaction

**4.** In psychiatry, the electroencephalogram (EEG) can be helpful in the diagnosis of

- a. Intermittent explosive disorder
- b. Panic disorder
- c. Bipolar disorder
- d. Social phobia
- e. Frotteurism

**5.** A 7-year-old girl hospitalized for tonsillectomy awakens in the middle of the night and cries out that a “big bear” is in her room. She is relieved when a nurse turns on the light revealing that the bear was an armchair covered with a coat. This experience is an example of

- a. A delusion
- b. A hallucination
- c. An illusion
- d. A projection
- e. A dissociative reaction

**Items 6–7**

A 3-year-old girl is clumsy and poorly coordinated. Her language is impaired and she wrings her hands constantly. Her head is small in comparison with the rest of her body.

**6.** The most likely diagnosis is

- a. Asperger’s disorder
- b. Down syndrome
- c. Congenital rubella
- d. Rett’s disorder
- e. Childhood disintegrative disorder

**7.** In the *DSM-IV* this disorder is listed under

- a. Pervasive developmental disorders
- b. Mental retardation
- c. Psychotic disorders
- d. Communication disorders
- e. Learning disorders

**8.** A consult is requested for a 75-year-old female who underwent hip repair two days earlier, because the nurses noted that from time to time the patient “was not making any sense.” The psychiatric resident conducting the evaluation observes that the patient believes she is a young girl, still living at home with her parents. She believes the resident is her deceased father. These statements are manifestations of impaired

- a. Concentration
- b. Memory
- c. Thought associations
- d. Orientation
- e. Level of consciousness

**9.** A 47-year-old secretary has lost her job because, due to her perfectionism and excessive attention to trivial details, she could never finish an assignment on time. She writes innumerable lists of things to be done and follows rules scrupulously. She consistently annoys friends and family members with her lack of flexibility and her pedantic remarks. Her diagnosis is likely to be

- a. Obsessive-compulsive disorder
- b. Paranoid personality disorder
- c. Obsessive-compulsive personality disorder
- d. Narcissistic personality disorder
- e. Passive-aggressive personality disorder

**10.** An adult whose IQ score falls in the moderate range of mental retardation (IQ level 35–40 to 50–55) is expected to function at

- a. Seventh to ninth grade level
- b. Third to sixth grade level
- c. Preschool to second grade level
- d. 1 to 3-years-old level
- e. 18-months-old level

**11.** An 18-year-old woman, previously in good health, seeks help at an emergency room for light-headedness, headaches, and nausea. She appears anxious and is tremulous, sweating, and breathing heavily. These symptoms appeared suddenly 20 minutes before her arrival at the ER. While waiting to see a physician, she begins to complain of tingling around her mouth and in her fingertips. The physician should first

- a. Ask her to breathe into a paper bag
- b. Order immediate intravenous infusion of 50 ml of 50% glucose solution
- c. Arrange for a brain scan
- d. Conduct an amobarbital interview
- e. Draw a blood sample to evaluate blood alcohol concentration

### Items 12–13

A 25-year-old man's teaching career has been abruptly terminated by a psychiatric illness. During a psychiatric evaluation he is asked the meaning of the proverb "People in glass houses should not throw stones." The patient replies, "They will break the windows."

**12.** This response is an example of

- a. Idiosyncratic thinking
- b. Concrete thinking
- c. Formal operation
- d. Loose associations
- e. Autistic thinking

**13.** This patient diagnosis is likely to be

- a. Dysthymia
- b. Conversion disorder
- c. Communication disorder
- d. Passive-aggressive personality disorder
- e. Schizophrenia

**14.** A 69-year-old man is suspected of having an acute onset of multiple small cerebral infarcts. The finding on a mental status examination that would be most supportive of this diagnosis is

- a. A decline in cognitive functioning
- b. Bizarre and idiosyncratic proverb interpretation
- c. An elated affect
- d. Loose associations
- e. Catatonic posturing

**15.** A 75-year-old African American male becomes profoundly depressed after his son dies in a car crash and he tells his doctor that he wants to “join Steve in Heaven.” Choose the correct statement about suicide:

- a. People who talk about their death wishes rarely kill themselves
- b. Widowers have a higher incidence of suicide than divorced people
- c. Whites are more likely to kill themselves than African Americans
- d. Women have a higher risk for completed suicide than males
- e. Elderly patients rarely commit suicide due to their stronger religious beliefs

**16.** A therapist considers administering the Minnesota Multiphasic Personality Inventory (MMPI) to a chronically depressed patient who does not seem to respond to treatment as well as expected. The MMPI is commonly used to

- a. Explore the patient’s unconscious thoughts and emotions
- b. Measure the patient’s intelligence
- c. Monitor severity of depressive symptoms
- d. Arrive at a definite diagnosis in ambiguous cases
- e. Better understand the patient’s beliefs, expectations, and emotional status

**17.** During a psychoeducational evaluation, a school psychologist shows a child a series of ambiguous pictures and asks her to make up stories about them. This projective test is called

- a. Children Depression Inventory (CDI)
- b. Rorschach Inkblot Test
- c. Thematic Apperception Test (TAT)
- d. Personality Inventory for Children (PIC)
- e. Wechsler Intelligence Scale for Children III (WISC-III)

**Items 18–19**

A patient has been standing, immobile, for several hours. One of his arms is stretched upward, the other is wrapped around the patient's neck. The patient does not appear aware of his surroundings and actively resists any attempt to make him change position.

**18.** This is an example of

- a. Apraxia
- b. Dystonia
- c. Synesthesia
- d. Catatonia
- e. Trance

**19.** This symptom is usually seen in patients with

- a. Schizophrenia
- b. Parkinson's disease
- c. Delirium
- d. Neuroleptic malignant syndrome
- e. Huntington's disease

**20.** A psychiatrist finds himself annoyed with a quarrelsome patient for no apparent reason. Later on he realizes that the patient reminds him of his disliked sibling. This is an example of

- a. Reaction formation
- b. Projection
- c. Countertransference
- d. Identification with the aggressor
- e. Illusion

**21.** A person is sitting alone and behaving as if listening intently, then suddenly begins to nod and mutter aloud. This person most likely is experiencing

- a. A delusion
- b. A depersonalization episode
- c. An hallucination
- d. An idea of reference
- e. Flight of ideas

**22.** The capacity to formulate concepts and generalize them is called

- a. Concrete thinking
- b. Abstract thinking
- c. Delusional thinking
- d. Intellectualization
- e. Rationalization

**23.** A 28-year-old man is brought to the ER of a local hospital by the police, who found him wandering without a coat in subzero weather, muttering about being persecuted by a secret organization. During the evaluation he is disorganized, distractible, and from time to time dozes off in the middle of a sentence. Family members deny previous psychiatric or substance abuse history, but they add that lately the patient had complained of fatigue and increased thirst. The toxic screen is negative and glucose level is 450 mg/dL. Choose the most likely diagnosis:

- a. Delirium
- b. Psychotic depression
- c. Brief psychotic episode
- d. Paranoid schizophrenia
- e. Dementia

**DIRECTIONS:** Each group of questions below consists of lettered options followed by numbered items. For each numbered item, select **one** lettered option. The lettered options may be used once, more than once, or not at all.

**Items 24–27**

Match the following vignettes with the most useful diagnostic test.

- a. EEG
- b. ECG
- c. Liver function tests
- d. Dexamethasone Suppression Test (DST)
- e. MRI
- f. Serum amylase
- g. CD4 count

**24.** A 35-year-old postal worker has been getting lost in familiar places he has known for years. He has been moody and irritable and “irrational.” His family members have noticed that he “makes bad decisions.” His 42-year-old sister is in a hospice, due to a chronic neurodegenerative disorder. His father died 10 years earlier, due to the same condition.

**25.** A 55-year-old female, through her tears, complains of having no energy and no desire for anything. Her hair is unkempt, her clothes mismatched. She has lost 20 pounds in the past two months and she wakes up every morning at 3 A.M. Her daughter reports that her mother was functioning well three months earlier.

**26.** A 23-year-old male is hospitalized for a fever of unknown origin and persistent cough. During the past two months he has been increasingly forgetful and “disorganized.” He stated having difficulties in balancing his checkbook and driving without getting lost. During the physical exam, the medical resident notices track marks on his arm.

**27.** During a period of severe marital discord, a young woman starts having episodes characterized by an altered state of consciousness, falling, rhythmic muscle contractions, and vocalizations (moaning, cries). These episodes last from 5 to 20 minutes and always take place in her husband’s presence, often in the middle of or after an argument. At the end of the episodes the patient is fully alert and oriented.

**Items 28–32**

Match the symptoms with the most appropriate diagnosis.

- a. Conversion disorder
- b. Specific phobia
- c. Agoraphobia
- d. Narcissistic personality disorder
- e. Body dysmorphic disorder
- f. Schizophrenia
- g. Borderline personality disorder
- h. Dissociative amnesia

**28.** A young woman presents to the emergency room for the third time in two months with multiple self-inflicted cuts on her arms and legs. The resident on call cleans and bandages her wounds and listens patiently while she bitterly complains about her therapist, her psychiatrist, and her family. On her way out, the patient tells the resident that he is the best doctor she has ever met and the only one who really understands her pain.

**29.** A young housewife is convinced that her mild acne is disfiguring. She has spent hundreds of dollars on skin products and dermatological consultations. She also underwent three dermo-abrasions but she still believes she looks like “a monster.”

**30.** A 50-year-old woman is trapped for hours in an elevator during a blackout. She has no memory of the hours she spent in the elevator.

**31.** The career of a young executive who needs to travel often for his business is much impaired because, due to his overwhelming fear of flying, he refuses all the jobs that require traveling by plane.

**32.** A young woman who has ambivalent feelings about separating from her family wakes up paralyzed on the morning she is scheduled to go back to college.

**Items 33–36**

Match each definition with the correct term.

- a. Prevalence
- b. Incidence
- c. Validity
- d. Primary prevention
- e. Secondary prevention
- f. Tertiary prevention

**33.** Early case finding and treatment to minimize duration of illness and to prevent permanent disability

**34.** The proportion of a population affected by a disorder at a given time

**35.** The proportion of a population that becomes affected by a disorder for the first time in a given period of time

**36.** Attempting to discover and eliminate the causes of mental illness

**Items 37–40**

Match each patient with the correct symptom.

- a. Mood disturbance
- b. Affect disturbance
- c. Disorientation
- d. Circumstantiality
- e. Tangentiality
- f. Perseveration
- g. Blocking

**37.** A 29-year-old patient describes witnessing a terrible plane crash that involved many victims and smiles and chuckles while telling the story.

**38.** An adolescent patient responds to the examiner's question with the same response he has given to a variety of previous questions.

**39.** A 75-year-old man is asked a question and gives a long answer that incorporates a great deal of tedious and unnecessary details.

**40.** A 45-year-old male with a chronic psychiatric disorder suddenly seems to forget what he wants to say, in the middle of a sentence.

**Items 41–44**

Match each definition with the correct term.

- a. Magical thinking
- b. Obsession
- c. Looseness of associations
- d. Echolalia
- e. Depersonalization
- f. Compulsion
- g. Nihilism
- h. Derealization

**41.** When asked where he lives, a patient replies with, "House, mouse, you will pay for that! I know who you are. . . . Come, come to me, little bird, little flower. . . . Stop it right now!"

**42.** A patient in a state hospital is convinced that she has caused the earthquake that flattened her hometown because she was wishing for a reason not to go visit her parents.

**43.** A 24-year-old man confides to his physician that for several weeks he has not been able to stop worrying about germs. As much as he tries, he cannot avoid the thought that everything he touches is contaminated.

**44.** A patient insists that the whole world has ceased to exist.

**Items 45–47**

Match each pertinent clinical information with the axis where it should be recorded.

- a. I
- b. II
- c. III
- d. IV
- e. V

**45.** A patient suddenly develops episodes of acute, intense anxiety, accompanied by increased blood pressure, palpitations, and sweating. Three months later he is discovered to have a pheochromocytoma. On which axis is the pheochromocytoma recorded?

**46.** A 40-year-old unmarried accountant who just underwent surgery has managed to irritate the whole medical team because he is suspicious and untrusting. He interprets every physical discomfort as the proof that “something went wrong and nobody is telling me.” He has threatened multiple times to sue the hospital. His sister tells the resident who is conducting the evaluation that “My brother has been like that all his life.”

**47.** The change in level of function of a 46-year-old college professor, who, during the past six weeks, has not been able to go to work and spends his days in front of the TV, unwashed and unshaven, due to severe depression.

# EVALUATION, ASSESSMENT, AND DIAGNOSIS

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## Answers

**1. The answer is d.** (*DSM-IV [see under American Psychiatric Association in Bibliography], p 765; Sadock, 7/e, p 682.*) A delusion of reference refers to events, objects, or persons in one's environment that are believed to have particular personal significance. A persecutory delusion refers to the belief that other people or malevolent entities intend to harm the individual. As in all delusions, the beliefs are unshakable. Hallucinations and illusions are perceptual disturbances, the former lacking any real basis, the latter being misinterpretations of actual stimuli. Concrete thinking refers to a cognitive style of processing that utilizes only information related to actual objects and events and is devoid of abstractions.

**2. The answer is b.** (*Sadock, 7/e, p 680.*) Circumstantial thought processes are characterized by the communication of unnecessary details before finally arriving at the central idea. Goal-oriented thought processes communicate the central idea in a clear, concise, logical manner. Flight of ideas is one form of loosening of associations, each of which involves greater or lesser degrees of loss of the logical progression of thoughts. Flight of ideas in particular is manifested by a rapid succession of unrelated or fragmentary thoughts. Perseveration involves the persistent repetition of words or ideas.

**3. The answer is a.** (*Sadock, 7/e, p 681.*) A delusion is a false belief that is not supported by fact and cannot be challenged successfully by logic or reason. A false belief is not considered a delusion if it is shared by other members of the person's own cultural or social group. False beliefs that can change in the face of strong evidence are called overvalued ideas.

**4. The answer is a.** (*Hales, 3/e, pp 292–293, 776, 1416.*) Intermittent explosive disorder is characterized by discrete episodes of aggression and destructiveness that are out of proportion with the precipitant stressor. EEG may help to clarify the diagnosis, since 55% of patients have EEG abnor-

malities as well as learning disabilities, a history of attention deficit hyperactivity disorder (ADHD), and abnormal neuropsychological test results. EEG may also be helpful in diagnosing the rare cases of violence that occur during or after a complex partial seizure and specific types of delirium and dementing disorders (for example, Creutzfeldt-Jakob dementia and delirium induced by hepatic encephalopathy are both associated with very specific EEG patterns). Frotteurism (a paraphilia), panic disorder, social phobia, and bipolar disorder are not associated with EEG changes.

**5. The answer is c.** (*Hales, 3/e, p 218.*) An illusion is a misinterpretation of a real sensory stimulus. Illusions are common even in individuals free of psychiatric disorders and their content often is affected by the person's state of mind, wishes, and fears. For example, the child described in the vignette probably took the armchair for a bear because she was frightened to be in the hospital. Systemic diseases associated with confusion (certain types of poisoning, for instance) also can produce misperceptions of sensory images by interfering with proper functioning of the brain.

**6–7. The answers are 6-d, 7-a.** (*DSM IV, p 71.*) Patients diagnosed with Rett's disorder have normal prenatal and postnatal development but, between ages 5 to 30 months, they begin to lose previously acquired purposeful hand skills and develop stereotyped hand movements (hand wringing or hand washing) and poorly coordinated gait or trunk movements. These patients have severe to profound mental retardation and have severe receptive and expressive language deficits. They also lose all the interest they had in social interaction. Characteristically, head circumference is normal at birth, but between 5 months and 4 years of age the rate of the head growth decelerates rapidly. Rett's disorder has been described only in females and is very rare.

Rett's disorder is one of the pervasive developmental disorders, with autistic disorder, Asperger's disorder, and childhood disintegrative disorder (a catastrophic deterioration of cognitive functions, social awareness, and adaptive behavior that starts after two years of normal development).

**8. The answer is d.** (*Sadock, 7/e, p 685.*) Orientation refers to the state of awareness of the individual as to the time and place, and to the awareness of the identity of oneself and others in the environment. The waxing and waning of the patient's orientation, a hallmark of organic mental disturbances, is also evident in the nursing report that led to the consultation request.

**9. The answer is c.** (*DSM IV, pp 669–673.*) The essential feature of obsessive personality disorder is a preoccupation with perfection, orderliness, and control. Individuals with this disorder lose the main point of an activity and miss deadlines because they pay too much attention to rules and details and are not satisfied with anything less than “perfection.” As in other personality disorders, symptoms are ego-syntonic and create considerable interpersonal, social, and occupational difficulties. Obsessive-compulsive disorder is differentiated from obsessive-compulsive personality disorder by the presence of obsessions and compulsions. Paranoid personality disorder is characterized by suspiciousness and distrust of others. Individuals with narcissistic personality disorder are preoccupied with perfection, but usually they are convinced of having already reached it. Individuals with obsessive-compulsive personality disorder, instead, are rarely satisfied with themselves. Passive-aggressive personality disorder is characterized by a passive resistance to perform in occupational and social settings, manifested by forgetfulness, procrastination, and intentional lack of efficiency.

**10. The answer is c.** (*Yudofsky, 3/e, p 916.*) Adults whose IQ scores fall in the range of 35–55 are considered to exhibit moderate mental retardation. These individuals can learn to manage some aspects of daily living such as the basics of self-care or making small change. They usually require life-long custodial supervision.

**11. The answer is a.** (*Hales, 3/e, p 573.*) The symptoms experienced by the woman described in the vignette are classical symptoms of hyperventilation, which commonly is associated with panic disorder and other anxiety states. Hyperventilation causes a drop in blood CO<sub>2</sub> and alkalosis, which in turn causes a decrease of the ionized fraction of the serum’s calcium and constriction of the cerebral vessels. Dizziness, light-headedness, and feelings of derealization follow the cerebral hypoxia. The lower ionized calcium level causes signs of tetany, such as painful muscle spasms in the hands, perioral tingling, and paresthesias. Breathing into a paper bag reverses the symptoms because the recycled air has a higher concentration of carbon dioxide than does normal air.

**12–13. The answers are 12-b, 13-e.** (*Sadock, 7/e, p 680.*) Patients who present with concrete thinking have lost the ability to form abstract concepts, such as metaphors, and focus instead on actual things and facts.

Concrete thinking is the norm in children and is seen in cognitive disorders (mental retardation, dementia) and schizophrenia.

**14. The answer is a.** (*Yudofsky, 3/e, pp 842–843.*) Multiple cerebral infarcts cause a progressive dementia, focal neurological signs, and, often, neuropsychiatric symptoms, such as depression, mood lability (but not usually elated mood), and delusions. Loose associations, catatonic posturing, and bizarre proverb interpretations are typical symptoms of schizophrenia.

**15. The answer is c.** (*Hales, 3/e, p 1384.*) Males have a higher risk for completed suicide than females and people over 45 are at higher risk than younger people. Among the ethnic groups, Caucasians have the highest risk, followed by Native Americans, African Americans, Hispanics, and Asians. People who live with others or are married are less at risk of committing suicide than people who live alone. Divorced people have a higher risk than widows and widowers and singles. Good health lowers the risk for suicide and poor health increases it. People who commit suicide usually talk about their intent with others before going ahead with their plans.

**16. The answer is e.** (*Sadock, 7/e, pp 689–732.*) Three instruments are used to assess patients' functioning: psychological tests, rating scales, and structured interviews. Psychological tests use questions or statements the patients have to agree or disagree with, or similar sampling methods, to obtain more information about individuals' cognitive functions, emotional status, expectations, beliefs, and many other areas that are significant in psychiatry. Answers are standardized to assure reliability. Psychological tests are helpful tools, because they can provide understanding of personality traits, symptoms, and cognitive deficits not readily accessible during an unstructured evaluation, but a diagnosis should not be made only on the basis of test results. Commonly used psychological tests are the Wechsler Adult Intelligence Scale (WAIS), the Minnesota Multiphasic Personality Inventory (MMPI), and projective tests such as the Rorschach Inkblot Test. Rating scales are standardized devices which allow an observer to rate the patient's behavior in specific areas. An example is the Child Behavioral Checklist (CBCL), usually filled by parents and teachers. In semistructured interviews, questions are predetermined and responses are formulated in a way that permits standardization (Yes/No, Not at all/Sometimes/Always, and so on).

The Minnesota Multiphasic Personality Inventory (MMPI) and the MMPI-2 (a revised version) are among the most used psychological tests. They are called personality tests because they provide information about the patient's characterological traits in addition to information concerning the patient's symptoms. The MMPI consists of a 566-item checklist in a true/false format, to be completed by the patient usually in one to two hours' time. The questions are worded so that a person with an elementary education would not have difficulties understanding them and are constructed to explore the presence or absence of emotions, experiences, and thoughts. The items are divided in groups, each intended to provide information in one of nine clinical scales: hypochondriasis, depression, hysteria, psychopathic deviance, masculinity-femininity, paranoia, psychoasthenia, schizophrenia, and mania. The patient's responses are computer scored and the patient's "profile" (personality) depends on the score in each scale. For example, a patient with a high score in the schizophrenia scale will typically emerge as distrustful, keeping people at a distance, using projection as a main defense, and so on.

**17. The answer is c.** (*Sadock, 7/e, pp 708–712.*) Projective psychological tests are used to obtain information about feelings, interpersonal dynamics, intrapsychic dynamics, and other items that are outside of the patient's conscious awareness. In these tests, the patient "projects" his or her inner world into the stimulus provided (pictures, inkblots, or incomplete sentences, depending on the specific test). The Thematic Apperception Test (TAT) is a projective psychological test used to assess the patient's self-concept in relation to other. It consists of a series of 30 pictures depicting one or more individuals with ambiguous expressions or poses. The patient is asked to make up a story about each picture. The patient's feelings, desires, and impulses are usually reflected by the feelings, desires, and impulses attributed to the picture's main character. In the Rorschach Inkblot Test, another projective test, the patient is asked to describe what he or she sees in the inkblots. The Children Depression Inventory is a self-report measure used to assess symptoms of depression in children between 7 and 17 years of age. The Personality Inventory for Children is the equivalent of the MMPI for adults. It differs from the adult test insofar as questions are answered by parents and teachers for young children. The WISC is used to measure the child IQ.

**18–19. The answers are 18-d, 19-a.** (*Sadock, 7/e, pp 680, 819.*) The voluntary assumption of an inappropriate or bizarre posture for long periods

of time is called catatonic posturing and it is usually seen in schizophrenia, especially of the catatonic type. In catatonic posturing, patients actively resist attempts to make them change position. A similar symptom, waxy flexibility, refers to patients that maintain the body position into which they are placed. Apraxia refers to the inability to perform voluntary motor activity in the absence of motor or sensory deficits. Dystonia refers to the protracted contraction of a group of muscles. In synesthesia, the stimulation of one sensory modality produces a sensation belonging to another sensory modality (a color is perceived as a smell). Trance is a sleeplike condition characterized by a reduced state of consciousness. Parkinson's disease, neuroleptic malignant syndrome, and Huntington's disease are characterized by different motor disturbances.

**20. The answer is c.** (*Hales, 2/e, p 1162.*) Countertransference is the name given to the analyst's or psychotherapist's transference response to the patient. As with patients' transference, the particular form the countertransference takes depends on the therapist's past experiences, relationships, and unresolved conflicts. As with transference, countertransference is not limited to the patient-therapist relationship, but may be present in any relationship. By analyzing his countertransference toward the patient, the therapist may acquire useful insight into the patient's dynamics and his own. Consequently, even negative countertransference feelings can be helpful tools in the psychotherapy process. Reaction formation, projection, and identification with the aggressor are unconscious defense mechanisms. An illusion is a perceptual misinterpretation of a real stimulus.

**21. The answer is c.** (*Sadock, 7/e, p 810.*) An hallucination is the perception of a stimulus when, in fact, no sensory stimulus is present. Hallucinations can be auditory, visual, tactile, gustatory, olfactory, or kinesthetic (body movements). Auditory hallucinations are most commonly associated with psychotic illness, whereas visual, tactile, gustatory, and olfactory hallucinations often are associated with neurologic disorders. A delusion is an erroneous unshakable belief, and an idea of reference is a form of delusion.

**22. The answer is b.** (*Hales, 3/e, pp 219–220.*) The capacity to generalize and to formulate concepts is called abstract thinking. The inability to abstract is called concreteness and is seen in organic disorders and sometimes

in schizophrenia. Abstract thinking is commonly assessed by testing similarities, differences, and the meaning of proverbs. Intellectualization and rationalization are unconscious defenses, while delusional thinking refers to fixed beliefs with no basis in reality.

**23. The answer is a.** (*Yudofsky, 3/e, pp 455–459.*) The patient's persecutory delusions and disorganized thinking could suggest a psychotic disorder such as schizophrenia or brief reactive psychosis, but fluctuations in consciousness and disorientation are typically found in delirium. Memory, language, and sleep-wake cycle disturbances are also typical of delirium. Delusions, hallucinations, illusions, and misperceptions are also common. The causes of delirium are many and include metabolic encephalopathies, such as the hyperglycemic encephalopathy experienced by the patient in the vignette; intoxications with drugs and poisons; withdrawal syndromes; head trauma; epilepsy; neoplasms; vascular disorders; allergic reactions and injuries caused by physical agents (heat, cold, radiation).

**24–27. The answers are 24-e, 25-d, 26-g, 27-a.** (*Hales, 3/e, pp 345, 346, 512, 346.*) Huntington's disease is a progressive neurodegenerative disorder, inherited as an autosomal dominant trait, which usually manifests between 35 and 40 years of age. Affected individuals present with a progressive dementia, choreoathetoid movements, and, often, psychiatric symptoms. Computed tomography (CT) scan and nuclear magnetic resonance imaging (MRI) demonstrate gross atrophy of the putamen and the caudate.

The Dexamethasone Suppression Test (DST) can be part of the diagnostic workup of depression. In this test, 1 mg of dexamethasone is given in the afternoon of the first day of the test and cortisol levels are drawn the next day. Normally, due to the suppressive effect of the dexamethasone on the pituitary, the cortisol levels decrease to 5 micrograms/dL or less. In depression, due to a dysregulation of the pituitary-adrenocortical axis, this cortisol level drop does not happen. Nonsuppression is found in 40 to 50% of depression cases, and values are even higher in severe psychotic depression (80 to 90%).

The patient described in the third vignette has an HIV-associated dementia, a disorder caused by the direct toxic effect of the HIV virus on the brain. A CD4 count below 200 is usually associated with HIV dementia, since this disorder occurs usually in the more advanced stages of AIDS.

More rarely, cognitive impairments may be the first manifestation of the HIV infection.

The woman in the vignette has nonepileptic seizures, a form of conversion disorder. Although nonepileptic seizures can often be differentiated from epileptic episodes by the presence of unusual and wild movements and vocalizations, a lack of postictal confusion, and an association with a psychosocial stressor, sometimes the diagnosis can be made only by documenting that the behavioral manifestations of the seizure are not accompanied by epileptic activity on the EEG.

**28–32. The answers are 28-g, 29-e, 30-h, 31-b, 32-a.** (*Sadock, 7/e, pp 1746, 1527–1529, 1544, 1480–1482, 1509–1512.*) Individuals with borderline personality disorder characteristically form intense but very unstable relationships. Since they tend to perceive themselves and others as either totally bad or perfectly good, borderline individuals either idealize or devalue any person who occupies a significant place in their lives. Usually these perceptions do not last, and the person idealized one day can be seen as completely negative the next day.

An extreme feeling of dislike for a part of the body in spite of a normal or near-normal appearance is the main characteristic of body dysmorphic disorder. The fear of being ugly or repulsive is not decreased by reassurance and compliments and has almost a delusional quality. The social, academic, and occupational lives of individuals with this disorder are greatly affected, due to avoidance of social interactions for fear of embarrassment, the time spent in checking mirrors and seeking surgical treatment or cosmetic remedies, and the chronic emotional distress that accompanies the disorder.

Dissociative amnesia is characterized by the inability to remember important autobiographical information, usually of a traumatic or disturbing nature. The period of amnesia may last from hours to years. Occasionally the amnesia is limited to specific events, for example, memories involving an abusive individual. Often patients with dissociative amnesia are not aware of their memory loss, but come to treatment complaining of anxiety, depression, poor concentration, and blank spells.

Fear of flying is one of the many presentations of specific phobias. Phobic individuals have an excessive or unreasonable fear of an object, an animal, or a situation. When exposed to the feared stimulus, they experience severe anxiety that can reach the level of panic attack. Characteristically,

phobic patients go to great lengths to avoid whatever they fear and this phobic avoidance can greatly interfere with functioning.

Conversion disorder is characterized by the sudden appearance of often dramatic neurological symptoms that are not associated with the usual diagnostic signs and test results. Conversion disorder occurs in the context of a psychosocial stressor or an insoluble interpersonal or intrapsychic conflict. The psychological distress is not consciously acknowledged but it is expressed through a metaphorical body dysfunction. In the vignette example, the young woman who was torn between leaving home and becoming independent, found a temporary solution in her paralysis, which prevented her from leaving her home without having to consciously acknowledge her conflict.

**33–36. The answers are 33-e, 34-a, 35-b, 36-d.** (*Sadock, 7/e, pp 507, 2957.*) All the terms listed are particularly significant for psychiatric epidemiology. The goal of secondary prevention is to address problems at an early stage to avoid future more severe problems. Prevalence refers to the portion of the population who has a specific disorder at a specific point in time, regardless of when the disorder started. The point in time may be a date (point prevalence), six months, or the entire life of an individual (life prevalence). The incidence of a disease refers to a rate that includes only those people who develop the disease during a specific period of time, usually one year. Primary prevention focuses on preventing a disorder from happening in the future and targets normal individuals at risk. Validity refers to the accuracy and verifiability of a study. It is usually demonstrated by agreement between two attempts to measure the same issue by different methods. Tertiary prevention defines those interventions aimed at reducing the disability or the duration of a disorder.

**37–40. The answers are 37-b, 38-f, 39-d, 40-g.** (*Sadock, 7/e, pp 678–688.*) All the choices are elements of the mental status examination, an essential part of the psychiatric evaluation.

Mood refers to the sustained feeling tone experienced internally by the patient. The patient may describe it, or the clinician may infer it from the patient's verbal and nonverbal behavior. In reporting their moods, patients may describe themselves as depressed, happy, angry, euphoric, or anxious.

Affect is the feeling tone that accompanies the patient's verbalizations or immediate behaviors. The interviewer's observations of the patient's affect

during the whole evaluation represent an important part of the mental status evaluation. In schizophrenia, affect is often inappropriate or flat. Blunting of affect is also common in brain disorders.

Tangentiality, circumstantiality, and perseveration are forms of thought disorder. Tangentiality is present when the patient wanders and digresses to unnecessary details and the substance of the idea is not communicated. Circumstantiality is a disturbance in which the patient digresses into unnecessary details before communicating the central idea. In perseveration, the patient displays an inability to change the topic or gives the same response to different questions. In blocking, the patient suddenly stops talking, usually in the middle of a sentence, and cannot complete his or her thoughts.

Disorientation is an impairment of awareness of time, place, or person. A disoriented patient usually does not know the date or where he or she is. Very rarely, a person is disoriented about his or her own identity, and, when this symptom is present, malingering may be suspected. Disorientation is a typical finding in cognitive disorders such as delirium and dementia but it is not usually found in primary psychotic disorders such as schizophrenia.

**41–44. The answers are 41-c, 42-a, 43-b, 44-g.** (*Sadock, 7/e, pp 678–688.*) Looseness of associations refers to a string of thoughts that are disconnected in content and are illogical in their sequence. Severe cases are referred to as “word salad.” This kind of thought disorder is seen in schizophrenia and acute mania.

Magical thinking is normal in young children and is present in people affected by a variety of psychiatric conditions. Magical thinking is the belief that specific thoughts, words, or gestures can directly lead to the fulfillment of wishes. Such thinking is due to an unrealistic understanding of the relationship between cause and effect.

Obsessions are recurrent thoughts, ideas, or impulses that cannot be eliminated from consciousness by reasoning or desire to stop them. Obsessions are characteristic symptoms of obsessive-compulsive disorder and are usually ego-dystonic.

Nihilism refers to a delusional belief that oneself, or part of oneself, has ceased to exist. Echolalia refers to the parrotlike repeating of the words of another person. Depersonalization is the sense of being outside one’s own body, observing oneself as an actor engaged in a role. A similar symptom, derealization, is the feelings that the person’s surroundings are not real. These symptoms represent the main disturbance in depersonalization disorders

and are seen in several other psychiatric disorders including schizophrenia, personality disorders, anxiety disorders, and temporal lobe epilepsy. A compulsion is a repetitive behavior or a ritual that is performed to avoid future unpleasant events. Compulsions have an urgent quality and resisting them generates anxiety.

**45–47. The answers are 45-c, 46-b, 47-e.** (*DSM-IV, pp 25–31.*) Medical disorders etiologically related to mental disorders or symptoms are coded on Axis III. In this case, pheochromocytoma is recorded on Axis III because the episodic changes in the patient's mental status are a direct result of abnormally high levels of circulating catecholamines.

Personality disorders are coded on Axis II. The lifelong nature of the patient's symptoms and the fact that they are based on actual events and perceptions that are then misinterpreted are evidence arguing in favor of a diagnosis of personality disorder, more specifically, paranoid personality disorder.

On Axis V, the interviewer records his or her impression of the patient's general level of functioning and whether this represents a change from baseline. The depressed man in the vignette clearly was functioning at a much lower level than baseline. Axis IV is used to code the nature and the severity of events that preceded and precipitated the individual's mental disorders or symptom. Axis I is used to record all psychiatric disorders and conditions except for personality disorders which are recorded on Axis II.

# HUMAN BEHAVIOR: THEORIES OF PERSONALITY AND DEVELOPMENT

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## Questions

**DIRECTIONS:** Each item below contains a question or incomplete statement followed by suggested responses. Select the **one best** response to each question.

- 48.** A mother promptly responds to her infant's distress cries. Well attuned to his cues, she has no difficulty identifying the cause of the distress and she promptly attends to it. Shortly after, the infant smiles contentedly and the mother smiles back at him. Later in the day, the child spends two hours with a babysitter while the mother goes shopping. On his mother's return, he greets her with great displays of pleasure and outstretched arms. According to Bowlby's theory, this child's behavior is characteristic of
- Insecure attachment
  - Oral phase
  - Secure attachment
  - Infantile neurosis
  - Easy temperament
- 49.** A 10-year-old child is very interested in school and is proud of his athletic achievements. Peers are very important to him but he also gets along with his parents. Under stress he tends to become over-focused on details and slightly obsessive. At what stage is he, according to Sigmund Freud's theory of psychosexual development?
- Concrete operational
  - Latency
  - Industry versus inferiority
  - Object constancy
  - Separation-individuation

**Items 50–51**

A 20-month-old boy loves running around and exploring the environment but every few minutes keeps returning to his mother, to “check on her” and solicit a quick hug.

**50.** Margaret Mahler calls this normal stage of early childhood development

- a. Depressive position
- b. Secure attachment
- c. Insecure attachment
- d. Rapprochement
- e. Autonomy versus shame and doubt

**51.** Margaret Mahler is best known for her theories on

- a. Psychosocial development
- b. Psychosexual maturation
- c. Cognitive development
- d. Moral development
- e. Separation-individuation

**52.** Which of the following theorists primarily focused on the importance of early interpersonal experiences in the development of a cohesive and stable sense of self?

- a. Piaget
- b. Erikson
- c. Freud
- d. Klein
- e. Kohut

**53.** Piaget is best known for his theories and investigations of

- a. Cognitive development
- b. Psychosexual development
- c. Psychosocial development
- d. Interpersonal development
- e. Attachment theories

**Items 54–55**

A 2-year-old child carries around an old, tattered blanket wherever he goes. When he is sad or upset, he calms himself down by hugging and stroking his blanket. He also needs it to settle down before sleep.

**54.** For this child, the old blanket is

- a. A fetish
- b. An obsession
- c. A transitional object
- d. A phallic substitute
- e. An imaginary friend

**55.** This concept was introduced by

- a. Piaget
- b. Klein
- c. Kohut
- d. Anna Freud
- e. Winnicott

**Items 56–57**

A 3-year-old boy stands on one side of a large sculpture and is asked to describe what he sees. When he is asked to describe what a person on the other side of the sculpture sees, the child answers that the other person sees just what he does.

**56.** This kind of logic, normal in early childhood, is called

- a. Autistic thinking
- b. Concrete thinking
- c. Egocentrism
- d. Primary process
- e. Object constancy

**57.** This concept is encountered in theories of

- a. Psychosexual development
- b. Moral development
- c. Cognitive development
- d. Social development
- e. Autism

**58.** A 70-year-old woman has had three face-lifts and never leaves the house without makeup. She forbids her grandchildren to address her as “grandmother” and lies about her age. Which stage of development, according to Erikson, is she having difficulty mastering?

- a. Integrity versus despair stage
- b. Egocentric stage
- c. Generative versus stagnation stage
- d. Narcissistic stage
- e. Pragmatic development stage

**59.** An 18-month-old girl predictably takes a nap every afternoon, is easily soothed if she is ill or she hurts herself, and always smiles at strangers. This is an example of a child with an “easy temperament.” Choose the most appropriate statement:

- a. Temperament is biologically determined
- b. Temperamental traits are unchangeable throughout life
- c. Poor parenting is always the cause of difficult temperament
- d. Slow-to-warm-up children cannot be taught to become less fearful of changes
- e. Temperament is a synonym for personality

**60.** A young woman with a history of childhood neglect feels suddenly worthless and devastated when her supervisor makes a mildly negative comment about her work performance. According to Heinz Kohut’s theory, her hypersensitivity to criticism is due to

- a. An unresolved oedipal complex due to her parents’ divorce when the patient was 4 years old
- b. An inability to make stable commitment to others
- c. A punitive superego due to harsh and critical parents
- d. A fragmented sense of self due to an empathic failure from her parents
- e. Autistic traits

**61.** A young woman, who during childhood was severely punished for showing anger, never loses her temper, even when anger would be completely appropriate. According to Jung, for this person, anger is part of her

- a. Shadow
- b. Archetype
- c. Unconscious
- d. Aggressive drive
- e. Animus

**62.** A 23-year-old woman constantly goes to great lengths to avoid being criticized, even when this requires going against her own beliefs and wishes. Although she is good looking and successful, she is tormented by doubts about her abilities and her physical appearance. According to Kohut's theories, her difficulties are most likely due to

- a. An overly harsh toilet training when she was 2½
- b. Overindulgent parents who freely dispensed praise
- c. A lack of self-esteem, which causes a constant need for validation
- d. An overly punitive superego
- e. A shy temperament

**63.** A 5-year-old boy is presented with two stories and asked which character has committed the worse infraction and should receive the more severe consequence. In the first story, a little boy breaks one cup when he climbs over the counter to reach a cake placed on top of the refrigerator. In the second story, a little girl breaks five cups and one plate by accident when she trips over the cat while she is helping her mother in the kitchen. The boy's answer would probably be

- a. The little boy, because he broke the cup while he was trying to steal the cake, a forbidden act
- b. The little girl, because she did more damage
- c. The boy and the girl are equally guilty because both of them broke something and breaking things is wrong
- d. The boy and the girl have done nothing wrong, because they did not intend to break anything
- e. The boy has committed the worse infraction, but only if he is found out

**64.** In psychoanalytic theory, the superego

- a. Is totally unconscious
- b. Is a defense mechanism
- c. Functions to reduce guilt and shame
- d. Contains the sexual and aggressive drives
- e. Contains the ego ideal

**Items 65–66**

A 20-month-old girl is admitted to a pediatric ward because she weighs only 15 pounds but an extensive medical workup does not reveal any organic cause for the child's failure to thrive. The child is listless, apathetic, and does not smile. The parents rarely come to visit, and, when they do, they do not pick the child up and do not play or interact with her.

**65.** This scenario proves the established notion that

- a. Lack of adequate emotional nurturance causes depression and failure to thrive in infants
- b. Neglected infants fail to thrive but do not have the intrapsychic structures necessary for experiencing depression
- c. Infants reared in institutions are likely to become autistic
- d. Neglected infants are at higher risk for developing schizophrenia
- e. Environmental variables have little impact on the health of infants as long as enough food is provided

**66.** The effects of emotional deprivation on infants were extensively investigated by

- a. Melanie Klein
- b. Erik Erikson
- c. Otto Kernberg
- d. Anna Freud
- e. Renée Spitz

**Items 67–68**

A healthy 9-month-old girl, previously very friendly with everyone, now bursts into tears when she is approached by an unfamiliar adult.

**67.** Her behavior is most likely due to

- a. Separation anxiety
- b. Insecure attachment
- c. Simple phobia
- d. Depressive position
- e. Stranger anxiety

**68.** This behavior is

- a. Common in normal infants
- b. Always a symptom of insecure attachment
- c. Only present in children who will develop anxiety disorders later in life
- d. Likely to persist, if not appropriately treated
- e. A symptom of a pervasive developmental disorder

**69.** A 29-month-old boy plays with a ball, which rolls under a couch. The boy promptly crawls under the couch to retrieve the ball. According to Piaget's theories of cognitive development, this behavior is characteristic of a thinking process called

- a. Object permanence
- b. Basic trust
- c. Initiative versus guilt
- d. Object constancy
- e. Sensory-motor stage

**70.** According to Sigmund Freud, primary processes are

- a. Typically conscious
- b. Nonlogical and primitive
- c. Absent during dreaming
- d. Characteristic of the neuroses
- e. Rational and well organized

**71.** Harry Stack Sullivan's theory of personality development was characterized by an emphasis on

- a. Psychosexual development
- b. Genetic determinism
- c. Infant-mother interaction
- d. Interpersonal relations
- e. Object relations

**72.** Erikson's developmental theories differ from Freud's in that Erikson placed greater emphasis on

- a. Cultural factors in development
- b. Instinctual drives
- c. Interpersonal relations
- d. Psychosexual development
- e. Object relations

**DIRECTIONS:** Each group of questions below consists of lettered options followed by numbered items. For each numbered item, select one lettered option. Each option can be used once, more than once, or not at all.

**Items 73–77**

Match the following vignettes with the appropriate defense mechanism.

- a. Rationalization
- b. Anticipation
- c. Sublimation
- d. Identification with the aggressor
- e. Acting out
- f. Introjection
- g. Distortion
- h. Reaction formation
- i. Externalization

**73.** A child is hit by his father for breaking a valuable vase. One hour later he slaps his little sister for dropping his toy train.

**74.** A teacher does not like one of her students, although she believes that she should be completely impartial. She makes exaggerated efforts to be helpful and uncritical toward the student.

**75.** A writer of mystery novels who has never had legal problems jokes about his “dark side” and his hidden fantasies about leading an exciting life of crime.

**76.** A psychotherapist is irritated with one of his patients, who consistently tries to put him down. Contrary to his usual punctuality, the therapist seems unable to start this patient’s sessions on time.

**77.** A man cheats on his tax returns and justifies himself with the thought that the government wastes most of the tax money anyway.

**Items 78–80**

Match the following vignettes with the correct concept.

- a. Core identity
- b. Gender role
- c. Gender identity
- d. Sexual identity
- e. Sexual drive

**78.** A 3-year-old boy knows that he is a male “like Daddy” and becomes upset if someone mistakes him for a little girl.

**79.** A 14-year-old girl spends a great deal of time putting on make-up and styling her hair. She babysits after school and she likes to cook. She considers heavy yard work a job more suited to her brother.

**80.** A 23-year-old man enjoys the company of girls and is sexually aroused by them.

**Items 81–83**

Match the following definitions with the appropriate concept.

- a. Psychic determinism
- b. Wish fulfillment
- c. Identification
- d. Secondary gain
- e. Overdetermination
- f. Primary gain

**81.** The concept that a symptom may have a number of different origins and meanings

**82.** The concept that all mental events are causally linked to others in an associative network

**83.** The benefit derived as the result of a neurotic illness

**Items 84–87**

For each phenomenon or experience listed below, select the psychoanalytic theorist with whom it is most commonly associated.

- a. Sigmund Freud
- b. Harry Stack Sullivan
- c. John Bowlby
- d. Melanie Klein
- e. Carl Jung
- f. Heinz Kohut
- g. Erich Fromm

**84.** Signal anxiety as result of conflicts between id, ego, and superego

**85.** Relationship problems as result of early empathic failure and developmental arrest

**86.** Anxiety caused by disruption of attachment to parents in infancy

**87.** Symptoms as consequence of disowned parts of the personality

**Items 88–90**

Match each example with the appropriate developmental stage according to Freudian theory.

- a. Oral
- b. Anal
- c. Phallic
- d. Oedipal
- e. Latency

**88.** Two young parents are worried because their once happy-go-lucky infant has become oppositional and obstinate since he turned 2. Their psychologically oriented pediatrician assures them that the child's behavior is age appropriate.

**89.** A 4-year-old girl loves her father's attention and tells him she will marry him when she grows up.

**90.** A 6-month-old puts everything in her mouth and can fall asleep only if she sucks on her pacifier.

**DIRECTIONS:** Each item below contains a question or incomplete statement followed by suggested responses. Select the **one best** response to each question.

**Items 91–93**

A young man who is in a conflicted relationship with a woman who reminds him of his domineering mother dreams that he is having tea with a woman who has his fiancée's features but his mother's eyes and hair color. In the dream, the young man realizes, with horror, that he is paralyzed from the waist down. He tries to communicate his distress to his fiancée but she is oblivious and continues talking about buying new furniture. With an enormous effort, the young man manages to stand up and at that moment the woman in his dreams starts floating in the air as a balloon and presently she disappears.

**91.** According to Freud's theories, the dream may represent an insight into the fact that his fiancée has emotionally paralyzed the dreamer, as his mother had done before her. This insight represents

- a. The manifest content of the dream
- b. The latent content of the dream
- c. Dream work
- d. A punishment dream
- e. A defense mechanism

**92.** The process that transforms the raw unconscious wishes and impulses of the dreamer into images more acceptable to his super-ego is called

- a. Sublimation
- b. Return of the repressed
- c. Rationalization
- d. Dream work
- e. Wish fulfillment

**93.** The appearance in a dream of a composite character with the characteristics of more than one person in the dreamer's life is due to a process called

- a. Displacement
- b. Overdetermination
- c. Identification
- d. Condensation
- e. Secondary revision

# HUMAN BEHAVIOR: THEORIES OF PERSONALITY AND DEVELOPMENT

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## Answers

**48. The answer is c.** (Lewis, 2/e, pp 126–128.) John Bowlby, a psychiatrist who published most of his work between 1970 and 1990, is known for his work on infant attachment. He theorized that infants are predisposed from birth to form attachments with their primary caregivers and that the quality of the attachment depends on their caregivers' response to them. When the caregiver is attentive and responsive to the infant's physical and emotional needs, secure attachment is the norm. Insecure attachment occurs when the caregiver is unresponsive, neglectful, or inconsistent. The quality of attachment has been empirically studied through the "Strange Situation Procedure," which focuses on the infant's reaction when he or she is reunited with the parent after a brief separation. Children with secure attachment greet their parents with relatively unequivocal pleasure (like the child in the vignette). Children with insecure attachment manifest a variety of deviant behaviors, stemming from their lack of confidence that the parent will be helpful and available. Behaviors associated with insecure attachment include avoiding and ignoring the parent, anger and aggression, extreme passivity, clingy, whiny behavior, or a combination of all these.

Basic trust also describes a stage of development characterized by the security that caregivers will be helpful and available, on the basis of the quality of the child's previous interactions. This phase is the first of Erickson's eight psychosocial developmental stages and does not belong to Bowlby's theories. The oral phase is the first of the five psychosexual developmental stages theorized by Freud. The term *infantile neurosis* describes, in Freudian psychoanalytic theory of development, the appearance of regressive behaviors and fears during the oedipal period as an attempt to withdraw from the conflicts caused by the intensity of the oedipal longing for the parent of the opposite sex. Temperament refers to an inherited set of personality traits such as adaptability, intensity of reaction, threshold of re-

sponsiveness, and so forth. A difficult temperament may affect attachment, because it makes parenting more frustrating and can interfere with the parent's ability to relate to the child positively.

**49. The answer is b.** (*Sadock, 7/e, pp 574–579; Lewis, 2/e, pp 162–163.*) According to Freud's psychosexual developmental theory, children between the age of 5 and 12 or 13 enter into a stage where sexual drives become secondary (hence the term *latency*) while other developmental tasks, such as peer relations and school achievements, become more important. Children at this stage have a strong sense of "right and wrong" and like to play "by the rules." Usually there is a tendency toward orderliness, attention to details, and collecting things. Under stress, these traits may become exaggerated. The stormy parent-child relationship that characterizes adolescence is yet to come. The other stages of Freud's psychosexual development theory are discussed in detail in the answers to questions 88–90.

Industry versus inferiority and concrete operational stage apply to the same age period, respectively, in Erickson's psychosocial developmental theory and Piaget's theory of cognitive development. Separation and individuation and object constancy refer to two stages of infant development according to Margaret Mahler's theory.

**50–51. The answers are 50-d, 51-e.** (*Sadock, 7/e, p 593.*) Margaret Mahler made her contributions to the psychoanalytic movement called ego psychology through her theories on early infantile development. On the basis of her observations of normal and pathological mother-child interactions, Margaret Mahler identified three developmental phases of infant development. The "autistic phase" occurs during the first two months of life, when the child spends a good part of his or her day asleep and has little interest in interpersonal relationships. From 2 to 6 months, the child enters "symbiosis," a stage characterized by psychological fusion or lack of differentiation between mother and child. Margaret Mahler is best known, though, for her research on the third phase, called "separation-individuation." This phase occurs between 6 and 36 months during which the child develops a concept of him- or herself as different and separated from the mother. During the same period, the infant gradually develops an internal, stable representation (introjection) of the mother, which includes both her positive and negative aspects. The separation-individuation phase is subdivided into four sub-phases: "differentiation," between 6 and 10 months, refers to the child's ini-

tial awareness that the mother is a separate person; “practicing,” between 10 and 16 months, is characterized by the child’s enthusiastic exploration of the environment, thanks to his or her newly acquired mobility; “rapprochement,” between 16 and 24 months, refers to a period characterized by a need to know where the mother is and frequent “refueling,” triggered by the child’s new awareness that independence also makes him or her vulnerable; the fourth subphase, “object constancy,” takes place during the third year of life and refers to the integration of the good and bad aspects of both the internalized images of the mother and the child’s self. According to ego psychology theory, object constancy is necessary for the later development of stable and mature interpersonal relationships.

The “depressive position” refers, in Melanie Klein’s theory of infantile psychological development, to the period during which the infant realizes that the “bad mother” who frustrates the child’s wishes and the “good mother” who nurtures him or her are the same person and the child worries that rage at the “bad mother” may also destroy the good. Autonomy versus shame and doubt is one of the eight stages of psychosocial development described by Erikson and corresponds, in age, to the period of Mahler’s separation-individuation.

**52. The answer is e.** (*Sadock, 7/e, pp 593–594.*) Heinz Kohut is one of the founders of one of the three modern psychoanalytic schools, Self-Psychology. He theorized that in order to develop a coherent, stable, and resilient sense of self, the child needs positive, empathic, and consistent responses from his or her caretakers. The need for positive and validating responses from the environment is not limited to infancy or childhood, since even adults need a certain amount of positive feedback from others to maintain positive self-esteem. Individuals whose sense of self remains fragile and unstable due to faulty early parenting need constant and excessive reassurance from others and become emotionally and behaviorally dysfunctional under stress. Freud’s theories relate to the child’s psychosexual development and to the part unconscious conflicts play in psychopathology. Erik Erikson is known for his theory of psychosocial development throughout the life cycle. Melanie Klein is an proponent of the object relations school of psychoanalysis and wrote extensively on early stages of infant-mother interaction. Piaget is known for his work on cognitive development.

**53. The answer is a.** (*Lewis, 2/e, pp 135–138.*) Jean Piaget, a Swiss psychologist, made extensive empirical observations of the way children rea-

son and make sense of their environment at various ages. His theory of the development of cognitive thinking in children encompasses four stages: sensorimotor (18–24 months), pre-operational (2 to 5–7 years), concrete operational (6–11 years), and formal operational (11 years to adulthood). Each stage is characterized by specific ways of approaching and processing information.

**54–55. The answers are 54-c, 55-e.** (*Sadock, 7/e, pp 389–390.*) D. W. Winnicott, a British pediatrician with a keen interest in psychoanalysis, focused his attention on the early mother-child relationship. In his view, the child is able to develop a separate and stable identity only if the child's needs are met by his or her mother's empathic anticipation. Winnicott calls the positive environment so created by the mother the "holding environment." According to Winnicott, mothers do not have to be perfect in order to fulfill their roles, but they have to be "good enough" to provide the infant with a sufficient amount of comfort and constancy. Winnicott also coined the term "transitional object," usually a toy or a blanket, that represents a comforting substitute for the primary caregiver. Thanks to a transitional object, the child can tolerate separation from the mother without excessive anxiety.

**56–57. The answers are 56-c, 57-c.** (*Lewis, 2/e, pp 136–137.*) Egocentrism refers to young children's inability to see things from another point of view. Egocentrism is described by Jean Piaget as part of the pre-operational stage of cognitive development, which occurs between 2 and 5–7 years of age.

**58. The answer is a.** (*Sadock, 7/e, pp 610–612.*) Erik Erikson's theory of psychosocial development centers around eight stages of ego development that take place during the life cycle. Each stage represents a turning point in which physical, cognitive, social, and emotional changes trigger an internal crisis, whose resolution results either in psychological growth or regression. Integrity versus despair is the last of the Eriksonian stages and takes place between age 60 and death. If this stage is successfully mastered, the individual arrives at a peaceful acceptance of his or her mortality without losing interest in life. The woman in the vignette, with her futile attempts to deny the passage of time, clearly has difficulties in this developmental stage. The other developmental stages in Erikson's theory are (1) trust versus mistrust, which occurs between birth and 18 months of age. During this period, if the infant's needs are promptly and empathically met, the infant learns to see the

world as a benign and nurturing place; (2) autonomy versus shame and doubt, which occurs between 18 months and 3 years and corresponds to Freud's anal stage and Mahler's separation-individuation stage. During this period, if allowed to experiment with his or her new motility and curiosity about the environment, and at the same time he or she is provided enough nurturance, the child acquires a healthy self-esteem and sense of autonomy; (3) initiative versus guilt, which occurs between 3 and 5 years of age, when the child expands his or her explorations of the outside world and has omnipotent fantasies about his or her own powers. During this stage, in a good psychosocial environment, the child develops a capacity of self-reflection, manifested by feeling guilty when rules are broken, without losing enthusiasm for independent exploration; (4) industry versus inferiority, which occurs between 5 and 13 years of age, is equivalent to Freud's latency. The child's psychological growth depends on his or her opportunity to learn new skills and to take pride in accomplishments; (5) identity versus role confusion occurs during adolescence, approximately between 13 and 21 years. If this stage is mastered successfully, the young individual enters adulthood with a solid sense of identity, knowing his or her role in society; (6) intimacy versus isolation refers to the adult developmental task of learning to make and honor commitments to other people and to ideas; (7) generativity versus stagnation, which occurs between 40 and 60 years of age. According to Erikson, the focus of the individual starts shifting from personal accomplishments and needs to a concern for the rest of society and the nurturing of the next generation; (8) integrity versus despair, which occurs from approximately age 60 to the time of death. The main developmental task is accepting life as it is, without desire to change the past or change others. When this stage is mastered, the individual acquires the wisdom necessary to face the inevitability of death with equanimity and without dread.

**59. The answer is a.** (*Lewis, 2/e, pp 170–180.*) Temperament refers to an inherited set of traits that are present at birth and are rather stable during the first years of life, although they can often be modified by interpersonal and other experiences later on. Three temperamental styles are described, on the basis of variations in several categories such as rhythmicity, adaptability, intensity of reaction, quality of mood, attention span, and so forth. Children with an easy temperament, approximately 40% of the population, are adaptable to changes, have regular feeding and sleeping rhythms, have a predominantly pleasant mood, and have responses of mild or mod-

erate intensity. Children with a difficult temperament, on the contrary, adapt slowly to change, have irregular biological rhythms, and have frequent high-intensity negative emotional displays. Children with a slow-to-warm-up temperament, usually labeled as “shy,” tend to withdraw from new experiences and have negative emotional responses with low intensity. Although quality of parenting does not cause a specific temperament, temperament can affect parenting styles. For example, children with difficult temperaments are more likely to elicit negative responses and, in extreme cases, abusive behaviors from caregivers.

**60. The answer is d.** (*Sadock, 7/e, pp 593–594.*) According to Kohut, emphatic validation from caregivers is essential for the development of an integrated sense of self. People who have been neglected or abused or have received suboptimal parenting grow up with a very fragile sense of self and an easily shaken self-esteem. These individuals, like the woman in the vignette, when exposed to criticism or rejection, cannot maintain a positive image of themselves and experience a devastating sense of worthlessness and fragmentation.

**61. The answer is a.** (*Sadock, 7/e, p 622.*) Carl Jung, a contemporary and disciple of Freud, who later moved away from classical Freudian psychoanalytic theory, defined the “shadow” as a part of the unconscious personality that contains all the traits and qualities that are unacceptable to an individual. For example, for a generous person, avarice is a shadow quality. On the contrary, a person that takes pride in frugality, generosity is part of the shadow. Archetypes, also part of Jungian psychology, are universal, symbolic images that recur in dreams and are part of the “collective unconscious.” The animus, according to Jung, contains the masculine elements of a woman’s personality, while the anima represents the female traits of a man’s personality.

**62. The answer is d.** (*Sadock, 7/e, pp 603–604.*) According to Kohut’s theories, individuals who require other people’s constant validation to maintain a marginal self-esteem have suffered a “narcissistic injury” during childhood due to parental neglect or lack of empathy.

**63. The answer is b.** (*Sadock, 7/e, pp 2547–2549.*) According to the theories of moral development of Piaget and Kohlberg, for children between 4

and 7 years of age, the consequence of an action determines its intrinsic moral value independently from the intention and circumstances. At this age, children see rules as permanent and unchangeable, and punishment is dispensed by figures of authority without a possibility of appeal. Older children (7 to 14) make moral judgments taking into account the intent of the doer and the situational circumstances.

**64. The answer is e.** (*Sadock, 7/e, pp 583–586.*) In his structural theory of the mind, Freud divided the psychic apparatus into three agencies: the id, which contains the instinctual drives; the ego, whose function is to find an equilibrium between gratification of the instinctual drives and the rules of society (and the demands of the superego); and the superego, the agency that contains the internalized parental and societal rules and dictates to the ego what is not to be done. The ego ideal, a component of the superego, is the internal standard of what one should be to be approved all the time by society and internalized parental figures. Shame is a consequence of not living up to one's ego ideal while guilt is the consequence of transgressing the superego's prohibitions. The superego, as well as the ego, have both conscious and unconscious components.

**65–66. The answers are 65-a, 66-e.** (*Lewis, 2/e, pp 579–580; Sadock, 7/e, p 2741.*) Although the relationships between emotional deprivation and failure to thrive are complex, the fact that children who are emotionally deprived do not grow well even when an adequate amount of food is available is well proved. Renée Spitz studied institutionalized children and demonstrated that, due to lack of adequate nurturing, they become apathetic, withdrawn, and less interested in feeding, which in turn causes failure to thrive and, in extreme cases, death. Spitz called this syndrome “analytic depression.” Schizophrenia and autism have not been associated with emotional deprivation in infancy.

**67–68. The answers are 67-e, 68-a.** (*Lewis, 2/e, p 259.*) The term “stranger anxiety” refers to manifestations of discomfort and distress on the part of the infant when he or she is approached by a stranger. Although it does not necessarily appear every time the child meets a stranger and although some children seem to be more prone than others to such reactions, stranger anxiety is considered a normal, transient phenomenon. It manifests at about 8 months of age, when the child starts differentiating between familiar and unfamiliar adults.

**69. The answer is a.** (*Lewis, 2/e, p 136.*) According to Piaget, object permanence is the recognition that an object continues to exist even if it cannot be perceived. Object permanency is reached during the preoperational stage of cognitive development, which extends from 2 to 6 years of age. The child in the vignette understands that, even if he cannot see the ball anymore, the toy still exists under the couch. A younger child, who has not yet reached the stage of object permanence, would consider the ball as lost forever. Object permanence is often confused with object constancy, a psychoanalytic concept referring to children's ability to maintain stable, realistic internalized constructs of their caretakers and themselves. Object constancy is a fundamental concept in ego psychology and self-psychology.

**70. The answer is b.** (*Sadock, 7/e, pp 571, 580–581.*) Primary process thinking is primitive, nonlogical, and timeless. Primary processes characterize the operational style of the id and are manifested in dreams. Condensation, displacement, and symbolic representation are, according to Freud's theory, forms of primary processes.

**71. The answer is d.** (*Sadock, 7/e, pp 632–625.*) Harry Stack Sullivan's theory of personality development emphasized the central importance of interpersonal relationships. He believed that the interpersonal relationships of the first five years of life were crucial, although not immutable, in shaping personality. He thought that personality continues to develop and change throughout adolescence and into adulthood and that, in therapy, the opportunity for change derived from an active interaction between patient and therapist.

**72. The answer is a.** (*Sadock, 7/e, pp 610–611.*) Erikson's work concentrated on the effects of social, cultural, and psychological factors in development. Although Erikson acknowledged the important role of sexuality, it was less central to his theory. The concepts of instinctual drives and psychosexual development are essential parts of Freud's theories. Object relations, which refers not to interpersonal relationships but to the interactions of internalized constructs of external relationships, is the central idea in object relation psychology.

**73–77. The answers are 73-d, 74-h, 75-c, 76-e, 77-a.** (*Sadock, 7/e, pp 584–585, 2149.*) In Freudian psychoanalytic theory, defense mechanisms

represent the ego's attempts to mediate between the pressure of the instinctual drives, emerging from the id, and the restrictions imposed by societal rules through the superego. Freud classified defense mechanisms as narcissistic (or primitive, including denial, projection, and distortion), immature (acting out, introjection, passive-aggressive behavior, somatization, and several others), neurotic (displacement, externalization, intellectualization, rationalization, inhibition, reaction formation, and repression), and mature (sublimation, altruism, asceticism, anticipation, suppression, and humor). Primitive and immature defenses are the norm during childhood and infancy and persist in pathological states. Mature defenses are considered more adaptive than immature and neurotic defenses.

Identification refers to the incorporation of another person's qualities into one's ego system. In the particular case illustrated in the vignette of question 73, the boy, by identifying with his violent father (the aggressor), acquires a sense of control over an otherwise very distressing situation. In reaction formation, an unacceptable, unconscious impulse is transformed into its opposite. Through sublimation, satisfaction of an objectionable impulse is obtained by using socially acceptable means. In the vignette of question 75, the writer derives a vicarious satisfaction of his antisocial impulses through the criminal activities of the characters of his stories. Acting out implies the expression of an impulse through action to avoid experiencing the accompanying effect at a conscious level. Rationalization refers to offering a rational explanation to justify actions or impulses that would otherwise be regarded as unacceptable.

**78–80. The answers are 78-c, 79-b, 80-d.** (*Hales, 3/e, pp 739–740.*)

Gender identity, a deep-rooted awareness of being either male or female, seems to depend in great part on the way the individual is reared, as a boy or a girl. Once established, usually by age 2 or 3, it is extremely resistant to change. In gender identity disorders, the individuals identify strongly with the opposite sex and dislike their own sexual characteristics.

Gender role refers to the many behaviors, such as wearing dresses and makeup versus wearing pants and neckties, that identify an individual as male or female. It is not as unchangeable as gender identity and usually tends to fluctuate during the life course due to changes in beliefs, attitudes, and social mores (for example, smoking was considered a behavior unfit for women, but this has changed in recent years).

Sexual identity refers to a subjective experience of an individual's sexual orientation and includes the awareness of what the individual considers sexually desirable.

**81–83. The answers are 81-e, 82-a, 83-d.** (*Hales, 3/e, pp 148–155, 681.*)

Each of the terms listed in the question describes a concept important to Freudian psychoanalytic theory. Freud's theory of psychic determinism refers to his belief that all mental events are in some way connected. Overdetermination describes the concept that mental phenomena, such as neurotic symptoms and dreams, have multiple causes and multiple meanings. Primary gain refers to the relief of tension and conflict produced by the development of symptoms. In addition to the internal reduction of distress, the symptoms may gratify wishes or impulses (secondary gain). Examples of secondary gain include an increase in attention and sympathy, relief from burdensome obligations, and monetary compensation. Wish fulfillment is the term used by Freud to describe one of the goals of dreams.

**84–87. The answers are 84-a, 85-f, 86-c, 87-e.** (*Sadock, 7/e, pp 580, 593–595.*) In Freudian psychoanalytic theory, signal anxiety represents an autonomous function of the ego that activates unconscious defenses when impulses unacceptable to the superego threaten to emerge into consciousness.

Heinz Kohut's theories hold that empathic, validating, and consistent responses from the parents or other primary caregivers are essential in the development of a cohesive and resilient self-concept. Developmental intrapsychic deficits caused by early empathic failures are, in Kohut's theories, involved in the development of personality disorders and manifest themselves through a multitude of emotional and behavioral dysfunctions, including anxiety.

John Bowlby's work, as discussed in more detail in the explanation of question 48, focused on infant attachment. In Bowlby's view, anxiety follows an insecure attachment, caused by inconsistent or neglectful parenting.

According to Carl Jung, when a characteristic of a child meets with the persistent disapproval of his or her parents, that characteristic is disowned and "forgotten." The unwanted and unrecognized traits are collected into the person's "shadow." Mental health, according to Jung, requires that individuals recognize and accept their shadow parts.

**88–90. The answers are 88-b, 89-d, 90-a.** (*Sadock, 7/e, pp 577–579.*)

According to Freud's theory of psychosexual development, the child goes through six stages between birth and adolescence: oral, anal, phallic, oedipal, latency, and genital. In each stage, pleasure (not necessarily sexual) is derived from specific areas of the body. Each stage is associated with specific drives, conflicts, and defenses.

In the first 18 months of life, infants go through the oral stage, during which oral sensations (feeding, sucking, biting, etc.) represent the main gratification. According to Freud, excessive gratification or deprivation during this stage can cause an “oral fixation.” Individuals with an oral character are dependent and require that others fulfill their needs. In the anal stage, between 18 and 36 months of age, the child is much more independent and active than during the previous stage. Erotic stimulation of the anal mucosa through the excretion or retention of feces is the main source of pleasure. Battles over toilet training are common in the attempts to achieve autonomy from the parents. If toilet training is too harsh or inconsistent, “anal traits” may persist as personality traits later in life. Stubbornness, obstinacy, and frugality are common traits of the “anal individual,” usually seen in obsessive-compulsive personalities. The phallic stage, which starts at age 3, is characterized by a concentration of erotic pleasure in the penis and the clitoris areas. During the phallic stage, the child starts looking outside himself or herself for an erotic object, thus heralding the advent of the oedipal stage. Freud theorized that between the ages of 3 and 5, the male child, as Oedipus in Greek mythology, falls in love with the mother and perceives the father as a murderous rival. Resolution of the oedipal stage leads to the boy’s identification with the father and the abandonment of the erotic wishes for the mother, which are later transferred to other women. During the oedipal stage, girls experience an equivalent attraction for their fathers and perceive their mothers as rivals. How girls resolve their oedipal conflicts and come to identify with their mothers is less clearly explained. During latency, between 5 and 11 to 13 years of age, the sexual drive is relatively quiescent and the child becomes focused on learning new skills and social interactions with peers. The genital stage begins with puberty and ends with young adulthood and is characterized by a reintensification of sexual drives. The key developmental tasks associated with this stage are mastery over instinctual drives, separation from parents, and the establishment of a genital sexuality with an appropriate partner.

**91–93. The answers are 91-b, 92-d, 93-d.** (*Sadock, 7/e, pp 370–372.*)

One of Freud’s main accomplishments was his observation that dreams are meaningful and that they provide valuable information about the dreamer’s unconscious, although their meaning was often hidden or disguised. According to Freud’s theory, each dream has a manifest content, which refers to images and sensations recalled by the dreamer, and a hid-

den latent content, represented by impulses, ideas, and feelings unacceptable to the conscious mind. Dream work is the process through which the latent content of the dream is transformed into the more acceptable manifest content. To disguise the latent content, the mind combines different concepts or feelings into one single image (condensation), uses neutral or innocent images to represent highly charged ideas or impulses (symbolic representation), and diverts the feeling or the energy associated with one object to another more acceptable to the dreamer's superego (displacement). Condensation, displacement, and symbolic representation are primary processes and can make the manifest content of the dream quite bizarre. Secondary revision, a process guided by the ego, intervenes at the end of the dream work to make the manifest content more rational and acceptable to the dreamer.

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# HUMAN BEHAVIOR: BIOLOGIC AND RELATED SCIENCES

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## Questions

**DIRECTIONS:** Each item below contains a question or incomplete statement followed by suggested responses. Select the **one best** response to each question.

- 94.** A Vietnam veteran with PTSD (post-traumatic stress disorder) startles if someone approaches him from behind and experiences panic, palpitation, and sweating when he hears a loud popping sound. These hyperarousal symptoms are thought to be due to a stress-induced, chronic hyperactivity of the
- Nucleus basalis of Meynert
  - Locus ceruleus
  - Substantia nigra
  - Raphe nuclei
  - Vagus
- 95.** A young man is often the object of his friends' jokes because he drops on the floor whenever he is having a good laugh. This young man suffers from
- Cataplexy
  - Narcolepsy
  - Hysteria
  - Drop seizures
  - Histrionic personality
- 96.** A young woman with a history of severe childhood abuse cuts or burns herself when she feels angry or anxious. She claims that hurting herself calms her and causes no pain. Self-injury can have this effect because it triggers the release of
- ACTH
  - Endorphins
  - Serotonin
  - Substance P
  - Arachidonic acid
- 97.** Benzodiazepines, barbiturates, and many anticonvulsants exert their influence through which of the following types of receptors?
- Muscarinic
  - Dopamine
  - Glutamate
  - Adrenergic
  - Gamma-aminobutyric acid (GABA)

**98.** Seasonal circadian rhythm has been implicated in the etiology of

- a. Depression
- b. Sociopathy
- c. Capgras syndrome
- d. Panic disorder
- e. OCD

**99.** The subject of a sleep study has been asleep for 90 minutes. When he enters his first REM period, his eyes start moving rapidly, his heart rate changes, and his muscles are flaccid. Another event associated with this sleep cycle is

- a. Night terrors
- b. Sleepwalking
- c. Dreaming
- d. Restless legs
- e. Sleep paralysis

**100.** After being struck on the head by a four-by-four, a previously serious and dependable construction worker starts making inappropriate sexual remarks to his coworkers, is easily distracted, and loses his temper over minor provocations. What part of his brain has been damaged?

- a. Occipital lobes
- b. Temporal lobes
- c. Limbic system
- d. Basal ganglia
- e. Frontal lobes

**101.** A little girl who was underweight and hypotonic in infancy is obsessed with food, eats compulsively, and, at age 4, she is already grossly overweight. She is argumentative, oppositional, and rigid. She has a narrow face, almond-shaped eyes, and a small mouth. What is her diagnosis?

- a. Down syndrome
- b. Fragile X syndrome
- c. Fetal alcohol syndrome
- d. Hypothyroidism
- e. Prader-Willi syndrome

**102.** A 36-year-old moderately retarded male with large ears and hands is very shy and awkward in social situations and starts rocking and flapping his hands when he is upset. His syndrome, which is also the most frequent cause of inherited mental retardation, is

- a. Down syndrome
- b. Hurler's syndrome
- c. William's syndrome
- d. Fragile X syndrome
- e. Rett's disorder

**103.** Monoamine oxidase (MAO) inhibitors exert their influence primarily by

- a. Increasing gamma-aminobutyric acid (GABA) production
- b. Blocking inactivation of biogenic amines
- c. Decreasing norepinephrine
- d. Decreasing serotonin
- e. Increasing endorphin production

**104.** Most studies suggest that the major inhibitory neurotransmitter in the brain is

- a. Serotonin
- b. Dopamine
- c. Beta-endorphin
- d. Gamma-aminobutyric acid
- e. Somatostatin

**105.** An adolescent presents to the ER with his distraught parents. His neck is bent to one side, his eyes are rolled upwards, and his tongue is hanging out of his mouth. These symptoms disappear after he is given 50 mg of Diphenhydramine IV. When he is able to talk, the boy admits that, earlier that evening, he had taken “a few pills” at a party. Which of the following is most likely to cause these symptoms?

- a. Methamphetamine
- b. Meperidine
- c. Alprazolam
- d. Methylphenidate
- e. Haloperidol

**106.** A 52-year-old housewife has gained weight although she has no appetite and she feels tired all the time. She does not seem to care about anything anymore and appears depressed. She complains of being always cold, her hair is dry and brittle, and her face is puffy. She is most likely to have

- a. An elevated ACTH
- b. A low cortisol level
- c. An elevated TSH
- d. A low calcium level
- e. An elevated FSH

**107.** A 34-year-old successful lawyer presents to the ER with chest pain. His pupils are dilated and his blood pressure is 160 over 95. The toxic screen is likely to be positive for

- a. Cannabinoids
- b. Opiates
- c. Cocaine
- d. LSD
- e. PCP

**108.** The cell bodies of serotonin-releasing neurons are located in an area of the brain known as the

- a. Raphe nuclei
- b. Locus ceruleus
- c. Cingulate cortex
- d. Basal forebrain
- e. Frontal cortex

**109.** A 65-year-old woman with a history of prolonged alcohol abuse cheerfully greets the resident doctor of her nursing home, whom she has met many times before, and calls him “my dear friend Jack.” The physician explains who he is and tells the patient his name. Two minutes later, when he asks the patient if she knows who he is, she answers with a smile: “Of course, you are my cousin Anthony from New Jersey.” What vitamin deficiency can cause this particular form of alcohol-induced amnesic disorder?

- a. Panthotenic acid
- b. Folate
- c. Thiamine
- d. Riboflavin
- e. Niacin

**110.** An elderly gentleman wakes up from a nap in a state of great agitation. Although he appears to want to communicate, he only repeats the sentence “See you later” over and over. The right side of his face droops and he seems to have difficulties in lifting his right arm. A CAT scan shows a recent brain infarct. Where is the lesion localized?

- a. Left parietal lobe
- b. Right parietal lobe
- c. Left frontal lobe
- d. Right frontal lobe
- e. Fronto-orbital region

**111.** A middle-aged woman with partial complex seizures smells the odor of burning rubber before each episode. EEG studies show that the discharge originates from the

- a. Parietal lobe
- b. Temporal lobe
- c. Frontal lobe
- d. Insula
- e. Occipital lobe

**112.** During an epidemiological study on schizophrenia, a sample of children between the ages of 12 and 15 is chosen and any subject who has already shown signs of the illness is excluded. The children are assessed for a variety of characteristics that can represent risk factors for developing schizophrenia. Afterward, they are evaluated every year to determine how many have developed the disease and what risk factors were most commonly associated with the disease. This kind of study is called

- a. Family risk study
- b. Twin study
- c. Adoption study
- d. Genetic marker study
- e. Prospective longitudinal study

**113.** Non-REM (NREM) sleep is associated with

- a. Increased blood pressure
- b. Increased heart rate
- c. Penile erections
- d. Dreaming
- e. Night terrors

**114.** A young man with a long history of aggressive and destructive behavior is arrested for assault and battery. Analysis of his cerebrospinal fluid is likely to show

- a. High levels of endorphins
- b. Low levels of endorphins
- c. High levels of serotonin
- d. Low levels of serotonin
- e. Low levels of Substance P

**115.** A 25-year-old man risks losing his job for chronic tardiness because he feels compelled to check and recheck whether he turned off his bathroom faucets for hours before he can leave for work. The neurotransmitter involved in this disorder is

- a. Dopamine
- b. Norepinephrine
- c. Acetylcholine
- d. Histamine
- e. Serotonin

**Items 116–117**

A 71-year-old with Parkinson's disease calls his neurologist in a panic reporting that he is "going crazy" because, for the past three days, he has been seeing little people walking all over his furniture.

**116.** What is the most likely cause of his hallucinations?

- a. L-dopa was decreased one week before the symptoms started
- b. Selegeline (an MAO inhibitor) was decreased two weeks before symptoms started
- c. L-dopa was increased four days before the hallucinations started
- d. The patient has developed a psychotic depression
- e. The hallucinations are a symptom of schizophreniform disorder

**117.** What is the treatment most likely to be effective?

- a. A reduction of L-dopa dosage
- b. An increase of L-dopa dosage
- c. Adding an anticholinergic medication
- d. Adding haloperidol
- e. Adding amitriptyline

**118.** A 7-year-old girl suddenly develops acute separation anxiety, oppositional behavior, nighttime fears, and a variety of compulsive behaviors (lining up her toys, ritualistic counting, excessive washing). Two weeks earlier the girl

- a. Was diagnosed with group A, beta-hemolytic streptococcal pharyngitis
- b. Was scratched by the family cat
- c. Went camping in a tick-infested area
- d. Ate a poorly cooked pork sausage
- e. Suffered several mosquitoes' bites

**DIRECTIONS:** Each group of questions below consists of lettered options followed by numbered items. For each numbered item, select the appropriate lettered option.

**Items 119–122**

For each neurotransmitter, choose the appropriate definition.

- a. Glutamic acid
- b. Gamma-aminobutyric acid (GABA)
- c. Norepinephrine
- d. Somatostatin
- e. Substantia P
- f. Acetylcholine

**119.** Catecholamine

**120.** Excitatory amino acid

**121.** Neuropeptide

**122.** Inhibitory amino acid

**Items 123–127**

Match symptoms with the part of the brain lesioned or malfunctioning.

- a. Hypothalamus
- b. Amygdala
- c. Nucleus basalis of Meynert
- d. Mesolimbic circuit
- e. Hippocampus
- f. Mammillary bodies

**123.** A 22-year-old woman with an inoperable craniopharyngioma has become grossly obese and experiences rapid fluctuation of body temperature.

**124.** A 34-year old homeless man with a chronic psychiatric disorder hears the voices of the angels and believes he is the New Savior.

**125.** A 17-year-old male cannot remember anything that happened after he recovered from a bout of encephalitis, but he has no difficulties with remote memories.

**126.** A 70-year-old retired librarian lives in a nursing home because she cannot take care of herself. She does not recognize her children anymore, she gets lost in her own room, and requires help for showering and dressing.

**127.** An 82-year-old woman at the late stage of dementing disorder roams her nursing home touching and licking everything she passes, over and over again. She is placid and nothing seems to frighten her.

**Items 128–132**

For each function described below, select the hypothalamic nucleus most likely responsible.

- a. Anterior
- b. Ventromedial
- c. Lateral
- d. Posterior
- e. Supraoptic

**128.** Acts as a satiety center for appetite

**129.** Stimulates appetite

**130.** Functions with the reticular activating system to control arousal

**131.** Influences sexual behavior

**132.** Produces antidiuretic hormone

# HUMAN BEHAVIOR: BIOLOGIC AND RELATED SCIENCES

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## Answers

**94. The answer is b.** (*Sadock, 7/e, pp 1450–1451, 1454.*) The locus ceruleus is located on the floor of the fourth ventricle in the anterior pons. It is the main noradrenergic nucleus of the brain and, through its widespread projections to many areas of the brain and the spinal cord, it regulates arousal, attention, and autonomic tone. The locus ceruleus, due to its connection with the amygdala, is stimulated by exposure to threats. Its firing causes adaptive responses that prepare the individual for fight or flight, such as increased vigilance, heart rate, and pupil dilation. Since severe stress causes a chronic state of hyperactivity of the nucleus ceruleus, individuals with post-traumatic stress disorder experience fight or flight symptoms such as increased startle reflex, autonomic hyperarousal, and increased level of vigilance in response to nonthreatening stimuli that trigger memories of the original stressful event.

The nucleus basalis of Meynert is connected to cognitive functions and memory. This nucleus degenerates in Alzheimer's dementia. Degeneration of the neurons in the substantia nigra is connected to Parkinson's disease. The raphe nuclei are the main source of serotonin in the central nervous system and they are connected with the regulation of mood, pain, and aggression.

**95. The answer is a.** (*Sadock, 7/e, p 1647.*) Cataplexy refers to a sudden loss of muscle tone, ranging in severity from weakness in the knee to a total loss of tone, triggered by strong emotions, that takes place during full wakefulness. Cataplexy is thought to be due to an abnormal intrusion of REM sleep phenomena in periods of wakefulness. It is usually treated with medications that reduce REM sleep, such as antidepressants. Cataplexy may be a symptom of narcolepsy, another dyssomnia characterized by the irresistible urge to fall asleep regardless of the situation.

**96. The answer is b.** (*Hales, 3/e, p 614.*) When animals are exposed to prolonged and inescapable stress, they develop analgesia through the release of endogenous opiates such as endorphins. Equally, patients who have experienced severe trauma readily release opiates in response to any stimulus that is reminiscent of the original trauma. This release, in turn, causes psychic numbing, a subjective feeling of calm and analgesia. This response can be suppressed by opiate antagonists and explains why traumatized people use self-injury as a way to calm themselves.

**97. The answer is e.** (*Hales, 3/e, p 22.*) Gamma-aminobutyric acid (GABA) receptors represent the most important inhibitory system in the central nervous system (CNS) and are found in almost every area the brain. Benzodiazepines, barbiturates, and many anticonvulsants act through activation of the GABA receptors. This explains the cross-tolerance that occurs between these substances.

**98. The answer is a.** (*Sadock, 7/e, pp 140–141.*) Seasonal circadian rhythm has been implicated in the etiology of seasonal depressive disorder, which is characterized by recurrent depression that starts in November and resolves in March. Winter's short days cause a change in the pattern of secretion of nocturnal melatonin, which is inhibited by light. In animals this causes a decrease in activity level, reproduction-related behaviors, and aggressive behavior. The same mechanism is postulated to be effective in seasonal depression, which, in fact, responds to light therapy.

**99. The answer is c.** (*Kaufman, 4/e, pp 390–391; Hales, 3/e, pp 958, 966.*) Dreaming is the main characteristic of REM (rapid eye movement) sleep. The active eye movements are attributed to the individual's "watching" his or her dreams. The lack of muscle tone prevents the individual from acting out his or her dreams. REM sleep is also characterized by increased heart rate and blood pressure and, in men, nocturnal erections. In sleep paralysis, the individual is unable to move on awakening due to an abnormal intrusion of an REM sleep-related atonia into wakefulness. Sleepwalking and night terrors take place during transition from deep sleep to REM sleep. Restless legs syndrome is classified as a "parasomnia not otherwise specified." It consists of an inability to fall asleep due to paresthesia of the calf muscles that promotes an intense urge to keep the legs in motion.

**100. The answer is e.** (*Kaufman, 4/e, pp 123–124; Yudofsky, 3/e, p 100.*) The frontal lobes are associated with the regulation of emotions, the manifestation of behavioral traits usually connected to the personality of an individual, and executive functions (the ability to make appropriate judgments and decisions and to form concepts). They also contain the inhibitory systems for behaviors such as bladder and bowel release. Damage of the frontal lobes causes impairment of these functions but it is not, strictly speaking, a form of dementia, because memory, language, calculation ability, praxis, and IQ are often preserved. Personality changes, disinhibited behavior, and poor judgment are usually seen with lesions of the dorsolateral regions of the frontal lobes. Lesions of the mesial region, which is involved in the regulation of the initiation of movements and emotional responses, cause slowing of motor functions, speech, and emotional reactions. In the most severe cases, patients are mute and akinetic. Lesions of the orbitofrontal area are accompanied by abnormal social behaviors, an excessively good opinion of oneself, jocularity, sexual disinhibition, and lack of concern for others.

**101. The answer is e.** (*Coffey, pp 669–674.*) Prader-Willi syndrome is a genetic disorder caused by a defect of the long arm of chromosome 15. Characteristically, children are underweight in infancy. In early childhood, due to a hypothalamic dysfunction, they start eating voraciously and quickly become grossly overweight. Individuals with this syndrome have characteristic facial features and present with a variety of neurologic and neuropsychiatric symptoms including autonomic dysregulation, muscle weakness, hypotonia, mild to moderate mental retardation, temper tantrums, violent outbursts, perseveration, skin picking, and a tendency to be argumentative, oppositional, and rigid.

**102. The answer is d.** (*Coffey, pp 652–659, 927–929.*) Fragile X syndrome is the most common form of inherited mental retardation, with a prevalence of 1 in 1200 in males and 1 in 2500 in females. Its manifestations are due to the inactivation of the fragile X mental retardation gene. Affected individuals have characteristic physical features including long face, large ears, and large hands. Adult males also have enlarged testicles, due to the elevated gonadotropin levels. Affected individuals and female carriers have higher rates of OCD, ADHD, dysthymia, anxiety, and antisocial personality disorder. Individuals with fragile X syndrome also display many behaviors

reminiscent of autism. They are shy and socially awkward, they avoid eye contact, and, as autistic individuals, they engage in self-stimulatory, peculiar, and self-injurious behaviors. Down syndrome is the most common genetic mental retardation syndrome, occurring in 1 in 660 live births, but in the majority of cases (94%), it is due to a *de novo* trisomy of chromosome 21 and, as such, it is not inherited. Hurler's syndrome is one of the mucopolysaccharidoses. In its most severe form, this rare syndrome presents with multisystemic deterioration secondary to the accumulation of mucopolysaccharides. Hurler's syndrome starts during the first year of life and causes death before age 10. Rett's syndrome, a pervasive developmental disorder, is characterized by a devastating progressive deterioration of cognitive, social, and motor functions that starts between age 5 months and 18 months, after an initial period of normal development. William's syndrome is a rare form of genetic mental retardation caused by a deletion of part of chromosome 23.

**103. The answer is b.** (*Schatzberg, 2/e, pp 240–241.*) Monoamine oxidases inactivate biogenic amines such as norepinephrine, serotonin, dopamine, and tyramine through oxidative deamination. The MAO inhibitors block this inactivation, thereby increasing the availability of these neurotransmitters for synaptic release. Norepinephrine and serotonin play an important role in the pathophysiology of depression and other psychiatric disorders.

**104. The answer is d.** (*Yudofsky, 2/e, pp 10–11, 690–691.*) Gamma-aminobutyric acid (GABA) is the major inhibitory neurotransmitter in the central nervous system. It has an important role in modulating the activity of other neurotransmitters. Many investigators believe that it has an important role in the etiology of anxiety disorders, though the exact mechanisms are still speculative.

**105. The answer is e.** (*Sadock, 7/e, p 2368.*) The boy in the vignette experienced an acute dystonic reaction, an adverse effect of neuroleptic medications, secondary to blockage of dopamine receptors in the nigro-striatum system. Dystonic reactions are sustained spasmodic contractions of the muscles of the neck, trunk, tongue, face, and extraocular muscles. They can be quite painful and frightening. They usually occur within hours to three days after the beginning of the treatment and are more frequent in males

and young people. They are also usually associated with high-potency neuroleptics. Occasionally, dystonic reactions are seen in young people who have ingested a neuroleptic medication, mistaking it for a drug of abuse.

**106. The answer is c.** (*Sadock, 7/e, pp 1810–1812.*) The symptoms experienced by the woman in the vignette, low tolerance to cold, poor appetite with weight gain, brittle hair, and puffy face due to myxedema, are diagnostic for hypothyroidism. Depressive symptoms are commonly associated with this disorder. Hypocalcemia and hypercortisolemia (associated with an elevated ACTH in Cushing's syndrome) are also associated with depression but present with different symptoms.

**107. The answer is c.** (*Sadock, 7/e, p 1007.*) Cocaine inhibits the normal reuptake of norepinephrine and dopamine, causing an increase of the concentration of these neurotransmitters in the synaptic cleft. This mechanism is responsible for the euphoria and sense of well-being that follow cocaine use, but it also causes excessive sympathetic activation and diffuse vasoconstriction. High blood pressure, mydriasis, cardiac arrhythmias, coronary artery spasms, and myocardial infarcts are all seen with cocaine intoxication. Other toxic effects of cocaine include headaches, ischemic cerebral and spinal infarcts, subarachnoid hemorrhages, and seizures. Phencyclidine (PCP), cannabinoids, opiates, and lysergic acid diethylamide (LSD) intoxications present with different symptoms and signs.

**108. The answer is a.** (*Hales, 3/e, pp 19–20.*) The cell bodies of serotonin-releasing neurons are located in the midbrain in a group of nuclei called the raphe nuclei. Through their projections on virtually all areas of the central nervous system, the raphe nuclei contribute to the regulation of mood, sleep, pain transmission, and aggression.

**109. The answer is c.** (*Hales, 3/e, p 351.*) Severe anterograde memory deficits with an inability to form new memories are the main feature of Korsakoff's syndrome or alcohol persisting amnesic disorder. Retrograde amnesia is also present, with the most severe loss of memory occurring for events that were closer to the beginning of the disorder. Remote memories are relatively preserved. The disorder is due to dietary thiamine deficiency and subsequent damage of the thiamine-dependent structures of the brain (mammillary bodies and the regions surrounding the third and fourth ven-

tricles). Korsakoff's syndrome can rarely be due to other causes of thiamine deficiency, such as diseases that cause severe malabsorption.

**110. The answer is c.** (*Kaufman, 4/e, pp 172–175; Sadock, 7/e, pp 235–236.*) Lesions of the Broca area, located in most right-handed people in the left frontal lobe, cause nonfluent aphasia, a disorder characterized by a severe reduction of speech with normal comprehension. Speech is limited to single words or repetition of one or two common sentences. The most common cause is a stroke in the middle cerebral artery territory. Right hemiparesis, with a particular involvement of the lower face and the arm and dysarthria are usually associated features, due to the proximity of the parietal primary motor area. Nonfluent aphasia can be confused with delirium and psychosis due to the unusual speech production and the patient's acute distress and agitation.

**111. The answer is b.** (*Kaufman, 4/e, pp 230–233; Yudofsky, 3/e, p 925.*) Partial complex seizures usually (90% of the time) originate from the temporal lobe. Auras that consist of unpleasant odors often originate from the tip of the temporal lobe, the uncus, an area involved in processing olfactory sensations. In the past, such seizures were called "uncinate fits."

**112. The answer is e.** (*Hales, 7/e, p 90.*) Prospective longitudinal studies are used to determine the incidence rates of an illness in a specific population (the new cases of the disorder during a specified period of time) and the risk factors associated with the disease. In these studies, a sample of persons younger than the age at which the disease usually manifests is chosen and evaluated for appropriate characteristics that represent or could represent risk factors for the disorder. After a specific interval, the sample is reassessed, with specific focus on the number of people that have developed the disease and what risk factors were present in this segment of the population. The rate of the population that is found to have developed the disease when the sample is reevaluated represents the incidence rate of the disorder. Comparing the incidence rates of two populations provides the "relative risk" for each population.

**113. The answer is e.** (*Sadock, 7/e, pp 1693–1694.*) Night terrors are characterized by a partial awakening accompanied by screaming, thrashing, and autonomic arousal. They are non-REM sleep events. Increase in blood pressure and heart rate, penile tumescence, and dreaming are associated with REM sleep.

**114. The answer is d.** (*Yudofsky, 3/e, pp 489–490.*) The correlation between low levels of serotonin in the cerebrospinal fluid (CSF) and aggressive behavior has been proved by many studies conducted with animals and human subjects. There is a clear inverse relationship between the levels of CSF serotonin in both violent suicidal behavior in depressed patients and aggressive behavior in patients with personality disorders. Endorphin and substance P are involved in the transmission and modulation of pain.

**115. The answer is e.** (*Hales, 3/e, pp 604–605.*) It has been proved that a dysfunction of serotonergic pathways is implicated in the genesis of obsessive-compulsive disorder. This finding is supported by the anti-obsessional effects of medications that increase the concentration of serotonin in the synaptic cleft, such as SSRIs and clomipramine. Of the other neurotransmitters, dopamine is linked to psychosis, acetylcholine plays a role in cognitive functions and memory, and norepinephrine is involved in anxiety disorders.

**116–117. The answers are 116-c, 117-a.** (*Yudofsky, 3/e, pp 836–837.*) Hallucinations are the most common side effect of anti-Parkinson medications. Hallucinations occur in 30% of the treated patients and can be induced by any type of medication used to treat Parkinson's disease, including dopaminergic agents such as L-dopa and amantadine, MAO inhibitors, and anticholinergic medications. The hallucinations usually consist of clear images of people and animals and may be preceded by sleep disturbances. Increasing age, polypharmacy, long treatment, and use of anticholinergic medications increase the risk for developing hallucinations. Reducing the dosage or eliminating anticholinergic agents is usually the only necessary treatment.

**118. The answer is a.** (*Sadock, 7/e, pp 790–1456.*) An acute onset of obsessions and compulsions in a prepubertal child is characteristic of a pediatric autoimmune neuropsychiatric disorder associated with streptococcal (group A, beta-hemolytic) infections (PANDAS). Behavioral problems, new onset separation anxiety, emotional lability, and motor hyperactivity are accompanying symptoms. Lyme's disease (transmitted by tick bites), encephalitis (transmitted by mosquito bites), trichinosis (from poorly cooked pork meat), and cat scratch disease have different clinical presentations.

**119–122. The answers are 119-c, 120-a, 121-d, 122-b.** (*Hales, 2/e, pp 13–27.*) CNS neurotransmitters include amino acids, biogenic amines, and neuropeptides. There are many other neurotransmitter substances, and many are still poorly understood. This is one of the most exciting areas of current psychiatric research. As more and more knowledge accrues, it becomes possible to develop more specific psychopharmacologic interventions. Glutamic and aspartic acids have excitatory properties. GABA is the principal inhibitory neurotransmitter. The biogenic amines include the catecholamines such as dopamine, norepinephrine, epinephrine, histamine, and the indolamine serotonin. Neuropeptides include beta-endorphin, somatostatin, and vasopressin.

**123–127. The answers are 123-a, 124-d, 125-e, 126-c, 127-b.** (*Yudofsky, 3/e, pp 645–646; Sadock, 7/e, pp 1101–1102; Yudofsky, 3/e, pp 488–489; Sadock, 7/e, p 340; Kaufman, 4/e, p 125; Yudofsky, 3/e, pp 291, 506–507.*) Craniopharyngiomas, although they originate in the pituitary, often present with dysregulation of body temperature, sleep, and eating behavior (hyperphagia or anorexia) due to the upward extension of the tumor into the hypothalamus.

Dysfunction of the prefrontal cortex, the limbic system, and the dopaminergic pathways that connect these areas is thought to be the cause of the positive and negative symptoms of schizophrenia as well as the cognitive deficits characteristic of this disorder. This hypothesis has been supported by the numerous neuroanatomical and physiological abnormalities found in schizophrenic patients. These abnormalities include, among others, reduced prefrontal gray and white matter, abnormal blood flow and metabolism in the prefrontal cortex, and decreased volume and evidence of faulty migration of neurons in the hippocampus and entorhinal cortex.

Herpes simplex encephalitis is the most common sporadic encephalitis. The herpes virus has a predilection for the temporal lobes and, without treatment, it causes severe damage to all the structures located in these areas. Anterograde amnesia, due to bilateral lesions of the hippocampus, Klüver-Bucy syndrome, due to bilateral damage of the amygdala, and partial complex seizures are characteristic sequelae of herpes encephalitis.

Klüver-Bucy syndrome, initially described in monkeys, refers to the behavioral and personality changes, including placidity, excessive exploratory behavior, hyperorality, hypersexuality, and absence of fear reaction, that follow bilateral resection of the amygdala. Alzheimer's disease is characterized

by a dramatic loss of cholinergic neurons from the nucleus basalis of Meynert (also called substantia innominata), a group of neurons located in the septal area, beneath the globus pallidus. The nucleus basalis projects widely to the cerebral cortex, the hippocampus, and the limbic system, and is associated with memory and cognitive functions. According to the most recent theories, this loss of neurons underlies the cognitive deficits characteristic of Alzheimer's disease. The severity of the dementia correlates with the extent of the loss of the enzyme choline acetyltransferase. One theory proposes that degeneration of the nucleus basalis triggers compensatory mechanisms which, in turn, cause more plaque formation and more pathologic changes.

The mammillary bodies and other diencephalic structures surrounding the third and fourth ventricles are dependent on thiamine to maintain their anatomical integrity and their functions. In cases of severe thiamine deficiency, most of the time due to protracted alcohol abuse, these areas are severely damaged. The acute results are the mental confusion, ataxia, and extraocular palsy seen in Wernicke's encephalopathy. The chronic stage, Korsakoff's dementia, is characterized by severe anterograde and retrograde amnesia.

**128–132. The answers are 128-b, 129-c, 130-d, 131-a, 132-e.** (*Sadock, 7/e, pp 28–30.*) Through its connection with the limbic system and the various visceral and somatic nuclei of the brainstem, the hypothalamus regulates the somatic and autonomic responses that accompany emotions. The hypothalamus is also involved in the regulation of appetite, body temperature, sexual behavior, memory, and the functions of the pituitary gland.

The anterior nucleus facilitates sexual interest and specific sexual behaviors. Lesions in this areas suppress these behaviors. The ventromedial nucleus acts as a satiety center and stimulation of this area reduces appetite. This nucleus acts by inhibiting the lateral nucleus, which stimulates appetite. Ablation of the lateral nucleus causes a fatal anorexia. Dysfunctions of the ventromedial nucleus are involved in the hyperphagia seen in Prader-Willi syndrome. The posterior nucleus, along with the contiguous reticular activating system, controls levels of arousal. Lesions in these areas cause lethargy and somnolence. The supraoptic and paraventricular nuclei produce vasopressin and oxytocin. These hormones travel through the axons of their parent neurons to the posterior pituitary gland, where they are released. The paraventricular nucleus and other hypothalamic areas also release the neuropeptides that regulate the synthesis of pituitary hormones in the median eminence.

# DISORDERS OF CHILDHOOD AND ADOLESCENCE

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## Questions

**DIRECTIONS:** Each item below contains a question or incomplete statement followed by suggested responses. Select the **one best** response to each question.

**133.** A 5-year-old boy is referred for psychiatric evaluation because he is unable to sit still in school for more than a few seconds at a time. He pushes other children and yanks toys away from others. In the middle of story time, he interrupts, wanders around the classroom, or pokes his neighbors. His parents report that he has been “on the move” since he learned to walk. The child’s language is appropriate for his age and he learned to ride a two-wheel bicycle at age 4. The most likely diagnosis is

- a. Oppositional defiant disorder
- b. ADHD, inattentive type
- c. Pervasive developmental disorder
- d. ADHD, combined type
- e. Mental retardation, mild

**134.** The parents of a 7-year-old boy with fragile X syndrome and an IQ of 65, are increasingly frustrated by his fidgeting, restlessness, and inability to focus. Family meals are consistently disrupted because the child is unable to sit for more than a few seconds and one of his parents needs to follow him everywhere to prevent him from endangering himself while he runs around the house. The teachers report similar difficulties in the classroom. The percentage of children with mental retardation who also exhibit these symptoms is approximately

- a. 0–3
- b. 10–20
- c. 30–40
- d. 50–60
- e. 75–85

**135.** The parents of an 8-year-old boy with a normal IQ are concerned because he is a very slow reader and does not appear to understand what he reads. When the boy reads aloud, he misses words and changes the sequence of the letters. Choose the correct statement about this disorder:

- a. It is diagnosed on the basis of a defect in visual or hearing acuity
- b. It is often associated with spelling and verbal language difficulties
- c. It occurs in less than 1% of the population
- d. It occurs more often in girls than boys
- e. It is often associated with brainstem neurologic defects

**136.** For the past three months a 15-year-old girl has had to turn her light on and off 23 times at exactly 10:30 P.M. before she can go to bed. She can spend from one to two hours on this ritual because she has to start again if she is interrupted or loses count. She is upset if the position of the order of the objects she has on her desk is changed even slightly and cannot stop worrying about her family's safety. Her parents wish to try a nonpharmacological treatment before considering medications. Which is the most appropriate intervention in this disorder?

- a. Play therapy
- b. Individual psychodynamic psychotherapy
- c. Group therapy
- d. Behavioral therapy
- e. Family therapy

**137.** A 9-year-old boy from a single-parent household is mandated to attend a fire prevention group after setting fire to a toolshed in his backyard. The boy began by setting on fire a small pile of dry leaves, then he poured gasoline on it. The fire went out of control and engulfed the toolshed. The boy's mother reports to the police that there have been at least four previous fire-setting incidents during the previous six months. Which of the following statements is correct:

- a. Fires started by children rarely cause any serious damage
- b. Children younger than 6 are not likely to experiment with fire
- c. Girls and boys are equally at risk for pathological fire setting
- d. Adolescent fire setting is usually a solitary activity
- e. Impulsivity and poor school performance are common in fire setters

**138.** A 5-year-old is being evaluated for ADHD. He has a past history of failure to thrive (FTT) and he is still at the 15th percentile for weight and height. The evaluator notices that he has unusually small eyes with short palpebral fissures as well as a thin upper lip with a smooth philtrum. Which substance did his mother abuse during pregnancy?

- a. Heroin
- b. Nicotine
- c. Cannabis
- d. Alcohol
- e. Cocaine

**139.** A 7-year-old boy avoids having sleepovers because he wets his bed almost every night and is afraid his friends would tease him. This disorder is

- a. Usually diagnosed before age 4
- b. Most likely to occur in the first one-third of the night
- c. Rarely associated with daytime incontinence
- d. More common in girls than boys
- e. Rarely associated with other emotional or behavioral symptoms

**140.** A 13-year-old girl grunts and clears her throat several times in an hour and her conversation is often interrupted by random shouting. She also performs idiosyncratic, complex motor activities such as turning her head to the right while she shuts her eyes and opens her mouth. She can prevent these movements for brief periods of time, with effort. The most appropriate treatment for this disorder is

- a. Individual psychodynamic-oriented psychotherapy
- b. Lorazepam
- c. Methylphenidate
- d. Haloperidol
- e. Imipramine

**141.** A 6-year-old boy has just been diagnosed with ADHD and started on methylphenidate 5 mg three times a day (TID). Parents report that the child is able to focus better, is less hyperactive, and seems to have more tolerance for frustration. They are concerned, though, because he is never hungry. The child psychiatrist explains that decreased appetite is a common side effect of methylphenidate. Another more serious side effect of this medication is

- a. Night terrors
- b. Choreiform movements
- c. Tics
- d. Cardiac arrhythmias
- e. Leukopenia

**142.** An 8-year-old girl becomes tearful and distressed and claims she feels sick every morning, on school days. Once in school, she often goes to the nurse, complaining of headaches and stomach pains. At least once a week, she misses school, or she is picked up early by her mother, due to her complaints. Her pediatrician has ruled out organic causes for the physical symptoms. The child is usually symptom-free on weekends, unless her parents go out and leave her with a babysitter. The most likely diagnosis is

- a. Separation anxiety
- b. Juvenile depression
- c. Somatization disorder
- d. Generalized anxiety disorder
- e. Attachment disorder

**143.** A 2-year-old girl has undergone two intravenous pyelograms (IVPs) and one cystoscopy for recurrent frank hematuria without any evidence of an organic disorder. Only the urine specimens collected by her mother are consistently positive for blood. Her mother does not appear at all distressed when she is told that her daughter will need another invasive procedure to clarify the diagnosis. Choose the most appropriate statement concerning this disorder:

- a. Older children often collude with the pathological mother
- b. The mother's motivation is usually the pleasure she experiences when her child suffers
- c. The offending caregiver, usually the mother, is often also neglectful and abusive in a more general way
- d. Usually only one child is victimized in a family
- e. Mothers who engage in such activities are usually mentally retarded or psychotic

**144.** A social worker makes a routine visit on a 3-year-old boy who has just been returned to his biological mother after spending three months in foster care for severe neglect. The child initially appears very shy and clings fearfully to his mother. Later on he starts playing in a very destructive and disorganized way. When the mother tries to stop him from throwing blocks at her, he starts kicking and biting. Mother becomes enraged and starts shouting. Based on the history, this child's most likely diagnosis is

- a. ODD
- b. ADHD
- c. Reactive attachment disorder
- d. PTSD
- e. Depression

**145.** A first-grade teacher is concerned about a 6-year-old girl in her class who has not spoken a single word since school started. The little girl participates appropriately in the class activities and she uses gestures and drawings and nods and shakes her head to communicate. The parents report that the little girl talks only in the home and only in the presence of her closest relatives. Choose the most appropriate diagnosis:

- a. Autism
- b. Expressive language disorder
- c. Oppositional defiant disorder
- d. School phobia
- e. Selective mutism

**146.** Parents are awoken by their 4-year-old screaming. They rush into his room and find him in his bed, thrashing wildly, his eyes wide open. He pushes them away when they try to comfort him. After two minutes, the boy suddenly falls asleep and the next day he has no memory of the episode. This disorder is associated with

- a. REM sleep
- b. Stage 2 of non-REM sleep
- c. Stage 3 of non-REM sleep
- d. Stage 4 of non-REM sleep
- e. Transition from deep sleep to lighter sleep

**147.** An 11-year-old boy who has been withdrawn, defiant, despondent, and very irritable for several weeks hangs himself in the garage after his parents threaten to give away his beloved dog if he “does not shape up.” Choose the most correct statement:

- a. Depression is rare in children
- b. The presentation of depression in children is often similar to adult presentation
- c. Medications are not recommended in childhood depression
- d. Depressed children rarely experience psychotic symptoms
- e. A family history of affective disorders is common in depressed children

**148.** The flow of a 5-year-old boy’s speech is interrupted by hesitations, repetition of syllables, and excessive sound prolongations. These symptoms worsen when the boy is anxious or is asked to speak in front of the class. Choose the correct statement about this disorder:

- a. It is more common in girls than boys
- b. It usually starts between ages 2 and 4
- c. Without treatment, it is likely to persist into adulthood
- d. It is commonly associated with major mental illness
- e. Family members of a child with this disorder are rarely affected

**149.** A 5-year-old boy does not show any interest in other children and ignores adults other than his parents. He spends hours lining up his toy cars or spinning their wheels but does not use them for “make believe” play. He rarely uses speech to communicate. Choose the most appropriate diagnosis:

- a. Asperger’s disorder
- b. Mental retardation
- c. Disintegrative disorder of childhood
- d. Autism
- e. Rett’s disorder

**150.** A 15-year-old boy is arrested for shooting the owner of the 7-11 he tried to rob. He has been in the Department of Youth Services' custody several times for a variety of crimes against propriety, possession of illegal substances, and assault and battery. He is cheerful and unconcerned during the arrest, more worried about not losing his leather jacket than about the fate of the man he has injured. Choose the most appropriate diagnosis:

- a. Oppositional defiant disorder
- b. Antisocial personality disorder
- c. Narcissistic personality disorder
- d. Conduct disorder
- e. Substance abuse

# DISORDERS OF CHILDHOOD AND ADOLESCENCE

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## Answers

**133. The answer is d.** (*Lewis, 2/e, pp 546–547.*) Excessive motor activity, usually with intrusive and annoying qualities, poor sustained attention, difficulties inhibiting impulsive behaviors in social situations and on cognitive tasks, and difficulties with peers are the main characteristics of ADHD combined type. Symptoms have to be present in two or more settings (in this case, home and school) and they have to cause significant impairment.

**134. The answer is b.** (*Coffey, pp 652–659; Lewis, 2/e, p 508.*) Rates of ADHD in mentally retarded children range from 10 to 20%. Stimulants are as effective in mentally retarded children with ADHD as in children with normal intelligence, but incidence of tics and emotional withdrawal may be higher. Emotional and psychiatric disorders are more common in mentally retarded than in nonretarded individuals. In Rutter's Isle of Wight study, 30 to 40% of the children with an IQ lower than 75 were found to have psychiatric disorders. In the nonretarded population, by comparison, rates were between 7.7 and 9.5%.

**135. The answer is b.** (*Coffey, pp 691–717; Lewis, 2/e, pp 520–526.*) Dyslexia occurs in 3 to 10% of the population and is more often found in boys than in girls. When a reading disorder is caused by a defect in visual or hearing acuity, it is excluded by diagnostic criteria from the diagnosis of developmental reading disorder. Almost all patients with this problem have spelling difficulties, and nearly all have verbal language defects. It is believed that the most common etiology relates to cortical brain pathology.

**136. The answer is d.** (*Lewis, 2/e, p 690.*) Behavioral therapy techniques such as exposure and response prevention and desensitization are very ef-

fective in adults and adolescents with a diagnosis of OCD. OCD has a lifetime prevalence of between 0.2 and 1.2 in children. Children as young as 2 have been diagnosed with the disorder. Contrary to adult onset OCD, in childhood, obsessions and compulsion are often egosyntonic.

**137. The answer is e.** (*Lewis, 2/e, pp 601–606.*) Most children between 3 and 5 show an interest in fire. Experimentation with matches or other incendiary materials emerges between 5 and 9 years of age. Boys are more likely to start fires than girls. Inattention, impulsivity, poor school performance, learning disability, and decreased ability to modulate anger are more frequent in fire setters than in the general population. Single-parent homes, conflicted, cold, and negative family interactions, and a greater use of harsh physical discipline are frequent in the history of fire setters. Fires started by children cause many deaths, injuries, and serious economic damage each year. In 1991, children started 103,260 fires, and caused 457 deaths, 1856 injuries, and \$310 million in property damage. Fire setting is the leading cause of death for preschoolers and the second leading cause of death, after automobile accidents, for children between 6 and 14. While younger children set fires alone, adolescents do so with friends, usually in the context of a peer group that encourages or condones this and other deviant behaviors.

**138. The answer is d.** (*Lewis, 2/e, pp 375–378.*) Fetal alcohol syndrome occurs in 1 to 2 live births per 1000, and among 2 to 10% of alcoholic mothers. Fetal alcohol syndrome is characterized by intrauterine growth retardation and persistent postnatal poor growth, microcephaly, developmental delays, attentional deficits, learning disabilities, and hyperactivity. Characteristic facial features are microphthalmia with short palpebral fissures, midface hypoplasia, thin upper lip, and a smooth and/or long philtrum. Children whose mothers used opiates during pregnancy are born passively addicted to the drug and exhibit withdrawal symptoms in the first days and weeks of life. During the first year of life, these infants show poor motor coordination, hyperactivity, and inattention. These problems persist during school-age years, although few differences in cognitive performance are reported. Infants exposed to cannabis prenatally present with decreased visual responsiveness, tremor, increased startle reflex, and disrupted sleep patterns. Long-term longitudinal outcome studies are few and contradictory. Prenatal exposure to cocaine causes impaired startle response, impaired habituation, recognition and reactivity to novel stimuli, and increased irri-

tability in infants. Older children present with language delays, poor motor coordination, hyperactivity, and attentional deficits.

**139. The answer is b.** (*DSM-IV, pp 108–110.*) Nocturnal enuresis is not diagnosed before age 5, an age at which continence is usually expected. The incidence in boys is somewhat higher than in girls. This disorder is often associated with daytime (diurnal) wetting. Nocturnal enuresis usually is diagnosed in childhood although adolescent onset does occur. When the disorder starts in adolescence, it tends to be associated with more psychopathology and to have a poorer prognosis. Nocturnal enuresis usually occurs 30 minutes to 3 hours after the onset of sleep. About half of enuretic children have other associated emotional disturbances, though it is sometimes difficult to separate cause and effect.

**140. The answer is d.** (*Lewis, 2/e, pp 623–627.*) Vocal tics (grunting, barking, throat clearing, coprolalia, shouting) and simple and complex motor tics are characteristic findings of Tourette's syndrome. Pharmacological treatment of this disorder includes neuroleptics and alpha-2 agonists (clonidine, guanfacine).

**141. The answer is c.** (*Schatzberg, 2/e, p 812.*) Common side effects of methylphenidate include loss of appetite and weight, irritability, oversensitivity and crying spells, headaches, and abdominal pain. Insomnia may occur, particularly when this agent is dispensed late in the day. Tics, while a less frequent complication of stimulant treatment, can cause significant impairment. Choreiform movements and night terrors are side effects of another stimulant, pemoline. Leukopenia and cardiac arrhythmias are not associated with stimulant treatment.

**142. The answer is a.** (*Lewis, 2/e, pp 676–678.*) Separation anxiety disorder is characterized by manifestations of distress when the child has to be separated from loved ones. The distress often leads to school refusal, refusal to sleep alone, multiple somatic symptoms, and complaints when the child is separated from loved ones, and at times may be associated with full-blown panic attacks. The child is typically afraid that harm will come either to loved ones or to her/himself during the time of separation.

**143. The answer is a.** (*Lewis, 2/e, pp 1048–1051.*) In Münchhausen by proxy a caregiver, usually the mother, fabricates or produces symptoms

of illness in a child. The caregiver's motive is to vicariously receive care and attention from health providers through the sick child. The severity of the disorder varies, from cases in which symptoms are completely fabricated to cases in which the mother causes serious physical damage or even death to the child. Mothers with Münchhausen by proxy are extremely attentive to their children and often are considered model parents. These mothers are not cognitively impaired or psychotic; on the contrary, they are often quite accomplished and knowledgeable and frequently work or have worked in the medical field. Not infrequently, more than one child is victimized in a family, particularly in cases of suffocation disguised as sudden infant death syndrome (SIDS) or apnea. A very pathological relationship develops between the mother and the victimized child, to the point that older children often collude with the mother in producing the symptoms.

**144. The answer is c.** (*Lewis, 2/e, pp 498–501.*) Reactive attachment disorder is the product of a severely dysfunctional early relationship between the principal caregiver and the child. When caregivers consistently disregard the child's physical or emotional needs or are frequently changed, the child fails to develop a secure and stable attachment with them. This failure causes a severe disturbance of the child's ability to relate to others, manifested in a variety of behavioral and interpersonal problems. Some children are fearful and inhibited, withdrawn and apathetic; others are aggressive, disruptive, disorganized, with low frustration tolerance and poor affect modulation. This condition is often confused with ODD and ADHD.

**145. The answer is e.** (*Lewis, 2/e, pp 515–516.*) In selective mutism, a child voluntarily abstains from talking in particular situations, usually at school, while remaining appropriately verbal at home. Some children only speak with their parents and siblings and are mute with relatives and friends. Children with selective mutism do not have a language impediment nor do they display the lack of social interactions, lack of imagination, and stereotyped behavior characteristic of autism. On the contrary, they can be quite interactive and communicative in a nonverbal way, using drawing, writing, and pantomime. Children with school phobia refuse to go to school but do not have problems communicating through language. Oppositional defiant disorder is characterized by persistent refusal to follow rules and defiance toward authorities, not by failure to speak.

**146. The answer is e.** (*Sadock, 7/e, p 1694.*) The child in the vignette is experiencing an episode of sleep terror disorder, a dyssomnia characterized by sudden partial arousal accompanied by piercing screams, motor agitation, disorientation, and autonomic arousal. The episodes take place during the transition from deep sleep to REM sleep. Children do not report nightmares (which would be associated with REM sleep) and do not have any memory of the episodes the next day. Sleep terrors occur in 3% of children and 1% of adults.

**147. The answer is e.** (*Lewis, 2/e, pp 655–665.*) Depressive disorders are not rare in children and often children with depression have relatives who also suffer from depression or another mood disorder. The incidence of depression is estimated to be 0.9% in preschoolers, 1.9% in school-age children, and 4.7% in adolescents. The incidence is considerably higher among children with neurological or medical illnesses. The diagnosis can be difficult because younger children's symptoms differ from the symptoms of depression usually displayed by adults. Often, aggression and irritability replace sad affect, and poor school functioning or refusal to go to school may be the prominent manifestations. Psychotic symptoms are present in one-third of cases of childhood major depression.

**148. The answer is b.** (*DSM-IV, pp 63–65; Lewis, 2/e, p 512; Hales, 3/e, pp 881–883.*) The boy in the vignette presents with classic symptoms of stuttering. This disorder affects 2 to 4% of children, with a male predominance of 3:1 to 4:1. Genetic factors are very significant in stuttering and the incidence of the disorder in relatives of affected persons is higher than that found in the general population. Stuttering is not associated with any major mental illness. Anxiety does occur around situations where the individual is required to speak in public or social situations. This can sometimes lead to restriction of lifestyle and avoidance of such situations.

**149. The answer is d.** (*DSM IV, pp 66–71.*) Autistic disorder is characterized by lack of interest in social interactions, severely impaired verbal and nonverbal communication, stereotyped behaviors, and a very restricted range of interests. Children with autism do not have imaginative and imitative play and can spend hours lining and spinning things or dismantling toys and putting them together. Mentally retarded children are developmentally delayed but their social interaction and interest in people are

appropriate for their mental age. Children with Asperger's disorder present with the same impairments in social interactions, range of interests, and imagination found in autism but they do not have language deficiencies. Rett's disorder and disintegrative disorder of childhood are two devastating entities characterized by an initial normal development followed by a rapid decline of cognitive, social, and motor functions.

**150. The answer is d.** (*Lewis, 2/e, pp 564–574.*) Children with conduct disorder display a persistent disregard for rules and other people's rights. Aggression toward people and animals, destruction of property, deceit and illegal activities, and frequent truancy from school are the main characteristics of the disorder. Approximately one-third of the children diagnosed with conduct disorder proceed to become delinquent adolescents and many are diagnosed with antisocial personality disorder in adulthood. Substance abuse is just one facet of conduct disorder. Children with oppositional defiant disorder are problematic and rebellious but do not routinely engage in aggressive, destructive, and illegal activities. Also, they do not present with the lack of empathy for others and the disregard for other people's rights that are typical of conduct disorder.

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# COGNITIVE DISORDERS AND CONSULTATION- LIAISON PSYCHIATRY

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## Questions

**DIRECTIONS:** Each item below contains a question or incomplete statement followed by suggested responses. Select the **one best** response to each question.

**151.** For the past 10 years the memory of a 74-year-old woman has progressively declined. Lately, she has caused several small kitchen fires by forgetting to turn off the stove, she cannot remember how to cook her favorite recipes, and she becomes disoriented and confused at night. She identifies an increasing number of objects as “that thing” because she cannot recall the correct name. Her muscle strength and balance are intact. Choose the most likely diagnosis.

- a. Huntington’s disease
- b. Multi-infarct dementia
- c. Creutzfeldt-Jakob disease
- d. Alzheimer’s disease
- e. Wilson’s disease

**152.** A 70-year-old male with a dementing disorder dies in a car accident. During the previous five years, his personality had dramatically changed and he caused much embarrassment to his family due to his intrusive and inappropriate behavior. Pathological examination of his brain shows fronto-temporal atrophy, gliosis of the frontal lobes’ white matter, characteristic intracellular inclusions, and swollen neurons. Amyloid plaques and neurofibrillary tangles are absent. Choose the correct diagnosis:

- a. Alzheimer’s disease
- b. Pick’s disease
- c. Creutzfeldt-Jakob disease
- d. B<sub>12</sub> deficiency dementia
- e. HIV dementia

**153.** The occurrence of delusions de novo in a person over the age of 35 years and without a known history of schizophrenia or delusional disorder should always alert to the possibility of

- a. Agoraphobia
- b. Frotteurism
- c. Sleep disorder
- d. Substance abuse
- e. Dissociative disorder

**154.** An emaciated and lethargic 16-year-old girl arrives at the ER. Her blood pressure (BP) is 75/50, her heart rate (HR) is 52, her potassium is 2.8, and her bicarbonate is 40 mEq/L. The girl's parents report that she has lost 35 pounds in three months but she is still convinced that she is overweight. She eats only very small amounts of low-caloric food and she runs two to three hours every day. What other activity is the patient likely to have engaged in?

- a. Sexual promiscuity
- b. Ethanol abuse
- c. Purging
- d. Wearing tight clothes
- e. Shoplifting

**155.** A 69-year-old woman slips on the ice and hits her head on the pavement, but she does not give much weight to this event. During the following three weeks, she develops a persistent headache, she is increasingly distractible and forgetful, and at night she becomes fearful and disoriented. The most likely cause of such changes is

- a. Chronic subdural hematoma
- b. Frontal lobe tumor
- c. Korsakoff's disease
- d. Epidural hematoma
- e. Multi-infarct dementia

**156.** A 45-year-old woman has been visiting her family doctor's office several times a month. Abdominal pain, dysuria, nausea, severe menstrual cramps, dizziness, fainting spells, and painful intercourse have been among her complaints during the past years. There are no positive objective findings and so far all tests have been negative. What is the most likely diagnosis?

- a. Somatoform disorder
- b. Delusional disorder
- c. Body dysmorphic disorder
- d. Conversion disorder
- e. Hypochondriasis

**157.** Choose the correct statement about psychiatric symptoms in patients with Parkinson's disease.

- a. Affective disorders are commonly associated with Parkinson's disease
- b. Psychiatric disorders are rare in Parkinson's patients
- c. Psychotic symptoms unrelated to medication side effects are common
- d. High-potency neuroleptics are the drugs of choice in the treatment of psychotic symptoms associated with Parkinson's disease
- e. Electroconvulsive therapy (ECT) is rarely used in depressed Parkinson's patients

**158.** A young man smells burnt rubber, then he turns his head and his upper body right, makes chewing movements, and fumbles with his clothes. During the episode, which lasts one minute, he appears dazed. Choose the most appropriate diagnosis:

- a. Frontal lobe tumor
- b. Derealization disorder
- c. Conversion disorder
- d. Absence seizure
- e. Partial complex seizures

**159.** A middle-aged, obese man is chronically tired and sleepy although he sleeps from seven to nine hours every night and he takes occasional naps. He wakes up every morning with a headache and a dry mouth. His wife complains about his loud snoring. The most appropriate diagnosis is

- a. Obstructive sleep apnea
- b. Narcolepsy
- c. Central apnea
- d. Recurrent hypersomnia
- e. Depression

**160.** A 55-year-old woman with breast cancer is waiting for the results of her bone scan. She promises God that she will stop smoking and attend Mass every Sunday if the scan does not show signs of metastases. According to Elisabeth Kübler-Ross, who extensively studied the psychological processes of dying patients, this behavior is typical of the stage of

- a. Anger
- b. Denial
- c. Sublimation
- d. Bargaining
- e. Acceptance

**161.** The members of the medical team caring for a young woman admitted for her third overdose are uncharacteristically arguing over the best way to address the patient's increasingly demanding attitude. The nurses see her as manipulative and exploitative, while the male resident is much more willing to justify her behavior on the basis of the patient's history of abuse and neglect. What personality disorder does this scenario suggest?

- a. Narcissistic
- b. Borderline
- c. Obsessive-compulsive
- d. Histrionic
- e. Paranoid

**162.** A 45-year-old woman has thin legs and arms but a considerable amount of fat deposited on her abdomen, chest, and shoulders. Her skin is thin and atrophic and she has several purple striae on her abdomen. An MRI shows the presence of a pituitary adenoma. The psychiatric disorder most commonly associated with this syndrome is

- a. Depression
- b. Psychosis
- c. Organic mental disorder
- d. Mania
- e. Anxiety neurosis

**163.** During the past year, a 25-year-old woman has had two episodes of diplopia and one episode of unilateral blindness that resolved spontaneously in a few weeks. She presents to her neurologist complaining of right arm weakness and urinary incontinence. Her MRI shows areas of hyperdensity localized in the white matter. The neurologist asks her many detailed questions about her mood, memory, and concentration. What is the most likely reason for such inquiry?

- a. Patient probably has a conversion disorder
- b. This patient's neurological disorder is frequently accompanied by psychiatric and neuropsychiatric symptoms
- c. One of the patient's second cousins suffers from schizophrenia
- d. This patient is probably malingering
- e. Patient's symptoms are inconsistent with any known medical diagnosis

**164.** A 34-year-old man recurrently perceives the smell of rotten eggs. This kind of hallucination is relatively rare and is most commonly encountered in patients with

- a. Parietal tumors
- b. Narcolepsy
- c. Grand mal epilepsy
- d. Partial complex seizures
- e. Wilson's disease

**DIRECTIONS:** The group of questions below consists of lettered options followed by numbered items. For each numbered item, select one appropriate lettered option. Each lettered option may be used once, more than once, or not at all.

**Items 165–169**

Match each vignette with the appropriate disorder:

- a. Creutzfeldt-Jakob disease
- b. Pseudodementia
- c. Germmann-Strausser syndrome
- d. Rett's disorder
- e. Wilson's disease
- f. Gilles de la Tourette's disorder
- g. Hypothalamic tumor
- h. Wernicke-Korsakoff syndrome
- i. Huntington's disease
- j. Alzheimer's disease
- k. Multi-infarct dementia

**165.** A 40-year-old woman's cognitive functions have progressively deteriorated for several years, to the point of needing nursing home-level care. She is depressed, easily irritated, and prone to aggressive outbursts, a dramatic change from her premorbid personality. She also presents with irregular, purposeless, and asymmetrical movements of her face, limbs, and trunk, which worsen when she is upset and disappear in sleep. Her MRI shows atrophy of the caudal nucleus and the putamen.

**166.** A 37-year-old mildly retarded man with Down syndrome has been increasingly forgetful. He makes frequent mistakes when counting change at the grocery store where he has worked for several years. In the past, he used to perform this task without difficulties. He often cannot recall the names of common objects and he has started annoying customers with his intrusive questions.

**167.** A 72-year-old retired English professor with a long history of hypertension has been having difficulties with tasks he used to find easy and enjoyable, such as crossword puzzles and letter writing, because he cannot remember the correct words and his handwriting has deteriorated. He has also been having difficulties remembering the events of previous days and he moves and thinks at a slower pace. Subsequently, he develops a mild right facial hemiparesis and slurred speech.

**168.** A healthy 62-year-old male undergoes a corneal transplant. Three months later, he is profoundly demented and his EEG shows periodic bursts of electrical activity superimposed on a slow background.

**169.** A 24-year-old previously competent and well-liked kindergarten teacher, without a psychiatric history, has lost her job and her boyfriend because she has been increasingly irritable, moody, and unreliable. She often has difficulty remembering words and facts she used to know well. For several months she has had a persistent tremor and she has become clumsy and poorly coordinated. Slit-lamp examination of her eyes reveals a greenish corneal ring around her irises.

### **Items 170–174**

Match each diagnosis with the appropriate vignette:

- a. Wernicke's encephalopathy
- b. Temporal seizures
- c. Pick's disease
- d. Broca's aphasia
- e. Hyperventilation episode
- f. Scrapie
- g. Central sleep apnea
- h. AIDS dementia
- i. Multiple sclerosis
- j. Absence seizures

**170.** During a final exam, a worried college student suddenly experiences perioral tingling, carpo-pedal spasms, and feelings of derealization.

**171.** A child often appears distracted and inattentive. His parents have noticed that frequently he "spaces out" for 10 to 20 seconds at a time. His EEG shows a spike and wave pattern.

**172.** A 45-year-old man is constantly sleepy and fatigued. At night he partially wakes up many times gasping for breath. His wife reports that he does not snore but she has noticed that he frequently stops breathing while he sleeps.

**173.** A young male with a history of IV drug abuse has experienced over the course of several months a progressive loss of memory and difficulty concentrating. He has lost interest in his friends and his work and has difficulty with abstract thoughts and solving minor everyday problems. He has also become withdrawn and depressed.

**174.** A 37-year-old male with a history of alcohol abuse is hospitalized for dehydration and pneumonia. While being treated, he becomes acutely confused and agitated. He cannot move his eyes upward or to the right and he staggers when he tries to walk.

**DIRECTIONS:** Each item below contains a question or incomplete statement followed by suggested responses. Select the **one best** response to each question.

**175.** The cognitive functions of an elderly man have deteriorated significantly during the previous month. He has become easily distractible, apathetic, and uncharacteristically unconcerned about his appearance. His gait shows a shortened stride length and step height. In copying a complex picture, he makes many mistakes and ignores details. He has also become incontinent of urine. What is the cause of this reversible dementia?

- a. Parkinson's disease
- b. Thiamine deficiency
- c. B<sub>12</sub> deficiency
- d. Wilson's disease
- e. Normal pressure hydrocephalus

**176.** According to the finding of epidemiology studies, in comparison to men, women have

- a. A lower prevalence of psychiatric disorders
- b. A higher prevalence of psychiatric disorders
- c. A higher prevalence of affective disorders
- d. A lower prevalence of anxiety disorders
- e. The same risk rates for all psychiatric disorders

### Items 177–179

A 22-year-old woman is admitted to the hospital because of right-hand anesthesia that developed after an argument with her brother. She is in good spirits and seems unconcerned about her problem. There is no history of physical trauma. The neurologic examination is negative except for reduced sensitivity to pain in a glove-like distribution over the right hand. Her entire family is in attendance and is expressing great concern and attentiveness. She ignores her brother and seems unaware of the chronic jealousy and rivalry described by her family.

**177.** The most likely diagnosis is

- a. Body dysmorphic disorder
- b. Histrionic personality disorder
- c. Parietal brain tumor
- d. Conversion disorder
- e. Hysteria

**178.** The absence of anxiety and apparent lack of awareness of the conflict with her brother is most likely due to

- a. Marginal intellectual function
- b. Amnesia
- c. An organic mental dysfunction
- d. Primary gain
- e. Psychosis

**179.** The patient's enjoyment of the attention and concern of her family is most likely due to

- a. Primary gain
- b. Secondary gain
- c. Tertiary gain
- d. Indifference reaction
- e. Suppression

**180.** A 32-year-old woman with a chronic psychiatric disorder is greatly concerned because her breasts have started leaking a whitish fluid. What is the most likely cause of this symptom?

- a. Haloperidol
- b. Oral contraceptives
- c. Hypothyroidism
- d. Cirrhosis
- e. Pregnancy

**181.** A 5-year-old child is rushed to the hospital by his parents after an accidental ingestion. The parents believe he ate rat poison but they are not sure. The child's breath smells of garlic and he presents with vomiting, bloody diarrhea, and muscle twitching. After his arrival at the emergency room, he has a generalized seizure. This child has probably ingested

- a. Thallium
- b. Lead
- c. Arsenic
- d. Aluminum
- e. Manganese

**182.** A young man walks into a local ER and tells the resident on call, "Put me in the nut house, because I am going to kill someone tonight." During the interview, the man states he does not know who he is and he responds affirmatively to every symptom the resident inquires about. He is admitted to a locked psychiatric unit for observation and, once on the hospital floor, he appears calm and unconcerned. The next day, one of nurses on the unit reads in the local newspaper that a young man resembling the new patient is wanted for holding up a bank. What is the most likely diagnosis?

- a. Factitious disorder
- b. Malingering
- c. Brief reactive psychosis
- d. Conversion disorder
- e. Psychogenic fugue

### **Items 183–184**

A 27-year-old microbiology technician has had three bouts of purulent arthritis and several subcutaneous abscesses in a six-month period. She does not seem upset or worried; on the contrary, her mood brightens when her medical condition worsens. She has several scars on her abdomen and she is missing two toes on her left foot. She does not want her new, puzzled physician to obtain her past medical records.

**183.** What is the most likely diagnosis?

- a. T-cell deficiency
- b. Somatization disorder
- c. Malingering
- d. Masochism
- e. Factitious disorder

**184.** Choose the correct statement about this disorder:

- a. It is extremely rare
- b. Severe cases are referred to as Münchhausen syndrome
- c. Once diagnosed, it is relatively easy to treat
- d. The patient is motivated by financial gain or hopes to avoid legal prosecution
- e. Patients with this disorder are almost always women

**185.** A man given a placebo for mild pain reports 30 minutes later that the pain has resolved. The most appropriate conclusion is that the man

- a. Has a conversion disorder
- b. Has a dissociative disorder
- c. Is malingering
- d. Had no real pain to begin with
- e. Responds to placebos

**186.** A 53-year-old woman who has consumed approximately half a pint of sweet liquor every day for the past 24 years presents with severe memory problems. Her amnesic disorder is likely to be characterized by

- a. Only anterograde memory deficits
- b. Only retrograde memory deficits
- c. Both anterograde and retrograde memory deficits
- d. Loss of autobiographical events in the remote past
- e. No significant memory deficits

**187.** In epileptic patients, the lifetime prevalence for developing a psychiatric disorder is

- a. 1 to 2%
- b. 5 to 10%
- c. 10 to 20%
- d. 20 to 30%
- e. 30 to 40%

**188.** A girl develops grand mal seizures after suffering a brain injury at age 15. Her seizures are well controlled with Valproate for approximately three years. When the girl leaves her home to go to college, the seizures suddenly increase in frequency although she has been compliant with her treatment. Her neurologist, to clarify whether the seizures are of an epileptic nature or psychogenic, admits the girl to the hospital for videotelemetry (EEG and video monitoring). What other test may help in the differential diagnosis?

- a. Prolactin level
- b. Calcium level
- c. TSH level
- d. Cortisol level
- e. Electromyography

**189.** A 35-year-old woman experiences recurrent periods of irritability, dysphoria, and fatigue during the week preceding her menstruation. Choose the correct statement about this condition.

- a. The prevalence is estimated between 23 and 35%
- b. The disorder is associated with significant hormonal disturbances
- c. Symptoms usually start in the late thirties
- d. Symptoms tend to improve with age
- e. Patients often have a history of mood and anxiety disorders

**190.** One of the most common causes of delirium in the elderly is

- a. Substance abuse
- b. Accidental poisoning
- c. Acute hypoxia
- d. Polypharmacy
- e. Alcohol withdrawal

**191.** A 52-year-old man undergoes a successful mitral valve replacement. The day after the surgery he appears irritable and restless. Hours later he is agitated, disoriented, hypervigilant, and uncooperative. He is convinced that he is back in the prison camp where he was interned during WWII and that the nurses are camp guards. His blood pressure and temperature are normal. What is the most likely diagnosis?

- a. Brief reactive psychosis
- b. Delirium tremens
- c. Postcardiotomy delirium
- d. Meningo-encephalitis
- e. Acute stress reaction

**DIRECTIONS:** The group of questions below consists of lettered options followed by numbered items. For each numbered item, select one appropriate lettered option. Each option can be chosen once, more than once, or not at all.

**Items 192–196**

Match each description of neurological and neuropsychiatric findings with the most likely localization of a brain tumor.

- a. Frontal lobes
- b. Temporal lobes
- c. Cerebellum
- d. Occipital lobes
- e. Corpus callosum
- f. Thalamus
- g. Pituitary
- h. Brainstem
- i. Parietal lobes

**192.** A 23-year-old depressed woman has lost her peripheral vision. Her skin is thin and she has many purple striae on her abdomen. Her face is round and she has a peculiar fat “pad” at the nape of her neck.

**193.** A 45-year-old nurse’s personality has significantly changed during the course of several months. She has become progressively less responsible both at work and at home and she displays childlike behaviors that are completely at odds with her previous character. She does not seem to care about anything and she makes silly jokes about the most serious subjects. Lately she has become increasingly convinced that her colleagues are spying on her.

**194.** A 23-year-old professional basketball player has been irritable, moody, and prone to uncharacteristic angry outbursts. Twice he has been expelled from a game for attacking another player. He has frequent “spells” during which he smells rotten eggs and he feels he is “in a dream.”

**195.** A 67-year-old man completely ignores the left side of his body and everything that is on the left side of external space. He does not shave the left side of his face and does not eat what is on the left side of his plate. He also has difficulty naming his fingers correctly and doing simple calculations.

**Items 196–199**

Match each psychiatric or neuropsychiatric disorder with the most appropriate diagnostic test.

- a. Hematocrit
- b. Prolactin
- c. Vitamin B<sub>12</sub>
- d. Creatinine phosphokinase (CPK)
- e. ECG
- f. Urine copper
- g. Serum ammonia
- h. BUN
- i. Serum amylase
- j. Testosterone

**196.** Nonepileptic seizures

**197.** Neuroleptic malignant syndrome

**198.** Impotence

**199.** Hepatic encephalopathy

**DIRECTIONS:** Each item below contains a question or incomplete statement followed by suggested responses. Select the **one best** response to each question.

**200.** The 27-year-old daughter of a 56-year-old man suffering from an advanced stage of Huntington's disease requests genetic counseling. She is told that her risk to develop the disease is

- a. 1 in 2
- b. 1 in 4
- c. 1 in 16
- d. 1 in 32
- e. She is not at risk for developing the disease but she may be a carrier

**201.** The most common psychiatric disorder associated with stroke is

- a. Mania
- b. Psychosis
- c. Bipolar disorder
- d. Depression
- e. Generalized anxiety disorder

**202.** Mental retardation is a common disorder with a prevalence of 1 to 2% of the general adult population. Individuals with IQs between 50 and 70 (mild mental retardation) account for what percentage of the affected population?

- a. 20%
- b. 40%
- c. 60%
- d. 70%
- e. 90%

**203.** An 8-year-old has been hit on the head by a baseball and, after a brief period of unconsciousness, he is once again alert. Although not too alarmed, the coach drives him to the closest emergency room for an evaluation. Shortly after the arrival at the ER, the boy complains of a severe headache and becomes delirious. What is the most likely diagnosis?

- a. Subdural hematoma
- b. Epidural bleeding
- c. Conversion disorder
- d. Subarachnoid hemorrhage
- e. Concussion

**204.** A 56-year-old retired professional boxer shows a considerable cognitive decline. His memory is very poor, he walks with small rigid steps, and has little facial expression. His dementia is most probably

- a. An idiopathic degenerative process
- b. Secondary to chronic trauma
- c. Due to an inborn error of metabolism
- d. A familial disorder
- e. Probably reversible with vitamin B<sub>12</sub> supplementation

# COGNITIVE DISORDERS AND CONSULTATION- LIAISON PSYCHIATRY

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## Answers

**151. The answer is d.** (*Sadock, 7/e, pp 884–885.*) Alzheimer's disease is the most common dementing disorder (at least in North America, Europe, and Scandinavia). Typical symptoms are progressive memory loss, aphasia, anomia (inability to recall the name of objects), apraxia (inability to perform voluntary motor activity in the absence of motor and sensory deficits), and agnosia (inability to process and understand sensory stimuli in the absence of sensory deficits). Motor functions are spared until the very end. Personality is preserved in the early stages of the disorder but considerable deterioration follows in later stages.

**152. The answer is b.** (*Yudofsky, 3/e, pp 828–832.*) Pick's disease accounts for 2.5% of cases of dementia. Clinically it is distinguishable from Alzheimer's disease due to the prominence and early onset of personality changes, disinhibition or apathy, socially inappropriate behavior, mood changes (elation or depression), and psychotic symptoms. Language is affected early in the disease but the memory loss, apraxia, and agnosia characteristic of Alzheimer's disease are not prominent until the late stages of the disorder. Temporofrontal atrophy, demyelination and gliosis of the frontal lobes, Pick bodies (intracellular inclusions), and Pick cells (swollen neurons) are the characteristic pathological findings.

**153. The answer is d.** (*DSM-IV, pp 281–301; Yudofsky, 3/e, p 952.*) Schizophrenia and delusional disorder often, but not always, first appear before age 35. When delusions appear de novo in older patients without a previous history of psychotic symptoms, an organic delusional disorder needs to be considered. Cannabis, cocaine, amphetamines, and hallucinogens are common causes of organic delusional syndromes. Delusions are also seen in Huntington's disease, late stages of Parkinson's disease, Alzheimer's dis-

ease, complex partial epilepsy (as an interictal phenomenon or, more rarely, as a postictal event), HIV infection, limbic encephalitis, and brain tumors involving the temporal lobe and diencephalon.

**154. The answer is c.** (*Sadock, 7/e, pp 1669–1673.*) Anorexia nervosa is characterized by the refusal to maintain a minimal normal weight for height and age, intense fear of gaining weight, distorted body image, and amenorrhea. Body weight is controlled by drastic reduction of caloric intake but most anorectic patients also use diuretics and laxatives. Purging, which causes hypokalemic alkalosis, can also be present but is not as frequent as in bulimia. The other listed behaviors are not characteristic of patients with anorexia.

**155. The answer is a.** (*Yudofsky, 3/e, pp 611–612.*) Chronic subdural hematoma causes a reversible form of dementia. It frequently follows head trauma (60% of the cases) with tearing of the bridging veins in the subdural space. Ruptured aneurysms, rapid deceleration injuries, and AVMs (arteriovenous malformations) of the pial surface account for the nontraumatic cases. The most common symptoms of chronic subdural hematomas are headache, confusion, inattention, apathy, memory loss, drowsiness, and coma. Lateralization signs, such as hemiparesis, hemianopsia, and cranial nerve abnormalities, are less prominent features. Epidural hematoma usually follows a temporal or parietal skull fracture that causes the laceration of the middle meningeal artery or vein. It is characterized by a brief period of lucidity followed by loss of consciousness, hemiparesis, cranial nerve palsies, and death, unless the hematoma is surgically evacuated. Multi-infarct dementia and Alzheimer's disease are characterized by a slower onset and have a more chronic course, although, at times, diagnostic confusion is possible. Korsakoff's disorder is characterized by anterograde and retrograde memory deficits. Frontal lobe tumors mainly present with personality and behavioral changes, which differ depending on the localization.

**156. The answer is a.** (*Hales, 3/e, pp 667–675.*) Somatization disorder is characterized by the recurrent physical complaints that are not explained by physical factors and that cause significant impairment or result in seeking medical attention. Pain of any part of the body and dysfunctions of multiple systems are typical. The DSM-IV diagnostic criteria for somatization disorder include at least four pain symptoms, one sexual symptom, and one

pseudoneurological symptom. These symptoms can be present at any time in the duration of the disorder. Somatization disorder usually emerges in adolescence or early twenties and follows a chronic course. Somatization disorder is diagnosed predominantly in women, with a prevalence of 0.2 to 0.5%, and rarely in men. The main feature of hypochondriasis is an exaggerated preoccupation with health, based on a faulty interpretation of benign physical signs or sensations. In delusional disorder with somatic delusions, the patient has an unshakable belief that he or she has some physical defect or a medical condition. Body dysmorphic disorder is characterized by distorted beliefs about the patient's own appearance, often with delusional quality. Finally, in conversion disorder acute, often dramatic symptoms suggestive of a neurological disorder appear suddenly in the context of psychological stress.

**157. The answer is a.** (*Yudofsky, 3/e, pp 810–812.*) Psychiatric symptoms are common in patients with Parkinson's disease. Affective disorders are particularly frequent, with an incidence estimated between 20 and 90%. Among affective disorders, depression and dysthymic disorder are the most frequent types. Psychotic disorders have a lower incidence (12% in one study). They are usually caused by anticholinergic and dopaminergic drug side effects, although psychosis similar to schizophrenia has been reported in the absence of medication side effects.

**158. The answer is e.** (*Yudofsky, 3/e, pp 563–564; Sadock, 7/e, p 263.*) In complex partial seizures, an altered state of consciousness, usually manifested by staring, is accompanied by hallucinations (olfactory hallucinations are common), automatisms (buttoning and unbuttoning, masticatory movements, speech automatisms), perceptual alterations (objects changing shape or size), complex verbalizations, and autonomic symptoms such as piloerection, gastric sensation, or nausea. Flashbacks, déjà vu, and derealization are also common. The episodes last approximately one minute and patients may experience postictal headaches and sleepiness. Absence seizure episodes are shorter, are not accompanied by motor activity, and are not followed by postictal phenomena.

**159. The answer is a.** (*Sadock, 7/e, pp 1687–1689.*) Sleep apnea is the cessation of breathing during sleep for 10 seconds or more. In obstructive sleep apnea, breathing stops due to airway blockage, while in central sleep apnea

the breathing stops due to an absence of respiratory efforts secondary to a neurological dysfunction. Features associated with obstructive sleep apnea are excessive daytime somnolence, snoring, restless sleep, and nocturnal awakening with gasping for air. Patients often wake up in the morning with dry mouths and headaches. Predisposing factors are maleness, middle age, obesity, hypothyroidism, and various malformations of the upper airways. Narcolepsy is characterized by irresistible urges to fall asleep for brief periods during the day, regardless of the situation. Nocturnal myoclonus refers to stereotyped, repetitive movements of the legs during sleep, accompanied by brief arousal and sleep disruption.

**160. The answer is d.** (*Sadock, 7/e, p 1964.*) Elisabeth Kübler-Ross postulates that dying patients go through five stages from the first moment they are aware of their fatal condition to the day of their death. The first stage is denial, and, if it does not interfere with treatment, it can be helpful for mitigating the initial overwhelming anxiety. In the second stage, anger toward themselves, caretakers, family, and God predominates. The third stage is bargaining for more time, most commonly by promising to change for the better if life is prolonged. When the patient arrives at the full realization of impending death, he or she enters the stage of depression. In the final stage of acceptance, the patient has accepted the inevitability of death without despair. These five stages do not represent a rigid evolutive process. Many patients fluctuate from one stage to another or go through only two or three stages. Other patients exhibit different coping styles such as the use of humor or compassion.

**161. The answer is b.** (*Hales, 3/e, p 808.*) Patients with borderline personalities see others (and themselves) as wholly good or totally bad, a psychological defense called splitting. They alternatively idealize or devalue important figures in their lives depending on their perceptions of the others' intentions, interest, and level of caring. These dynamics often elicit similar responses in the environment, with the individuals being idealized having a considerably better opinion of the patient than the persons who are being devalued.

**162. The answer is a.** (*Yudofsky, 3/e, pp 736–739.*) Cushing's syndrome, due to exogenous administration of corticosteroids and more rarely to adrenocarcinoma or ectopic production of ACTH, is often associated with psychiatric

disturbances. Depression and mixed anxiety and depressive states are the most common psychiatric manifestations of the syndrome (from 35 to 68%, depending on the study). Mania, psychosis, delirium, and cognitive disturbances also occurs but at a much lower rate. Depressive symptoms occur early in the disorder—in 27% of cases in the prodromal period. Most patients improve after the primary disorder is treated and serum cortisol decreases.

**163. The answer is b.** (*Sadock, 7/e, pp 300–306.*) Two or more distinct episodes of neurological impairment that cannot be explained by a single CNS lesion and multiple areas of white matter demyelination (seen as areas of hyperdensity on the MRI) are characteristic of multiple sclerosis (MS). Psychiatric disturbances (mostly depression) and cognitive impairment are frequent manifestations of this disease. The prevalence rates of depression in patients with MS range from 45 to 62%. Depression appears to be a direct consequence of the brain demyelination more than a psychological reaction to living with a chronic disease. Attentional, memory, and problem-solving deficits are also frequent in MS.

**164. The answer is d.** (*Yudofsky, 3/e, p 343.*) Hallucinations involving smell, taste, or kinesthetic experiences (body movements) are rare. They are most commonly encountered in patients with partial complex seizures, although occasionally they are reported by patients with somatization disorder, psychosis, and hypochondriasis. Tumors involving the olfactory areas of the brain must also be considered in the differential diagnosis.

**165–169. The answers are 165-i, 166-j, 167-k, 168-a, 169-e.** (*Yudofsky, 3/e, pp 832–834, 917, 842–845, 345, 840–841.*) Huntington's disease is a neurodegenerative disorder characterized by choreic movements of the face, limbs, and trunk; progressive dementia; and psychiatric symptoms. Deficits in sustained attention, memory retrieval, procedural memory (ability to acquire new skills), and visual-spatial skills are predominant and early manifestations of the disorder. Language skills are usually preserved until the late stages of the disease. Personality changes and mood disturbances, including depression and mania, are frequent and can predate the onset of the dementia and the movement disorder. Neuroimaging reveals atrophy of the caudate and the putamen.

Impaired naming, memory deterioration, poor calculation, poor judgment, and disinhibition are characteristic symptoms of Alzheimer's disease.

This progressive dementia develops in all individuals with Down syndrome who survive beyond 30 years. Neurofibrillary tangles, neuritic plaques, and loss of acetylcholine neurons in the nucleus basalis of Meynert—characteristic pathological changes of Alzheimer's disease—develop in patients with Down syndrome at a relatively young adult age.

Multi-infarct dementia results from the cumulative effects of multiple small and large-vessel occlusions in cortical and subcortical regions. Most cases are caused by hypertensive cerebrovascular disease and thrombo-occlusive disease. It is the second most common cause of dementia in the elderly, accounting for 8 to 35% of the cases. Clinically, it is characterized by memory and cognitive deficits accompanied by focal neurologic signs (muscle weakness, spasticity, dysarthria, extensor plantar reflex, etc). Unlike Alzheimer's disease, multi-infarct dementia is characterized by sudden onset and a stepwise progression.

Creutzfeldt-Jakob disease is a neurodegenerative disease caused by a transmissible infectious agent, the prion. Most cases are iatrogenic, following transplant of infected corneas or use of contaminated neurosurgical instruments. Familial forms, following an autosomal dominant pattern of inheritance, represent 5–15% of cases. Patients show a very rapid cognitive deterioration, myoclonic jerks, rigidity, and ataxia. Death follows within a year. An intermittent periodic burst pattern (periodic complexes) is the characteristic EEG finding.

Wilson's disease, or hepatolenticular degeneration, is an autosomal recessive disorder of copper metabolism (deficiency of copper-carrying protein ceruloplasmin). Frequency is 1 in 40,000 births. The disease first manifests in the second or third decade with a combination of neurologic symptoms (tremor, rigidity, poor coordination, abnormalities of gait and posture), mild impairment of memory retrieval and executive functions, and, in 20% of patients, psychiatric symptoms such as personality changes and mood disturbances. Copper corneal deposits (Kayser-Fleischer rings) are present in most patients. Other diagnostic findings are chronic hepatitis, hemolytic anemia, and cavitory necrosis of the putamen.

**170–174. The answers are 170-e, 171-j, 172-g, 173-h, 174-a.** (*Hales, 3/e, p 573; Yudofsky, 3/e, p 924; Yudofsky, 3/e, p 982; Hales, 3/e, p 346; Yudofsky, 3/e, pp 506–507; Sadock, 7/e, p 963.*) Hyperventilation causes hypocapnia and respiratory alkalosis, which in turn lead to decreased cerebral blood flow and a decrease in ionized serum calcium. Dizziness, derealization, and

light-headedness are due to the cerebral vasoconstriction, while circumoral tingling, carpopedal spasm, and paresthesias are symptoms of tetany. Hyperventilation is a central feature of panic disorder and acute anxiety attacks.

Absence seizures (petit mal seizures) are a common type of generalized seizure occurring primarily in children. They are characterized by brief periods (10–20 seconds) of impaired consciousness during which the affected children stare and are unresponsive to the environment. Posture is maintained and incontinence does not occur. There is no postictal confusion but when the episodes are frequent, they can interfere with attention and learning and they can be confused with attention deficit disorder. The EEG has a characteristic 3-Hz spike-and-wave pattern. In some children, absence seizures resolve during adolescence; in others, generalized tonic-clonic seizures develop later in life.

In central apnea, the breathing cessation during sleep is secondary to an impairment of the central respiratory drive. Patients do not snore and the respiratory pauses are not accompanied by respiratory efforts as in obstructive sleep apnea. Daytime somnolence, morning headaches, and intellectual dulling are the main symptoms. Continuous positive airway pressure (CPAP) is the treatment of choice.

HIV dementia is the most frequent neurological complication of HIV infection and can be the first symptom of the infection. It is due to a direct effect of the virus on the brain and it is always accompanied by some brain atrophy. HIV dementia presents with the combination of cognitive impairment, motor deficits, and behavioral changes typical of a subcortical dementia. Common features include impaired attention and concentration, psychomotor slowing, forgetfulness, slow reaction time, and mood changes.

Wernicke encephalopathy occurs in nutritionally deficient alcoholics and is due to thiamine deficiency and consequent damage of the thiamine-dependent brain structures, including the mammillary bodies and the dorso-medial nucleus of the thalamus. It presents with mental confusion, ataxia, and sixth nerve paralysis. Wernicke encephalopathy is a medical emergency and can rapidly resolve with immediate supplementation of thiamine.

**175. The answer is e.** (*Yudofsky, 3/e, pp 845–846.*) Normal pressure hydrocephalus (NPH) is an idiopathic disorder caused by the obstruction of the flow of the cerebrospinal fluid (CSF) into the subarachnoid space. Onset is usually after age 60. The classic syndrome of normal pressure hydrocephalus consists of dementia, gait abnormality, and urinary incontinence. The dementia has frontal-subcortical dysfunction features, such as impaired

attention, visuospatial deficits, and poor judgment. Apathy, inertia, and lack of concern are the typical personality changes. Ventricular dilatation without sulcal widening (that is, without evidence of atrophy) and normal CSF pressure during lumbar puncture are diagnostic. The dementia can be reversed with a CSF shunt, especially if the course of the disease is short.

**176. The answer is c.** (*Hales, 3/e, p 98.*) Men and women have equal overall rates of psychiatric disorders but their prevalence for specific disorders is quite different. Substance abuse disorders and antisocial personality disorder are much more frequent in men, while anxiety disorders, somatoform disorder, and depression are more frequent in women.

**177–179. The answers are 177-d, 178-d, 179-b.** (*Hales, 3/e, pp 677–685.*) Conversion disorder is characterized by symptoms or deficits of the voluntary motor or sensory functions that cannot be explained by neurological or other medical conditions. These symptoms are precipitated by psychological conflicts. The term *hysteria* was used in the nineteenth century (and the first versions of the DSM) to describe syndromes similar to conversion disorder. It is not a legitimate diagnostic term anymore and it has a negative connotation in general use. Patients with body dysmorphic disorder are preoccupied with nonexistent or very minor physical imperfections, often at a delusional level. Patients with brain tumors present with motor, behavioral, and neuropsychiatric symptoms that vary depending on the localization of the tumors.

The patient's lack of anxiety and apparent lack of awareness of the conflicts with her brother are classic findings in conversion disorder and they are described as called "primary gains." This term refers to the use of physical symptoms to express a conflict, emotion, or desire without allowing it to enter the patient's consciousness. The patient's enjoyment of her family's attention is a form of "secondary gain." Secondary gains, being experienced as pleasurable, reinforce the symptoms. There is no such thing as "tertiary gain." Suppression is a mature defense mechanism and consists of a voluntary decision to put a disturbing thought temporarily out of the conscious mind. The "indifference reaction" is associated with right hemispheric lesions and consists of symptoms of indifference toward failures and physical difficulties and lack of interest in family and friends.

**180. The answer is a.** (*Yudofsky, 3/e, p 741.*) Neuroleptic medications can produce hyperprolactinemia even at very low doses and are the most

common cause of galactorrhea in psychiatric patients. Amenorrhea and galactorrhea are the main symptoms of hyperprolactinemia in women and impotence is the main symptom in men, although men can also develop gynecomastia and galactorrhea. Other causes of hyperprolactinemia include severe systemic illness such as cirrhosis or renal failure, pituitary tumors, idiopathic causes, and, of course, pregnancy.

**181. The answer is c.** (*Yudofsky, 3/e, pp 756–757.*) Acute arsenic poisoning may occur by accidental, suicidal, or homicidal ingestion. Its main features are a burning sensation of the throat and esophagus, garlic breath, nausea, vomiting, diarrhea, muscle spasms, seizures, and shock due to fluid leakage into interstitial spaces. Arsenic is found in herbal and homeopathic remedies, insecticides, rodenticides, wood preservatives, and it has a variety of other industrial applications.

**182. The answer is b.** (*Sadock, 7/e, pp 1898–1908; DSM IV, p 683.*) Malingering is characterized by the intentional production of false or grossly exaggerated physical or psychological symptoms. The motivations include avoiding work, military duty, or criminal prosecution; obtaining financial compensation; or obtaining drugs. Malingering should be suspected when there are discrepancies between the person's complaints and the objective findings, when the symptoms develop in the context of a legal action, when the patient refuses to cooperate with the evaluation and recommended treatment, and when in the presence of antisocial personality disorder. Malingering is differentiated from factitious disorder by the patient's motivation. In factitious disorder the patient voluntarily produces symptoms or signs with the intent to assume the sick role. In conversion disorder, as in malingering, objective evidence cannot account for subjective symptoms, but the patient is not voluntarily producing the symptoms. In brief reactive psychosis, dramatic genuine psychotic symptoms develop abruptly after a severe stressor. Psychogenic fugue is a dissociative disorder characterized by a period of complete amnesia during which the patient flees from his or her life situation and assumes another identity.

**183–184. The answers are 183-e, 184-b.** (*Sadock, 7/e, pp 1533–1543.*) Factitious disorder is described as the intentional fabrication or feigning of psychological or physical signs and symptoms with the intent to assume the sick role. The possible presentations range from total fabrication of symp-

toms to actual illness production (for example, by injecting fecal material under the skin to create an abscess). Many kinds of medical, surgical, or psychiatric illnesses have been reproduced or fabricated, from such common disorders as urinary tract infections to obscure entities as Goodpasture syndrome (hemoptysis and glomerulonephritis). Different motivations distinguish factitious disorder from malingering, since in the latter the patients create or simulate symptoms to avoid work or legal prosecution or to obtain financial gains. Patients with somatization disorder do not voluntarily produce or feign their symptoms, while in masochism, patients submit to pain with the intent to reach sexual gratification.

A severe form of factitious disorder that involves numerous hospitalizations and peregrinations from one medical center to another to avoid discovery is called Münchhausen syndrome. Patients with Münchhausen syndrome are usually middle-aged men, unmarried, unemployed, and estranged from their families. Women between the ages of 20 and 40 represent the majority of patients with a less dramatic presentation of the disorder. Factitious disorder is not rare but, because it is difficult to diagnose due to the patients' deception and their tendency to change doctors and hospitals, its incidence it is not well known. Rates range from 0.3% of neurological disorders treated at a Berlin hospital to 9.3% of all cases of fever of unknown origin reviewed by the National Institute for Allergies and Infectious Diseases.

**185. The answer is e.** (*Sadock, 7/e, pp 1988–1989.*) Placebo is an inactive substance disguised as the active treatment. It can be effective in pain with both psychogenic and organic causes. Consequently, the only conclusion that can be reached about the man described in the question is that he responds to placebos. His response says nothing about whether his pain is “real” or psychogenic. Many psychological factors are thought to contribute to the effects of placebos, including the patient's expectations, the provider's attitude toward the patient and the treatment, and conditioned responses.

**186. The answer is c.** (*Yudofsky, 3/e, pp 506–507.*) Korsakoff's psychosis is characterized by both anterograde and retrograde memory deficits. Patients cannot form new memories and they have difficulties recalling past personal events, with the poorest recall for events that took place closest to the onset of the amnesia. Remote memories are usually preserved.

**187. The answer is d.** (*Hales, 3/e, pp 1674–1675.*) Approximately 20 to 30% of epileptic patients demonstrated psychopathology at some time, mostly depression and anxiety disorders. The lifetime prevalence for a psychotic episode is between 4 and 10%. Among patients with temporal lobe epilepsy, the prevalence for psychotic episodes is as high as 20%.

**188. The answer is a.** (*Hales, 3/e, p 1676.*) After a generalized tonic-clonic seizure, prolactin levels increase dramatically but they remain at baseline values in nonepileptic seizures. Blood samples must be drawn within 20 minutes of the episode. This test is less reliable with complex-partial seizures and it is not useful in status epilepticus and simple partial seizures.

**189. The answer is e.** (*DSM-IV, pp 715–718.*) Mood and anxiety disorders are common in the history of patients with dysphoric premenstrual disorder. Although up to 75% of women report minor or isolated premenstrual disturbances, only 3 to 5% experience symptoms severe enough to meet the criteria for this diagnosis. Symptoms usually begin in the early 20s, tend to worsen with age, and remit in menopause.

**190. The answer is d.** (*Yudosfky, 3/e, pp 450–451.*) Polypharmacy is among the most common causes of delirium in elderly patients, especially patients who already have signs of cognitive deterioration and many medical problems. Drug abuse and drug withdrawal are more commonly seen in young and middle-aged adults. Accidental poisoning and hypoxia (for example, from drowning) are more frequent in children.

**191. The answer is c.** (*Hales, 3/e, pp 319–325, 388.*) Postcardiotomy delirium is a frequent complication of cardiac surgery, with a prevalence that has remained constant through the years at 32%. Drugs effects, especially from opioids and anticholinergic medications, subclinical brain injury, complement activation, poor nutritional status, and embolism have been among the identified causes of this syndrome. Stable vital signs help in the differential diagnosis with delirium tremens, which is accompanied by hypertension, tachycardia, and elevated temperature. Meningitis and encephalitis are usually febrile illnesses and are accompanied by meningismus and more localized neurological signs. Patients with brief reactive psychosis have a clear sensorium and are not disoriented. Furthermore, the onset of psychotic symptoms is preceded by a severe stressor.

**192–195. The answers are 192-g, 193-a, 194-b, 195-i.** (*Yudofsky, 3/e, pp 641–649.*) Tumors of the pituitary cause bitemporal hemianopsia by compressing the optic chiasm and a variety of endocrine disturbances which in turn can cause psychiatric symptoms. The woman in the vignette has a basophilic adenoma and her depression is part of her Cushing's syndrome. Patients with craniopharyngiomas can also present with behavioral and autonomic disturbances caused by the upward extension of the tumor in the diencephalon.

Tumors of the frontal lobes are often associated with behavioral changes and other neuropsychiatric manifestations. Although three specific syndromes have been identified in frontal lobe damage (orbitofrontal, dorsolateral, and an anterior cingulate syndrome), patients with frontal lobe tumors usually present with a combination of symptoms, probably because tumors are rarely confined to a specific region of the lobes and can affect other regions through compression or edema. Affective symptoms, personality changes, and psychotic symptoms are the most common neuropsychiatric features. Personality changes have been described in as many as 70% of patients and they include irresponsibility, indifference, inappropriate childlike or sexualized behaviors, and disinhibition.

Tumors of the temporal lobe can present with olfactory and other unusual types of hallucinations, derealization episodes, mood lability, irritability, intermittent anger, and behavioral dyscontrol. Anxiety is another frequent finding.

Parietal lobe tumors usually are not associated with psychiatric symptoms but some of their typical features, such as the hemineglect described in the vignette, may appear so bizarre as to suggest a conversion disorder or another somatization disorder. Other features of parietal lobe tumors are acalculia (difficulties with calculations), finger agnosia, right-left confusion (Gerstmann's syndrome), and astereognosia (inability to identify an object held in the hand on the side opposite to the tumor).

**196–199. The answers are 196-b, 197-d, 198-j, 199-g.** (*Sadock, 7/e, pp 735–740.*) Grand mal seizures are followed by a sharp rise of the serum prolactin level that lasts approximately 20 minutes. Since in nonepileptic seizures prolactin levels do not change, this test may be helpful in the differential diagnosis. In neuroleptic malignant syndrome, the severe muscle contraction causes rhabdomyolysis and an increase of the serum CPK level. CPK levels also increase with dystonic reactions and following intramus-

cular injections. Since impotence and decrease in sexual desire may be due to low testosterone levels, this test is helpful in the differential diagnosis of organic and psychogenic impotence. Serum testosterone levels are abnormally high in people who abuse anabolic steroids. Serum ammonia is increased in delirium secondary to hepatic encephalopathy. Gastrointestinal hemorrhages and severe cardiac failure may also cause an increase in serum ammonia.

**200. The answer is a.** (*Sadock, 7/e, pp 292–293.*) Huntington's disease is an autosomal dominant disorder and in affected families the risk for developing the disease is 50%. Huntington's disease has been traced to an area of unstable DNA on chromosome 4.

**201. The answer is d.** (*Hales, 3/e, p 1685.*) Depression occurs in 30 to 50% of stroke patients within two years of the event. Depression is more commonly associated with frontal lobe lesions and, in particular, with left frontal lobe lesions. Mania is less common and it occurs almost exclusively with right hemisphere lesions. Many of the patients who develop mania have a family history of affective disorders. Psychosis is a rare consequence of single strokes but is more common with bilateral lesions. Anxiety syndromes follow cortical but not subcortical damage.

**202. The answer is e.** (*Yudofsky, 3/e, p 916.*) Nearly 90% of mentally retarded individuals are mildly retarded. They usually can achieve a level of education equivalent to sixth grade and can live in the community and work, although they need assistance in several areas, such as managing financial matters. IQ scores between 35 and 55 are considered in the range of moderate mental retardation, which has a prevalence of approximately 7% in the mentally retarded population. Individuals in this category function at the level of a preschooler or a young child and they need supervised living facilities. Three percent of the mentally retarded fall in the severe range, with IQs between 20 and 40. These patients learn very few skills and need specialized care. They have a considerably higher incidence of seizures and other neurological disorders. Only 1% of the mentally retarded are in the profound range, with IQs between 20 and 25. These patients often present with self-injurious behaviors and have a multitude of medical and neurological problems. They rarely survive past their early twenties.

**203. The answer is b.** (*Yudofsky, 3/e, pp 611–612; Hales, 3/e, p 325.*) Epidural hematomas usually follow a fracture of the parietal or temporal bones and the subsequent laceration of the middle meningeal artery or vein. It is characterized by delirium and loss of consciousness that usually follow a brief period of lucidity, hemiparesis, cranial nerve palsies, and, left untreated, they are often fatal. Subdural hematomas can be spontaneous or, more frequently, they follow a head trauma. They are caused by a tear of the bridging veins in the subdural space and they cause a variety of neuropsychiatric symptoms that often are confused with degenerative forms of dementia. Subarachnoid hemorrhages are due to bleeding aneurysms and arteriovenous malformations. They are characterized by the presence of blood in the CSF, severe sudden headaches, and signs of meningitis.

**204. The answer is b.** (*Sadock, 7/e, p 864.*) A persisting dementia, called chronic traumatic encephalopathy, occurs with multiple head traumas, even of minor entity. A classic example is dementia pugilistica or boxer dementia. In this disorder, cognitive decline and memory deficits are characteristically accompanied by Parkinsonian symptoms.

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# SCHIZOPHRENIA AND OTHER PSYCHOTIC DISORDERS

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## Questions

**DIRECTIONS:** Each item below contains a question or incomplete statement followed by suggested responses. Select the **one best** response to each question.

**205.** A 38-year-old patient with paranoid schizophrenia is discovered by his Department of Mental Health caseworker during a routine home visit lying in his bed with a temperature of 103 degrees. The patient is disoriented and so rigid the caseworker is unable to stand him up. Which of the following is the most likely cause of such a presentation?

- a. An increase in the dose of haloperidol decanoate, received three days earlier
- b. Minor surgery two days earlier
- c. Patient stopped taking his medications for two weeks
- d. Patient has been drinking four to five beers every night
- e. Patient has been in close contact with a friend who has pneumococcal meningitis

### Items 206–207

A 45-year-old woman with a chronic mental illness seems to be constantly chewing. Her tongue darts in and out of her mouth and occasionally she smacks her lips. She also grimaces, frowns, and blinks excessively.

**206.** These abnormal movements are seen, characteristically, in

- a. Tourette's syndrome
- b. Akathisia
- c. Tardive dyskinesia
- d. Parkinson's disease
- e. Wilson's disease

**207.** What medication has she received for the past 25 years?

- a. Diazepam
- b. Phenobarbital
- c. Clozapine
- d. Perphenazine
- e. Amitriptyline

**208.** A 17-year-old boy has just been diagnosed with schizophrenia. His distraught parents ask the psychiatrist if their two younger children are likely to develop the same disorder. Prevalence of schizophrenia in siblings is

- a. 2.5%
- b. 5%
- c. 10%
- d. 20%
- e. 30%

**209.** In the absence of other symptoms, episodic automatisms and olfactory hallucinations are suggestive of

- a. Schizophrenia
- b. Hysterical personality disorder
- c. Schizophreniform psychosis
- d. Nondominant parietal lobe lesion
- e. Temporal lobe lesion

**DIRECTIONS:** The group of questions below consists of lettered options followed by numbered items. For each numbered item, select one lettered option. Each option may be used once, more than once, or not at all.

**Items 210–214**

Match each vignette with the appropriate diagnosis.

- a. Delusional disorder
- b. Schizoaffective disorder
- c. Psychotic depression
- d. Schizophrenia, paranoid type
- e. PCP intoxication
- f. Schizophreniform disorder
- g. Catatonia
- h. Shared psychotic disorder
- i. Schizophrenia, disorganized type

**210.** For six weeks, a college student has survived on canned food because he is afraid of being poisoned by the mafia. He is convinced that secret cameras have been placed in his apartment and that he is being constantly watched. He can hear a man's voice that comments on his every move. For approximately two months prior to the emergence of these symptoms he has been increasingly withdrawn, suspicious, disinterested in his academic work, and uncharacteristically uncaring about his appearance.

**211.** A 35-year-old woman has been a state hospital resident for the past 15 years. She spends most of her day rocking, muttering softly to herself, or looking at her reflection in a small mirror. She needs help with dressing and showering and she often giggles and laughs for no apparent reason.

**212.** A 45-year-old homeless man refuses to stay in a shelter because he is convinced that the other clients are devil worshippers and that they are going to murder him in his sleep. He claims he has heard them plotting about cutting his throat and stealing his shoes. The shelter volunteers have heard him reporting similar fears for the past 10 years.

**213.** A hospitalized patient with a chronic mental illness has been mute and immobile for more than two weeks. He actively resists any attempt to be moved. Occasionally he has brief periods of sudden, unprovoked agitated and aggressive behavior.

**214.** A 45-year-old legal secretary, who leads a somewhat isolated but otherwise unremarkable life, has written hundreds of love letters to a famous movie star. She is convinced that only the actor's jealous wife is preventing him from openly declaring his passion for her.

**DIRECTIONS:** Each item below contains a question or incomplete statement followed by suggested responses. Select the **one best** response to each question.

**215.** A 25-year-old college student is admitted to a psychiatric ward with a six-month history of “personality change, strange behavior, and weird ideas.” Approximately six weeks before the admission, the patient became convinced that he was not able to remember his lessons because his thoughts were being “stolen” by other students. A male voice has been advising him to be suspicious of everyone. The patient’s parents report that for several weeks their son has been talking in a disorganized and obscure way. He has also been very depressed, he lost weight, cannot sleep, and has been barely able to take care of his basic needs. The most likely diagnosis is

- a. Schizophrenia
- b. Schizoaffective disorder
- c. Delusional disorder
- d. Bipolar I disorder
- e. Schizoid personality disorder

**216.** Which of the following statements regarding formal thought disorder is true?

- a. It is found only in schizophrenia
- b. It may be seen in manic and depressed patients
- c. Different forms of thought disorders are associated with different diagnoses
- d. Delusions are a form of thought disorder
- e. Ideas of reference are a form of thought disorder

**217.** A patient with schizophrenia has had a poor response to several trials of typical antipsychotic medications, risperidone and olanzapine. His psychiatrist recommends a trial of clozapine. What factor can represent a relative contraindication to the use of this medication?

- a. A history of severe extrapyramidal symptoms while on haloperidol
- b. A history of galactorrhea while on perphenazine
- c. A history of recurrent depressive symptoms
- d. A seizure disorder
- e. The presence of mild tardive dyskinesia

**218.** A 47-year-old homeless woman attempts suicide by jumping off an overpass and she is admitted for the treatment of several fractures. Tearfully, she reports to the physicians that devil worshippers have tormented her for many years. She is convinced that her persecutors have managed to infiltrate the ward, masquerading as nurses and maintenance workers. She is treated with risperidone and sertraline. After three weeks, her mood has greatly improved and she is not suicidal but her beliefs about being persecuted have not changed. This patient has had three similar episodes in the past 10 years. Choose the most appropriate diagnosis:

- a. Major depression, recurrent with psychotic features
- b. Schizoaffective disorder
- c. Chronic schizophrenia, paranoid type
- d. Delusional disorder, paranoid type
- e. Schizophreniform disorder

**219.** A young man with a diagnosis of paranoid schizophrenia is hospitalized for the third time in the space of six months for acute exacerbations of his symptoms. He has been compliant with his antipsychotic medications and has kept his monthly doctor appointments. When his parents come to visit, they worry about the patient's unkempt appearance and urge him to "take better care of yourself." They show their disappointment when they learn that the patient has not participated in groups and has been spending most of his time in his room. Choose the most appropriate statement:

- a. Schizophrenic patients need constant encouragement to stay motivated
- b. Family style of interaction makes no difference in the prognosis
- c. Intrusive and critical families have a detrimental effect on schizophrenic patients
- d. Family therapy has not proved to be of value in the treatment of schizophrenia
- e. The patient's psychotic disorder was caused by the pathological family interactions

**DIRECTIONS:** The group of questions below consists of lettered options followed by numbered items. For each numbered item, select one lettered option. Each option can be chosen once, more than once, or not at all.

**Items 220–223**

Match each clinical vignette with the most appropriate antipsychotic medication.

- a. Clozapine
- b. Molindone
- c. Haloperidol decanoate
- d. Chlorpromazine
- e. Olanzapine
- f. Perphenazine

**220.** A schizophrenic patient has no interest in social contacts or vocational rehabilitation. His affect is flat, he speaks very little and spends most of his day sitting in front of the TV, unwashed and unshaven. He has some chronic delusions of persecution but these do not impact his functioning as much as the previous symptoms.

**221.** A 45-year-old woman who is treated with an antipsychotic medication develops an uneven pigmentation over her face, shoulders, and arms after a trip to the beach.

**222.** A 55-year-old schizophrenic woman who has been treated with haloperidol for the past 25 years presents constant chewing movements, grimaces, and lip smacking. Her symptoms persist when her haloperidol dose is decreased. Without the neuroleptic, she experiences persecutory delusions and command auditory hallucinations, which tell her to kill her family members.

**223.** A schizophrenic patient has a history of multiple relapses caused by noncompliance with his antipsychotic medications.

**DIRECTIONS:** Each item below contains a question or incomplete statement followed by suggested responses. Select the **one best** response to each question.

**224.** Which of the following statements regarding delusions is true?

- a. Delusions are almost exclusively found in schizophrenia
- b. Delusions of grandiosity are rarely encountered except in mania
- c. Delusions involve a disturbance of thought content
- d. Delusions involve a disturbance of perception
- e. Delusions are a type of hallucination

**225.** The percentage of schizophrenic patients who ultimately commit suicide is approximately

- a. 1%
- b. 5%
- c. 10%
- d. 20%
- e. 30%

**226.** A young mother is involved in a car accident that claims the life of her two sons. When she is told that her two children have died from the injuries they suffered in the crash, she becomes agitated and combative. Her speech is disorganized and incoherent, but the observers understand that she hears the voices of her children screaming to her to help them and that she believes that the hospital nurses are prison guards. These symptoms remit spontaneously in one week. What is the most likely diagnosis?

- a. Delirium secondary to brain injury
- b. Schizophreniform disorder
- c. Major depression with psychotic features
- d. Brief psychotic disorder
- e. Post-traumatic stress disorder

**227.** Two days after delivering a healthy, full-term baby girl, a 25-year-old woman becomes acutely agitated and disoriented. She refuses to feed her baby, stating that she is the product of a sinful relationship with the devil. She hears voices telling her to drown her daughter if she wants to save her soul. Choose the most appropriate statement:

- a. Postpartum psychosis is unlikely to recur in future pregnancies
- b. Postpartum psychosis is as frequent as postpartum depression
- c. There is no correlation between stressful life events during pregnancy and postpartum psychiatric illnesses
- d. Infanticide is rare in postpartum psychosis, even if delusional ideations about the infant are common
- e. Psychotropic medications are rarely used in postpartum psychosis

**228.** The lifetime prevalence of schizophrenia is approximately

- a. 1%
- b. 3%
- c. 5%
- d. 10%
- e. 15%

**229.** A middle-aged woman complains to her primary care physician about her poor memory. She adds that during the past months her husband has accused her of leaving the house every night to meet her many lovers. She has no memory of such encounters. Nevertheless, she believes her husband's accusations are founded and she feels very guilty for her "sinful" actions. The husband's belief in his wife's unfaithfulness is unshakable, in spite of the fact that nobody has ever seen her leaving the house at night. What is the most likely diagnosis?

- a. The wife suffers from delusional disorder, erotomanic type
- b. The wife suffers from dissociative identity disorder
- c. The husband suffers from delusional disorder, jealous type
- d. The wife suffers from psychogenic amnesia
- e. This is an example of shared psychotic disorder, jealous type

**230.** Which of the following drugs may induce a psychosis that is easily confused with, or misdiagnosed as, paranoid schizophrenia?

- a. Barbiturates
- b. Heroin
- c. Benzodiazepines
- d. Amphetamines
- e. Chlorpromazine

- 231.** Studies of the relationship between gender and schizophrenia have generally demonstrated that
- The usual age of onset is earlier for females than males
  - Males tend to have a better prognosis than females
  - The lifetime risk of developing schizophrenia is approximately the same in males and females
  - Males tend to respond better to neuroleptic medication
  - There is a higher concordance rate in male monozygotic twins as compared with female monozygotic twins
- 232.** The psychiatrist who introduced the concept of the schizophrenogenic mother was
- Sigmund Freud
  - Frieda Fromm-Reichmann
  - Eugen Bleuler
  - Harry Stack Sullivan
  - Emil Kraepelin
- 233.** A 62-year-old male who was diagnosed with schizophrenia in his early twenties is found wandering around his halfway house confused and disoriented. He is rushed to a local emergency room where his serum sodium concentration is found to be 123 mEq/L. The urine sodium concentration is 5 mEq/L. The patient has been treated with risperidone, 4 mg a day for the past three years with good symptom control. His roommate reports that the patient makes many trips to the water cooler and often complains of being thirsty. What is the most likely cause of this patient's metabolic imbalance?
- Renal failure
  - Inappropriate antidiuretic hormone (ADH) secretion
  - Addison's disease
  - Psychogenic polydipsia
  - Nephrotic syndrome

**DIRECTIONS:** The group of questions below consists of lettered options followed by numbered items. For each numbered item, select one lettered option. Each option can be chosen once, more than once, or not at all.

**Items 234–237**

Match the following culture-bound syndrome with the appropriate vignette.

- a. Koro
- b. Sangue dormido
- c. Brain fag
- d. Amok
- e. Nervios
- f. Dhat
- g. Ghost sickness

**234.** A man becomes suddenly agitated and violent after a period of brooding. The episode is self-contained and the man shortly returns to his premorbid functioning level.

**235.** A man is convinced that his penis is receding into his body and fears that, when his penis disappears completely, he will die.

**236.** A Brazilian woman experiences tearfulness, inability to concentrate, headaches, dizziness, insomnia, and nervousness after her house is broken into by burglars.

**237.** An Indian man feels very weak and anxious and is intensely preoccupied with the discharge of his semen.

# SCHIZOPHRENIA AND OTHER PSYCHOTIC DISORDERS

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## Answers

**205. The answer is a.** (*Hales, 3/e, pp 1071–1072.*) Neuroleptic malignant syndrome (NMS) is a severe, potentially life-threatening disorder associated with the use of neuroleptics. Although all neuroleptics can cause NMS, this syndrome is most usually seen with typical high-potency antipsychotic medications. Initiating treatment, dosage increases, depot injectable preparations, dehydration, and concomitant use of lithium increase the risk for developing NMS. Characteristic signs and symptoms include severe muscle rigidity, an elevated body temperature (secondary to the thermogenic effects of the tonic contraction of the skeletal muscles), autonomic instability, and mental status changes. Typical laboratory findings are an elevated blood count (over 15,000/mm) and an elevated creatinine phosphokinase (CPK) due to muscle damage. Muscle damage can also cause myoglobinuria, which in turn can cause renal failure. Treatment interventions include discontinuation of all medications, intravenous fluids, cooling blankets, and antipyretic agents. In severe cases, bromocriptine (a centrally active dopamine agonist) and dantrolene (a direct-acting muscle relaxant) are used. Malignant hyperthermia (a rare reaction to anesthetic drugs) and neuroleptic malignant syndrome have very similar presentations. The differential diagnosis is aided by the history of a recent exposure to anesthetics in the former and to neuroleptics in the latter.

**206–207. The answers are 206-c, 207-d.** (*Hales, 3/e, pp 1069–1071.*) Tardive dyskinesia (TD) is a disorder characterized by involuntary choreo-athetoid movements of the face, trunk, and extremities. Tardive dyskinesia is associated with prolonged use of medications that block dopamine receptors, most commonly antipsychotic medications. Typical antipsychotic medications (such as perphenazine) and, in particular, high-potency drugs carry the highest risk of TD. Atypical antipsychotics are thought to be less likely to cause this disorder and clozapine is used in the treatment of TD.

**208. The answer is c.** (*Hales, 3/e, p 45.*) The risk for developing schizophrenia in first-degree relatives of schizophrenic patients is elevated compared to the risk of the general population (0.9%). Parents of schizophrenic patients have a lifetime prevalence of 5.9% and siblings have a prevalence of 10%. Children of schizophrenic have a lifetime prevalence of 12.8%.

**209. The answer is e.** (*Yudofsky, 3/e, pp 563–564.*) Olfactory hallucinations are rare in disorders other than temporal lobe epilepsy. Automatism, altered states of consciousness (*déjà vu*, staring spells), visual distortions, and auditory phenomena (hearing a buzz or a hum) are also common symptoms of this disorder. In schizophrenia, hallucinations are predominantly auditory. The episodic manifestation of the symptoms is also characteristic of a seizure disorder.

**210–214. The correct answers are 210-f, 211-i, 212-d, 213-g, 214-a.** (*DSM-IV, pp. 273–290.*) Schizophreniform disorder and chronic schizophrenia differ only in the duration of the symptoms and the fact that the impaired social or occupational functioning associated with chronic schizophrenia is not required to diagnose schizophreniform disorder. As with schizophrenia, schizophreniform disorder is characterized by the presence of delusions, hallucinations, disorganized thoughts and speech, and the presence of negative symptoms. The total duration of the illness, including prodromal and residual phases, is at least one month and less than six months. Approximately one-third of the patients diagnosed with schizophreniform disorder experiences a full recovery, while the rest progress to schizophrenia and schizoaffective disorder.

Depending on the predominance of particular symptoms, four subtypes of schizophrenia are recognized: paranoid, disorganized, catatonic, and residual. The essential characteristics of the disorganized type are disorganized speech and behavior, flat or inappropriate affect, great functional impairment, and inability to perform basic activities such as showering or preparing meals. Grimacing, silly and odd behavior, and mannerisms are common. Hallucinations and delusions, if present, are fragmented and not organized in a coherent theme. This subtype is associated with poor premorbid functions, early insidious onset, and a progressive course without remissions.

The man in vignette of question 212 presents with the classical symptoms of paranoid schizophrenia. This subtype of schizophrenia is characterized by prominent hallucinations and delusional ideations and a relative

preservation of affect and cognitive functions. Delusions are usually grandiose or persecutory or both, organized around a central coherent theme. Hallucinations, usually auditory, are frequent and related to the delusional theme. Anxiety, anger, argumentativeness, and aloofness are often present. Paranoid schizophrenia tends to develop later in life and it is associated with a better prognosis.

Catatonic schizophrenia is characterized by marked psychomotor disturbances including prolonged immobility, posturing, extreme negativism (the patient actively resists any attempts made to change his or her position) or waxy flexibility (the patient maintains the position in which he or she is placed), mutism, echolalia (repetition of words said by another person), and echopraxia (repetition of movements made by another person). Periods of immobility and mutism can alternate with periods of extreme agitation (catatonic excitement).

The main feature of delusional disorder is the presence of one or more nonbizarre delusions, without deterioration of psychosocial functioning and in the absence of bizarre or odd behavior. Auditory and visual hallucinations, if present, are not prominent and are related to the delusional theme. Tactile and olfactory hallucinations may also be present if they are incorporated in the delusional system (such as feeling insects crawling over the skin in delusions of infestation). Subtypes of delusional disorder include erotomanic (exemplified by the woman in vignette number 214), grandiose, jealous, persecutory, and somatic (delusions of being infested with parasites, of emitting a bad odor, of having AIDS). Delusional disorder usually manifests in middle or late adult life and has a fluctuating course, with periods of remissions and relapses.

**215. The answer is b.** (*DSM-IV, pp 292–296.*) Schizoaffective disorder is diagnosed when the required criteria for schizophrenia are met (delusions, hallucination, disorganized speech or behavior, and/or negative symptoms; duration of the disturbance, including prodromal and residual period, of at least six months with at least one month of active symptoms) and the patient experiences at some point in the course of the illness a major depressive episode or a manic episode. The man in the vignette does meet all these criteria. Delusional disorder is not accompanied by decline in functions or significant affective symptoms. Individuals with schizoid personality disorder do not experience psychotic symptoms. Bipolar disorder is differentiated from schizoaffective disorder by the absence of periods of psychosis unaccompanied by prominent affective symptoms.

**216. The answer is b.** (*Hales, 3/e, p 434; Sadock, 7/e, pp 798–799.*) Formal thought disorder is common in schizophrenia although it is also encountered in mania and depression. Forms of formal thought disorder characterized by a disturbance of the flow of the ideation include thought blocking, poverty of speech, and flight of ideas. Disturbances of thought continuity include circumstantiality, tangentiality, clang association, loose associations, derailment, and echolalia. Concrete and illogical thinking are also forms of formal thought disorder. Although certain forms of formal thought disorder are more frequently associated with specific psychiatric disorders (for example, tangentiality, flight of ideas, and clang association in mania, and illogical thinking and loose association in schizophrenia), no form of thought disorder appears to be disorder-specific. Delusions and ideas of reference are disturbances of thought content.

**217. The answer is d.** (*Schatzberg, 2/e, pp 331–336.*) Clozapine has been proved to be effective in reducing psychotic symptoms in refractory cases of schizophrenia and schizoaffective disorder. Its use is limited by two serious side effects: agranulocytosis (1 to 2%) and an increased risk for seizures. An antiepileptic medication can be added when the use of clozapine is justified by the potential benefits of this medication. Clozapine does not cause galactorrhea or Parkinsonism and can benefit patients with tardive dyskinesia.

**218. The answer is b.** (*DSM-IV, pp 292–296.*) Schizoaffective disorder is characterized by depressive or manic episodes superimposed on symptoms of chronic schizophrenia. The patient in the vignette experienced a persistence of psychotic symptoms in the absence of prominent affective symptoms and consequently fits the criteria for a diagnosis of schizoaffective disorder. Although affective symptoms may be present in schizophrenia, they are not prominent. In psychotic depression, psychotic symptoms are always associated with prominent affective symptoms. Delusional disorder is characterized by one or two nonbizarre, well-organized delusions and is not accompanied by significant mood disturbances.

**219. The answer is c.** (*Hales, 3/e, p 463.*) Combined with antipsychotic medication, family therapy has been proved to reduce the relapse rate in schizophrenia. Most effective interventions include educating family members about the nature of schizophrenia and the needs of schizophrenic patients. Family therapy can improve the patient's quality of life by bringing about a de-

crease in the level of criticism, a decrease in the family members' emotional overinvolvement with the patient, and a lowering of the overall emotional tone of family interactions. Pathological family interactions have a negative effect on the prognosis but are not the primary cause of schizophrenia.

**220–223. The answers are 220-e, 221-d, 222-a, 223-c.** (*Schatzberg, 2/e, pp 319, 331–342, 758.*) The schizophrenic patient in the vignette manifests a prevalence of negative symptoms (flat affect, abulia, lack of motivation). Two antipsychotic medications have been proved to be effective for negative symptoms, clozapine and olanzepine. The use of clozapine, though, due to this medication's high risk for agranulocytosis, is limited to refractory cases of schizophrenia, the treatment of severe tardive dyskinesia, and psychotic symptoms in patients with Parkinson's disease.

The patient in vignette 221 has experienced a common side effect associated with the use of low-potency neuroleptics, in particular, chlorpromazine. These medications have a photosensitization effect and cause sunburn, patchy discoloration of the skin, and rashes when the patients expose themselves to the sun without adequate protection (sunscreens, hats, long sleeves).

Tardive dyskinesia often improves when the dosage of neuroleptic is decreased or the medications are stopped. When these interventions are not effective or are not possible due to the severity of the patient's disorder, clozapine is the treatment of choice. No other medication has been proved to be effective in the treatment of TD so far.

There is strong evidence that without continuous treatment, virtually all schizophrenic patients relapse within 12 to 24 months. Injectable depot medications such as haloperidol decanoate and fluphenazine decanoate are effective in decreasing the rate of relapse in patients who are not compliant with oral medication.

**224. The answer is c.** (*Sadock, 7/e, pp 800–801.*) A delusion is defined as a firmly held false belief, not shared by other people in the same social and cultural group, and firmly held against evidence that disproves the belief. Delusions are classified as disturbances of thought content and they are found in a wide variety of psychotic conditions other than schizophrenia, including organic disorders, states of intoxication, and mood disorders. Although certain types of delusions are more common in certain disorders (delusions of being controlled by external agents in schizophrenia and

grandiose delusions in mania), delusions are not diagnostically specific. Hallucinations are disorders of perception.

**225. The answer is c.** (*Sadock, 7/e, p 1191.*) Suicide is a significant risk factor for schizophrenic patients and it has been calculated that approximately 10% of these patients commit suicide during the first 10 years of illness. Suicide may be due to despair and depression or in response to command hallucinations or persecutory delusions.

**226. The answer is d.** (*DSM-IV, pp 302–304.*) Brief psychotic disorder is characterized by the sudden appearance of delusions, hallucinations, and disorganized speech or behavior usually following a severe stressor. The episode lasts at least one day and less than a month and is followed by full spontaneous remission. For the woman in the vignette, the psychotic episode was clearly precipitated by the tragic death of her sons. Schizophreniform disorder is differentiated from brief psychotic disorder by temporal factors (in schizophreniform disorder, symptoms are required to last more than one month) and lack of association with a stressor. Post-traumatic stress disorder has a more chronic course and is characterized by affective, dissociative, and behavioral symptoms.

**227. The answer is d.** (*Sadock, 7/e, pp 1278–1282.*) Postpartum psychosis is a rare event (1 to 2 per 1000 postpartum women). Restlessness, disorganized behavior, derealization, hallucinations, and delusions develop rapidly within the first two to four weeks after delivery. Delusional beliefs and hallucinations often center on the infant. Infanticide is relatively uncommon (4%) but risk for suicide is very high. Psychosocial stressors play an important role in the development of postpartum disorders and many studies have proved that stressful events during pregnancy increase the risk for postpartum depression. The risk of a recurrence for postpartum psychosis and postpartum depression is high (respectively, 70% and 50%).

**228. The answer is a.** (*Hales, 2/e, pp 446.*) According to the Epidemiologic Catchment Areas Survey (Robins et al., 1984), the lifetime prevalence for schizophrenia is 1.3%. The one-year incidence rate is 0.2 per 1000. Studies conducted by the World Health Organization have demonstrated a surprisingly similar rate in countries with very different cultures and economic statuses.

**229. The answer is e.** (*DSM-IV*, pp 305–306.) Shared psychotic disorder refers to a delusional disorder that develops in a person who is in a close relationship with another person (inducer or primary case) who already has a psychotic disorder with prominent delusions. The primary case, usually the dominant person in the relationship, gradually imposes his or her delusional system on the more passive and, at least initially, healthier individual. Primary cases usually suffer from schizophrenia, delusional disorders, or psychotic depression. The content of the shared delusional system varies and can be quite bizarre. Individuals with shared psychotic disorder usually are blood-related or have lived together for a long time. They rarely seek help spontaneously. Usually if the primary case is removed, the other person improves or recovers.

**230. The answer is d.** (*Hales*, 3/e, p 402.) Amphetamine intoxication can result in a psychosis very closely resembling acute paranoid schizophrenia with symptoms including paranoid delusions and visual hallucinations. Some investigators feel that prominent visual hallucinations and a relative absence of thought disorder are more characteristic of amphetamine psychosis, but other investigators feel the symptoms are indistinguishable. Other drugs that produce psychoses similar to schizophrenia include phencyclidine (PCP) and lysergic acid diethylamide (LSD).

**231. The answer is c.** (*Hales*, 3/e, p 447.) Gender differences in schizophrenia have been repeatedly demonstrated. The lifetime risk for schizophrenia is the same in males and females, but males tend to have an earlier peak age of onset (18 to 25 years versus 26 to 45 years for females) and a poorer outcome.

**232. The answer is b.** (*Sadock*, 7/e, p 599.) Frieda Fromm-Reichmann followed the interpersonal school founded by Harry Stack Sullivan and believed that schizophrenia was the outcome of an inadequate mother-child relationship in which the mother was aloof, overly protective, or hostile. She postulated that faulty mothering leads to anxiety and distrust of others, causing people who develop schizophrenia to withdraw from interpersonal exchanges. This theory has been discredited by recent research that supports the notion that schizophrenia is a brain disorder caused by the convergence of multiple environmental and genetic factors. Kraepelin was the first to differentiate patients with dementia praecox (what is now called

schizophrenia), who had a chronic and deteriorating course, from patients with affective psychosis, who presented with intermittent symptoms and no deterioration of functions. Eugen Bleuler coined the term *schizophrenia* and identified the cardinal symptoms of this disorder: autism, disturbances of associations, disturbances of affect, and ambivalence.

**233. The answer is d.** (*Sadock, 7/e, p 1190.*) Self-induced water intoxication should always be considered in the differential diagnosis of confusional states and seizures in schizophrenic patients. As many as 20% of patients with a diagnosis of schizophrenia drink excessive amounts of water. At least 4% of these patients suffer from chronic hyponatremia and recurrent acute water intoxication. Medications that cause excessive water retention such as lithium and carbamazepine can aggravate the symptomatology.

**234–237. The answers are 234-d, 235-a, 236-e, 237-f.** (*Sadock, 7/e, pp 1272–1273.*) Amok refers to a dissociative episode characterized by violent agitation and aggressive and homicidal behavior. The episode is precipitated by a perceived slight or insult and it is preceded by a period of brooding. Amok was first described in Malaysia. Koro is seen in South and East Asia and is characterized by a sudden and intense anxiety connected to the belief that the penis is receding into the body and that death will follow when it has totally disappeared. Nervios is a common disorder in South America and among the Latino population in the United States. Nervios is characterized by a wide range of symptoms of emotional distress, somatic complaints, and decreased ability to function. Headaches, stomach problems, insomnia, irritability, tearfulness, trembling, and vertigo are only some of the symptoms associated with this disorder. Nervios is a very broad syndrome whose incidence spans individuals with no mental disorder to those with a variety of depressive and anxiety disorders. Dhat is characterized by anxiety, hypochondriac concern about semen discharge, and fatigue. It is found in India. Sangué dormido, a syndrome described among Portuguese Cape Verdians, includes numbness, tremor, paralysis, convulsions, strokes, and heart attacks. Brain fag, a syndrome described in West Africa, refers to a condition that develops in high school students who are feeling excessively challenged by their academic tasks. It includes difficulties concentrating, memory problems, blurred vision, and neck pain. Ghost sickness is a preoccupation with death and dead people that is found among several Native American tribes. Symptoms such as dizziness, fainting, anxiety, hallucinations, and confusion are commonly attributed to ghost sickness.

# MOOD DISORDERS

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## Questions

**DIRECTIONS:** Each item below contains a question or incomplete statement followed by suggested responses. Select the **one best** response to each question.

**238.** A 32-year-old woman has been increasingly depressed, discouraged, and irritable for the past six weeks. She wakes up at 3 A.M. every morning and cannot fall asleep again. She has lost interest in her job and often thinks that her family would be better off if she were dead. When she is diagnosed with major depression, her identical twin asks the psychiatrist what her own risk is of developing this disorder. The psychiatrist answers that the concordance rate for mood disorders in homozygotic twins is

- a. 5%
- b. 20%
- c. 50%
- d. 70%
- e. 90%

**239.** A 55-year-old male without a previous psychiatric history becomes depressed, withdrawn, and despondent. One month later, he is diagnosed with cancer. Which type of carcinoma is most likely to manifest with depressive symptoms?

- a. Prostatic
- b. Renal
- c. Gastric
- d. Pancreatic
- e. Ovarian

**Items 240–241**

**240.** As soon as she returns home from the hospital, three days after delivering a healthy baby girl, a 23-year-old woman becomes increasingly irritable and tearful. She constantly worries about the baby, fearing she won't be an adequate mother. What is the most likely diagnosis?

- a. Postpartum depression
- b. Postpartum psychosis
- c. Adjustment disorder
- d. Postpartum blues
- e. Major depressive episode

**241.** The husband of the woman in the previous vignette is very worried about her. To reassure him, the family physician tells him that such symptoms are common after delivery; in fact, the prevalence has been estimated in some studies to be as high as

- a. 5%
- b. 25%
- c. 45%
- d. 65%
- e. 85%

**242.** A 27-year-old woman seeks evaluation for her “depression” in an outpatient clinic. She reports episodic feelings of sadness since adolescence. Occasionally she feels good, but these periods seldom last more than two weeks. She is able to work but thinks she is not doing as well as she should. In describing her problems, she seems to focus more on repeated disappointments in her life and her low opinion of herself than on discrete depressive symptoms. In a differential diagnosis at this point, the most likely diagnosis is

- a. Major depression with melancholia
- b. Adjustment disorder with depressed mood
- c. Cyclothymia
- d. Childhood depression
- e. Dysthymia

**243.** One month after her mother's death from heart failure, a 25-year-old woman with no prior psychiatric history is still very sad and tearful. She has difficulty concentrating and falling asleep at night and has lost three pounds. The most likely diagnosis is

- a. Major depression
- b. Dysthymia
- c. Post-traumatic stress disorder
- d. Adjustment disorder
- e. Uncomplicated bereavement

**Items 244–245**

At 3 A.M. a middle-aged woman arrives at the ER escorted by police. She shouts, “I love you, Jesus! Jesus is my savior!” at the top of her lungs and throws kisses to everyone. Neighbors called the police because she had been singing church hymns for six hours. The patient tells the resident on call that two weeks earlier she had flushed her medications down the toilet because they made her go to the bathroom too much, gave her pimples, and made her food taste bad.

**244.** What is the most likely diagnosis?

- a. Cocaine intoxication
- b. Schizophreniform disorder
- c. Acute elated mania
- d. Dysphoric mania
- e. Manic delirium

**245.** What medication did this patient flush down the toilet?

- a. Valproic acid
- b. Haloperidol
- c. Carbamazepine
- d. Lithium
- e. Sertraline

**246.** A 56-year-old surgeon suffering from depression has accepted this diagnosis very reluctantly. After four weeks on paroxetine, 40 mg a day, his symptoms are only partially improved. He admits to his psychiatrist that he has been hearing voices that call him a failure and a bum since the depression started. Choose the most appropriate statement for this scenario:

- a. Psychotic depression is unlikely to improve without neuroleptic treatment
- b. The patient enjoys his sick role and is inventing symptoms
- c. This patient is probably schizophrenic and needs antipsychotic treatment
- d. The paroxetine dosage is grossly inadequate
- e. The paroxetine is probably the cause of the auditory hallucinations

**247.** The prevalence of clinical depression among poststroke patients is

- a. 1 to 2%
- b. 10 to 15%
- c. 30 to 50%
- d. 75 to 80%
- e. 90 to 100%

**248.** A 75-year-old male with angina has been increasingly moody and irritable for five weeks. He has lost interest in sex and his favorite leisure activities and nothing seems to cheer him up. He has difficulty falling asleep at night and his appetite is decreased, although he has not lost any weight. His heart medications have not been changed for the past year. There have been no changes or stressful events during the past six months. What is the most likely diagnosis?

- a. Depression secondary to medications' side effects
- b. Adjustment disorder
- c. Atypical depression
- d. Major depression
- e. Double depression

**249.** The percentage of new mothers who develop postpartum depression is believed to be approximately

- a. 0.5 to 1%
- b. 10 to 15%
- c. 25 to 30%
- d. 35 to 40%
- e. In excess of 50%

**250.** Following a stroke, the high-risk period for depression extends for

- a. 2 weeks
- b. 1 to 2 months
- c. 6 months
- d. 1 year
- e. 2 years

**251.** A 21-year-old college student with a diagnosis of bipolar disorder becomes irritable after sleeping four hours per night for one week while "cramming" for a final exam. His speech is somewhat pressured and he reports that for the past 24 hours his thoughts have been increasingly fast. He has been stable for the past six months on 500 mg of valproate twice a day and he has been compliant with his medications. Before any change in medication is considered, what nonpharmacological intervention may suppress the emergent manic symptoms?

- a. Increase the amount of sleep
- b. Decrease the amount of sleep
- c. Light therapy
- d. Exercising
- e. Transcendental meditation

**252.** The lifetime risk of suicide in mood disorders is

- a. 1 to 3%
- b. 3 to 5%
- c. 10 to 15%
- d. 20 to 30%
- e. 30 to 40%

**253.** A 55-year-old married professor without a previous psychiatric history is early in her menopause. In addition to experiencing “hot flashes” and some irritability, she complains of episodes of dizzy spells and memory lapses, which she had experienced on several occasions earlier in life. She denies depressive symptoms either now or in the past. In particular, she should be evaluated for possible

- a. Schizophrenia
- b. Major depression
- c. Temporal lobe epilepsy
- d. Dysthymia
- e. Panic disorder

**254.** The concept that psychopathology, including depression, is the result of unempathic, erratic, or neglectful parenting, which in turn prevents the development of a stable, coherent, and resilient self, is associated with

- a. Franz Alexander
- b. Carl Jung
- c. Harry Stack Sullivan
- d. Heinz Kohut
- e. Sigmund Freud

**255.** A patient with bipolar disorder who had been stable on maintenance lithium treatment for the past two years presents at his psychiatrist’s office in tears, reporting that for the past three weeks he has been increasingly despondent, has lost his appetite, and cannot concentrate at work. Choose the most appropriate statement about antidepressant treatment in bipolar depression.

- a. Antidepressants are unlikely to trigger a manic episode in the presence of a mood stabilizer
- b. Antidepressant treatment should be continued from six months to one year
- c. Lithium maintenance is more effective toward manic than depressive recurrences
- d. Bupropion should be avoided because it carries a higher risk for manic cycling than other antidepressants
- e. There are no contraindications to prolonged maintenance antidepressant treatment in bipolar disorder

**256.** A 27-year-old woman has been sad for the past two weeks. She is fatigued and has a hard time concentrating at work. Just a few weeks earlier she was energetic and enthusiastic, and was able to work 10 to 12 hours a day with little sleep and go dancing at night. Her husband wants a divorce because he is tired of “these constant ups and downs.” The most accurate diagnosis is

- a. Borderline personality disorder
- b. Seasonal mood disorder
- c. Dissociative identity disorder
- d. Cyclothymic disorder
- e. Recurrent major depression

**257.** While the majority of women do not experience significant side effects when taking oral contraceptives, for those who do, the most commonly encountered psychological problem is

- a. Anxiety
- b. Depression
- c. Night terrors
- d. Short-term memory deficits
- e. Long-term memory deficits

**DIRECTIONS:** The group of questions below consists of lettered options followed by numbered items. For each numbered item, select one lettered option. Each lettered option may be used once, more than once, or not at all.

**Items 258–261**

Each statement below refers to an etiologic theory of depression. Select the name most closely associated with each statement.

- a. Kraepelin
- b. Freud
- c. Bleuler
- d. Beck
- e. Bowlby
- f. Mahler
- g. Klein
- h. Sullivan

**258.** Depression is due to anger turned inward

**259.** Depression results from specific cognitive distortions present in depression-prone people

**260.** Depression is a consequence of suboptimal attachment

**261.** Depression arises from interpersonal conflict and loss of important relationships

**DIRECTIONS:** Each item below contains a question or incomplete statement followed by suggested responses. Select the **one best** response to each question.

**262.** A hospitalized patient with severe psychotic depression and recurrent suicidal ideations has not responded to a two-week trial with an antidepressant. The attending psychiatrist recommends electroconvulsive treatment (ECT). Choose the most appropriate statement:

- a. ECT is effective only in depression
- b. ECT is as effective as antidepressant treatment
- c. There are many contraindications to ECT
- d. ECT improves the motor symptoms of patients with Parkinson's disease
- e. ECT is never used as a first intervention

**263.** A woman's symptoms of major depression have partially improved after four weeks of fluoxetine, 60 mg a day. Her psychiatrist decides to try augmentation. Which medication would be appropriate for augmentation?

- a. Lithium
- b. Progesterone
- c. Sertraline
- d. MAO inhibitor
- e. Cortisone

**264.** For several weeks, a 10-year-old boy has been increasingly irritable, withdrawn, and apathetic. His participation in school has decreased significantly and his grades have deteriorated. Choose the appropriate statement about juvenile depression:

- a. Major depression is very rare in prepubertal children
- b. Symptoms of major depression in young children are identical to adults' symptoms
- c. Preadolescents' response to antidepressants is comparable to adults' response
- d. Psychotic symptoms are rare in depressed children
- e. Up to one-third of children who experience a major depressive episode before puberty eventually receive a diagnosis of bipolar disorder

**265.** The prevalence of alcoholism among individuals suffering from bipolar disorder is

- a. 5%
- b. 10%
- c. 30%
- d. 40%
- e. 60%

**266.** A middle-aged woman presents with a variety of cognitive and somatic symptoms, fatigue, and memory loss. She denies feeling sad but her family physician, who is aware of this patient's lifelong inability to identify and express feelings, suspects she is depressed. Choose the test results more likely to confirm a diagnosis of depression:

- a. Reduced metabolic activity and blood flow in both frontal lobes (PET)
- b. Diffuse cortical atrophy (CAT)
- c. Atrophy of the caudate (MRI)
- d. Prolonged REM sleep latency in a sleep study
- e. Subcortical infarcts (MRI)

**267.** A cognitive behavioral therapist routinely asks his depressed patients to complete a 21-item rating scale once a week, to monitor changes in symptom severity. Each item in the rating scale refers to a symptom of depression with four statements describing increasing levels of severity. This rating scale, commonly used in a clinical setting, is called

- a. Minnesota Multiphasic Personality Inventory (MMPI)
- b. Wechsler Adult Intelligence Scale (WAIS)
- c. Thematic Apperception Test (TAT)
- d. Beck Depression Inventory (BDI)
- e. Global Assessment of Functioning Scale (GAF)

**DIRECTIONS:** The group of questions below consists of lettered options followed by numbered items. For each numbered item, select one lettered option. Each option may be used once, more than once, or not at all.

**Items 268–272**

Match each vignette with the most appropriate diagnosis.

- a. Atypical depression
- b. Double depression
- c. Cyclothymic disorder
- d. Minor depressive disorder
- e. Melancholic depression
- f. Masked depression
- g. Schizoaffective disorder
- h. Seasonal affective disorder

**268.** An elderly man has been profoundly depressed for several weeks. He cries easily and he is intensely preoccupied about trivial episodes of his past, which he considers as unforgivable sins. This patient awakes every morning at 3 A.M. and cannot go back to sleep. Anything his family has tried to cheer him up has failed. He has completely lost his appetite and appears gaunt and emaciated.

**269.** A young woman who has felt mildly unhappy and dissatisfied with herself for most of her life has been severely depressed, irritable, and anhedonic for three weeks.

**270.** For the past six weeks, a middle-aged woman's mood has been mostly depressed but she cheers up briefly when her grandchildren visit or in coincidence with other pleasant events. She is consistently less depressed in the morning than at night. When her children fail to call on the phone to inquire about her health, her mood deteriorates even more. She sleeps 14 hours every night and she has gained 24 pounds.

**271.** Since he moved to Maine from his native Florida three years earlier, a college student has had great difficulty preparing for the winter-term courses. He starts craving sweets and feeling sluggish, fatigued, and irritable in late October. These symptoms worsen gradually during the following months and by February he has consistently gained several pounds. His mood and energy level start improving in March, and by May he is back to baseline.

**272.** A 56-year-old housewife has started neglecting her chores and refusing to see her friends. She tires easily, cannot concentrate, and has become very forgetful. She has several vague physical complaints but denies feeling depressed.

# MOOD DISORDERS

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## Answers

**238. The answer is d.** (*Yudofsky, 3/e, pp 303–304; Sadock, 7/e, p 1309.*)

Twin studies are useful tools to separate biological and environmental etiologic factors in illnesses. Most twin studies start with the selection of monozygotic and same-sex dizygotic twin pairs who are raised together, in which one of the twins has the disorder. The other twin is then followed to determine if he or she also develops the disorder. The proportion of the twin pairs in which both twins are affected is called concordance. The difference in the concordance rate between the monozygotic and the dizygotic pairs reflects the importance of hereditary factors in the development of the disorder. The concordance rate for mood disorders in monozygotic twins averages 70% when various studies are combined. The concordance rate in dizygotic twins is approximately 20%. This is significantly higher than that found in the general population but still two to four times lower than the concordance in monozygotic twins. These studies prove that, although environmental factors do play a role in mood disorders (the concordance is not 100%), heredity has a major role.

**239. The answer is d.** (*Sadock, 7/e, p 868.*) Major depression can be the first manifestation of an occult carcinoma of the pancreas. The mechanism for this phenomenon is not known, although it may be due to humoral factors secreted by the tumor that act directly on the brain.

**240–241. The answers are 240-d, 241-e.** (*Hales, 3/e, p 1435.*) Postpartum blues are very frequent, with a prevalence estimated between 30 and 85%. Symptoms include tearfulness, irritability, anxiety, and mood lability. Symptoms usually emerge during the first two to four days after birth, peak between days 5 and 7, and resolve by the end of the second week postpartum. This condition resolves spontaneously and usually the only interventions necessary are support and reassurance.

**242. The answer is e.** (*DSM-IV*, pp 345–349.) Dysthymia is defined as a chronic depression that lasts at least two years. Usually, it begins in late adolescence or early adulthood, and sometimes patients describe being depressed for as long as they can remember. Symptoms fluctuate but are usually not severe. Patients tend to have low self-esteem and perceive themselves as inadequate and inferior to others. The somatic symptoms characteristic of major depression or melancholia are less prominent in dysthymia.

**243. The answer is e.** (*Sadock*, 7/e, pp 1976–1977; *DSM-IV*, pp 684–685.) The loss of a loved one is often accompanied by symptoms reminiscent of major depression such as sadness, weepiness, insomnia, reduced appetite, and weight loss. When these symptoms do not persist beyond two months after the loss, they are considered a normal manifestation of bereavement. A diagnosis of major depression in these circumstances requires the presence of marked functional impairment, morbid preoccupations with unrealistic guilt or worthlessness, suicidal ideation, marked psychomotor retardation, and psychotic symptoms.

**244–245. The answers are 244-c, 245-d.** (*Sadock*, 7/e, pp 1347–1351.) Mood elevation, mood lability, irritability, expansive behavior, increased energy, decreased need for sleep, lack of insight, poor judgment, disinhibition, impulsivity, and pressured speech are characteristic symptoms of elated acute mania. In more severe cases, mood-congruent delusional ideations and hallucinations are present. Dysphoric mania refers to a mixed state characterized by symptoms of mania, such as grandiosity, irritability, increased energy, and agitation, coexistent with depressive symptoms, such as suicidal ideation and dysphoric mood. Although cocaine intoxication may mimic acute mania, in the scenario described in the vignette, this is an unlikely diagnosis since the patient had been on a mood stabilizer for some time. Delirious mania refers to an extremely severe form of mania, characterized by frenzied physical activity that leads to life-threatening emergencies.

Lithium is still the treatment of choice for acute mania and maintenance, although anticonvulsivants such as valproate and carbamazepine have been proved effective. Newer anticonvulsivants, such as gabapentin, topiramate, and lamotrigine, have also proved to have mood-stabilizing properties, although these medications have not been extensively studied yet. Weight gain, metallic taste, acne, hypothyroidism, and polyuria are common complaints with long-term lithium treatment.

**246. The answer is a.** (*Schatzberg, 2/e, p 714.*) The paroxetine dose the patient in the vignette is receiving is usually considered adequate to treat depression, but psychotic depression is unlikely to improve without antipsychotic treatment. The doses of antipsychotic medications required are usually lower than those necessary to treat schizophrenia.

**247. The answer is c.** (*Yudofsky, 3/e, pp 612–622.*) Depression is the most common psychiatric disorder associated with cerebrovascular disease, occurring in 30 to 50% of poststroke patients. There is a higher incidence of depression among patients with left- rather than right-hemispheric lesions. There is also an inverse correlation between the prevalence of depression and the distance of the lesion from the frontal pole, with the highest prevalence found in patients with lesions of the left frontal lobe.

**248. The answer is d.** (*DSM-IV, pp 399–344.*) Irritable or sad mood, anhedonia, decreased motivation, insomnia, and decreased appetite are consistent with a diagnosis of major depression. Although heart medications often cause psychiatric symptoms and, in particular, depression, in this case, the patient's depression is unlikely to be a medication side effect, since there were no recent changes in the pharmacological treatment. Atypical depression is characterized by hypersomnia, increased appetite, and increased reactivity to criticisms. Double depression is diagnosed when a patient with dysthymia develops a major depressive episode.

**249. The answer is b.** (*Sadock, 7/e, p 1278.*) Postpartum depression is relatively common, occurring in about 10 to 15% of new mothers. Symptoms are indistinguishable from those characteristic of nonpsychotic major depression and usually develop insidiously over the six months following delivery. Some women, though, experience an acute onset of symptoms immediately after delivery, and occasionally depression starts during pregnancy. Ambivalence toward the child and doubts about the patient's own parenting abilities are common but the rate of suicide is low.

**250. The answer is e.** (*Yudofsky, 3/e, pp 614–615; Hales, 3/e, p 506.*) Studies of the course and prognosis of poststroke depression indicate that the high-risk period can last up to two years. The presence of depression is associated with an eightfold increase of mortality risk.

**251. The answer is a.** (*Sadock, 7/e, p 208.*) Sleep deprivation has an antidepressant effect in depressed patients and may trigger a manic episode in bipolar patients. Light therapy is also used to treat depression and would certainly be contraindicated in this case scenario. Exercise has been proved to be effective in mild depressive syndromes.

**252. The answer is c.** (*Hales, 3/e, p 480.*) The lifetime risk of suicide in mood disorders is between 10 and 15%. The risk is high in mania as well as depression. Patients with mixed episodes characterized by a combination of rage, depression, and grandiosity are more likely to involve others in their suicide attempts. As many as 4% of people who commit suicide murder someone else first.

**253. The answer is c.** (*Yudofsky, 3/e, p 925; Sadock, 7/e, p 1951.*) Complaints of hot flashes, fatigue, irritability, or depressive feelings are common during menopause. Memory lapses and dizzy spells are not characteristic of panic disorder and dysthymia, and the absence of typical symptoms or history makes major depression or schizophrenia unlikely. The patient's symptoms are consistent instead with temporal lobe epilepsy, a condition that can be exacerbated by menopause.

**254. The answer is d.** (*Sadock, 7/e, pp 593–595.*) Heinz Kohut's theory of psychopathology focuses on intrapsychic developmental deficits, as opposed to the classical psychoanalysis view that psychiatric disorders are due to repressed drives and intrapsychic conflicts. Kohut believed that psychological health is based on a coherent, stable sense of self, which can develop only if a child receives consistent, empathic validation from his or her caretakers. When the early years are marked by emotional neglect and empathic failure, the child is left with a fragmented, unstable, and easily threatened sense of self. In adulthood, this developmental deficit manifests with low self-esteem, extreme need for others' approval, and a tendency to experience anxiety and depression whenever the already fragile self is threatened by interpersonal losses, rejection, or criticism.

**255. The answer is c.** (*Hales, 3/e, pp 544–545; Schatzberg, 2/e, p 714.*) Since lithium and other mood stabilizers are more effective in the prevention of manic episodes than in the prevention of depression, antidepressants are used as an adjunctive treatment when depressive episodes develop dur-

ing maintenance with a mood stabilizer. Since the incidence of antidepressant-induced mania is high (up to 30%) and since antidepressant treatment may cause rapid cycling, the antidepressant should be tapered and discontinued as soon as the depressive symptoms remit. Among the antidepressants in common use, bupropion is considered to carry a slightly lower risk for triggering mania.

**256. The answer is d.** (*DSM-IV*, pp 363–365; *Hales*, 3/e, p 949.) Cyclothymic disorder is characterized by recurrent periods of mild depression alternating with periods of hypomania. This pattern has to have been present for at least two years (one year for children and adolescents) before the diagnosis can be made. During these two years, the symptom-free intervals should not be longer than two months. Cyclothymic disorder usually starts during adolescence or early adulthood and tends to have a chronic course. The marked shifts in mood of cyclothymic disorder can be confused with the affective instability of borderline personality disorder or may suggest a substance abuse problem.

**257. The answer is b.** (*Sadock*, 7/e, p 1945.) Many studies have been done to determine the side effects of oral contraceptives, and the results are somewhat inconsistent. Most studies suggest that, although the majority of women have no significant side effects, there is an increased incidence of depression associated with this type of contraception.

**258–261. The answers are 258-c, 259-d, 260-e, 261-b.** (*Sadock*, 7/e, pp 1329, 2172, 1335, 2178.) In his paper “Mourning and Melancholia,” Freud stressed the similarity between depression and mourning and postulated that depression is a consequence of anger, triggered by a loss, real or imaginary, turned toward the self.

According to Beck’s cognitive model, depression is the consequence of the activation of three cognitive patterns that led patients to view themselves, their situations, and their futures in utterly negative terms (depressive triad). Due to a negative attitude toward themselves, patients believe they are deficient, inferior, and unlovable. The second component of the depressive triad refers to the depressed patients’ tendency to give a negative interpretation to everyday events and to past experiences. Finally, depressed patients believe that nothing will ever change and that they will continue to suffer indefinitely.

Bowlby studied the effects of faulty attachment patterns between young children and their caregivers. He believed that separation from a primary care figure in early life leads to infant depression and to a predisposition to depression throughout life.

According to the Interpersonal School of Thought founded by Sullivan, secure interpersonal relationships are essential to healthy development and to subsequent psychological stability. Sullivan theorized that conflicted relationships and loss of relationships (due to death or other changes in the environment) cause depression. Melanie Klein, who was part of the Object Relation movement, believed that depression is a consequence of the reactivation of the “depressive position,” an early psychological developmental stage during which the young child experiences sadness because he or she fears to have destroyed the “good object” through his or her hate and rage. Kraepelin and Bleuler are associated with the diagnostic conceptualization and classification of schizophrenia and other psychotic disorders.

**262. The answer is d.** (*Sadock, 7/e, pp 2503–2509.*) When compared to antidepressants, ECT is at least as effective and usually more effective than medications. ECT is the recommended treatment for patients with major depression who have not responded to medications, have severe psychotic symptoms, and are highly suicidal, as well as for medically ill patients and depressed patients who cannot tolerate medications’ side effects. ECT is also effective in the treatment of catatonic states and has been used to treat mania, schizophrenia, and neuroleptic malignant syndrome with variable results. ECT is particularly useful in Parkinson’s disease patients with depression because it also decreases their extrapyramidal symptoms. ECT is a safe procedure with very few contraindications (recent myocardial infarcts, increased intracranial pressure, aneurysms, bleeding disorders, and any condition that disrupts the blood-brain barrier).

**263. The answer is a.** (*Schatzberg, 2/e, pp 720–722.*) Lithium has been proved effective when added to an antidepressant in the treatment of refractory depression. More than one mechanism of action is probably involved, although lithium’s ability to increase the presynaptic release of serotonin is the best understood. Other augmentation strategies include the use of thyroid hormones, stimulants, estrogens, and light therapy. Progesterone and cortisone are likely to cause depression, not to decrease it. The combinations of two SSRIs (in this case fluoxetine and sertraline) and of an MAOI

and an SSRI are not recommended due to the risk of precipitating a serotonergic syndrome.

**264. The answer is e.** (*Sadock, 7/e, pp 2740–2756.*) Major depression is not a rare occurrence in children. Prevalence rates are 0.3% in preschoolers, 0.4 to 3% in school-age children, and 0.4 to 4.6% in adolescents. Making a correct diagnosis is complicated by the fact that the presentation of juvenile depression often differs from the adult presentation. Depressed preschoolers tend to be irritable, aggressive, withdrawn, or clingy instead of sad. In school-age children, the main manifestation of depression may be a significant loss of interest in friends and school. By adolescence, presenting symptoms of depression become more similar to those of adults. Psychotic symptoms are common in depressed children, most commonly one voice that makes depreciative comments and mood-congruent delusional ideations. Up to one-third of the children diagnosed with major depression receive a diagnosis of bipolar disorder later in life. This evolution is more likely when the depressive episode has an abrupt onset and is accompanied by psychotic symptoms. Childhood depression can be treated pharmacologically, but children's response to medications differs from adult response. SSRIs have been proved effective in preschoolers and school-age children; TCAs have not. There are insufficient data about the efficacy of newer antidepressants such as nefazodone, venlafaxine, bupropion, and mirtazapine. The response of older adolescents to antidepressants is equivalent to the adult response.

**265. The answer is e.** (*Hales, 3/e, p 507.*) The prevalence of alcoholism among bipolar patients is 60%. Similarly high rates are found in unipolar depression (50%) and bipolar disorder type II (50%). The presence of alcohol abuse worsens the prognosis of both unipolar depression and bipolar disorder.

**266. The answer is a.** (*Yudofsky, 3/e, pp 892–893.*) Positron emission tomography (PET) scan has consistently demonstrated a decrease in blood flow and metabolism in the frontal lobe of depressed patients. Most studies have found bilateral rather than unilateral deficits and equivalent decreases in several types of depression (unipolar, bipolar, associated with OCD). Cortical atrophy and subcortical infarcts are associated, respectively, with Alzheimer's disease and multi-infarct dementia. Atrophy of the caudate is

characteristic of Huntington's disease. Finally, in major depression, the REM sleep latency (the period of time between falling asleep and the first period of REM sleep) is shortened, not prolonged.

**267. The answer is d.** (*Sadock, 7/e, p 769.*) The Beck Depression Inventory is commonly used in clinical practice as a diagnostic tool and to monitor symptoms of depression during treatment. The Global Assessment of Functioning Scale (GAT) provides a measure of overall functioning in relation to the patient's psychiatric symptoms and was developed to rate Axis V of DSM-IV. The WAIS is used to quantify intelligence in adults. The Thematic Apperception Test is a projective test used to explore patients' attitudes and expectations toward themselves and others. The MMPI is used to clarify personality traits and characterological styles.

**268–272. The answers are 268-e, 269-b, 270-a, 271-h, 272-f.** (*Hales, 3/e, pp 486–499.*) Melancholic depression, a variant of major depressive disorder, is characterized by loss of pleasure in all activities (anhedonia), lack of reactivity (nothing can make the patient feel better), intense guilt, significant weight loss, early morning awakening, and marked psychomotor retardation. TCAs have been considered to be more effective than other antidepressants in the treatment of melancholic depression.

Double depression is diagnosed when a major depressive episode develops in a patient with dysthymic disorder. Between 68 and 90% of patients with dysthymic disorder experience at least one episode of major depression during their lives. Compared with patients who are euthymic between depressive episodes, dysthymic patients with superimposed major depression experience a higher risk for suicide, more severe depressive symptoms, more psychosocial impairment, and more treatment resistance.

Atypical depression, another variant of major depressive disorder, is characterized by mood reactivity (pleasurable events may temporarily improve the mood), self-pity, excessive sensitivity to rejection, reversed diurnal mood fluctuations (patients feel better in the morning), and reversed vegetative symptoms (increased appetite and increased sleep). Approximately 15% of patients with depression have atypical features. MAOIs are considered to be more effective than other classes of antidepressants in atypical depression.

Seasonal affective disorder is characterized by a regular temporal relationship between the appearance of symptoms of depression or mania and

a particular time of the year. Depression characteristically starts in the fall and resolves spontaneously in spring, with a mean duration of five to six months. Characteristic symptoms include irritability, increased appetite with carbohydrate craving, increased sleep, and increased weight. The shortening of the day is the precipitant for seasonal depression. Manic episodes are associated with increased length of daylight and, consequently, are associated with the summer months.

Individuals who present with masked depression tend to complain about physical symptoms and poor memory but do not perceive themselves as depressed or cannot put their emotional experiences into words (alexithymia). Many major depression episodes are not recognized due to the lack of overt dysphoria, especially among the elderly and the cognitively impaired population.

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# ANXIETY, SOMATIFORM, AND DISSOCIATIVE DISORDERS

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## Questions

**DIRECTIONS:** Each item below contains a question or incomplete statement followed by suggested responses. Select the **one best** response to each question.

**273.** A 23-year-old woman arrives at the emergency room complaining that, “out of the blue,” she had been seized by an overwhelming fear, associated with shortness of breath and a pounding heart. These symptoms lasted for approximately 20 minutes and, while she was experiencing them, she feared that she was dying or going crazy. The patient has had four similar episodes during the past month and she has been worrying that they will continue recurring. The most likely diagnosis is

- a. Acute psychotic episode
- b. Hypochondriasis
- c. Panic disorder
- d. Generalized anxiety disorder
- e. Post-traumatic stress disorder

**274.** A middle-aged man is chronically preoccupied with his health. For many years he feared that his irregular bowel functions meant he had cancer. Now he is very preoccupied about having a serious heart disease, despite his physician’s assurance that the occasional “extra beats” he detects when he checks his pulse are completely benign. What is his most likely diagnosis?

- a. Somatization disorder
- b. Hypochondriasis
- c. Delusional disorder
- d. Pain disorder
- e. Conversion disorder

**275.** After witnessing a violent argument between her parents, a young woman develops sudden blindness, but she does not appear as distraught as would be expected. Her pupils react normally to light and she does get hurt when she trips over obstacles. Her parents, who are in the middle of a bitter divorce, put aside their differences to focus on their daughter's illness. What is the most appropriate diagnosis?

- a. Factitious disorder
- b. Malingering
- c. Somatization disorder
- d. Conversion disorder
- e. Histrionic personality disorder

**276.** A college student previously in good health, develops transient bladder incontinence. Three months later, after breaking up with her boyfriend, she presents to her doctor's office complaining of weakness of the right leg. What medical disorder, often confused with conversion disorder, is likely to have such presentation?

- a. Myasthenia gravis
- b. Guillain-Barré syndrome
- c. Brain tumor
- d. Creutzfeldt-Jakob disease
- e. Multiple sclerosis

### Items 277–278

A 28-year-old taxi driver is chronically consumed by fears of having accidentally run over a pedestrian. Although he tries to convince himself that his worries are silly, his anxiety continues to mount until he drives back to the scene of the "accident" and proves to himself that nobody lies hurt in the street.

**277.** This is an example of

- a. A compulsion secondary to an obsession
- b. An obsession triggered by a compulsion
- c. A delusional ideation
- d. A typical manifestation of obsessive-compulsive personality disorder
- e. A phobia

**278.** Obsessive-compulsive disorder

- a. Usually has an onset in middle age
- b. Has a lifetime prevalence of 2.5%
- c. Is usually caused by traumatic events
- d. Is not responsive to pharmacological intervention
- e. Has frequent spontaneous periods of complete remission

**279.** A young woman, who has a very limited memory of her childhood years but knows that she was removed from her parents due to abuse and neglect, frequently cannot account for hours or even days of her life. She hears voices that alternatively plead, reprimand, or simply comment on what she is doing. Occasionally, she does not remember how and when she arrived at a specific location. She finds clothes she does not like in her closet, and she does not remember having bought them. Her friends are puzzled because sometimes she acts in a childish, dependent way and other times she becomes uncharacteristically aggressive and controlling. These symptoms are commonly seen in

- Dissociative amnesia
- Depersonalization disorder
- Korsakoff dementia
- Dissociative identity disorder
- Schizophrenia

**280.** A 45-year-old woman was physically and sexually assaulted in her own house by two intruders. She cannot remember anything about the incident. Choose the correct statement about this disorder:

- The majority of people with this disorder also carry a variety of other serious psychiatric diagnoses
- Most cases revert spontaneously
- The period of memory loss is never more than a few hours
- This disorder is very rare
- The loss of memory is usually irreversible

**281.** Which of the following statements about buspirone is true?

- It is a benzodiazepine
- It is particularly useful for the rapid treatment of acute anxiety states
- It is the most sedating of the commonly used antianxiety drugs
- On a per-milligram basis, it is three times more potent than diazepam
- It has less potential for abuse than diazepam

**Items 282–283**

A 34-year-old secretary climbs 12 flights of stairs every day to reach her office, because she is terrified by the thought of being trapped in the elevator.

**282.** Her diagnosis is

- a. Social phobia
- b. Performance anxiety
- c. Generalized anxiety disorder
- d. Specific phobia
- e. Agoraphobia

**283.** The treatment of choice for this disorder is

- a. Imipramine
- b. Clonazepam
- c. Propranolol
- d. Exposure
- e. Psychoanalysis

**284.** A 27-year-old librarian has been worried that the small lymph nodes she can palpate in her groin are a sign of lymphoma. She also worries about developing laryngeal cancer due to the second-hand smoke she is exposed to at home. For a diagnosis of hypochondriasis, her symptoms should have been present for at least

- a. 1 month
- b. 3 months
- c. 6 months
- d. 1 year
- e. 3 years

**285.** A young executive is periodically required to give reports of his department's progress in front of the firm's CEO. Although usually confident and well prepared, the young man becomes very anxious prior to each presentation. Once he is in front of his audience, he experiences dry mouth, heart palpitation, and profuse sweating. Choose the most appropriate statement concerning this disorder.

- a. Females have a higher prevalence
- b. Onset in adolescence is rare
- c. Medications are not effective treatment options
- d. Cognitive behavioral therapy has been proved to be effective
- e. Heredity does not play a role

**286.** During the hectic weeks preceding her wedding, a 22-year-old woman in good health and without a previous history of psychiatric illness occasionally feels unreal and detached from her own body, "like in a dream." The episodes lasts a few minutes and resolve spontaneously. Choose the correct statement:

- a. These symptoms are common in normal persons
- b. The patient suffers from depersonalization disorder
- c. Depersonalization symptoms are rare in other psychiatric disorders
- d. The patient suffers from somatization disorder
- e. The patient is malingering

**DIRECTIONS:** Each group of questions below consists of lettered options followed by numbered items. For each numbered item, select one appropriate letter option. Each lettered option may be used once, more than once, or not at all.

**Items 287–289**

Match each vignette with the appropriate diagnosis.

- a. Agoraphobia
- b. Panic disorder
- c. Obsessive-compulsive disorder
- d. Social phobia
- e. Adjustment disorder
- f. Specific phobia
- g. Acute stress disorder

**287.** A 45-year-old policeman who has demonstrated great courage on more than one occasion while on duty is terrified of needles.

**288.** For several months, a 32-year-old housewife has been unable to leave her house unaccompanied. When she tries to go out alone, she is overwhelmed by anxiety and fear that something terrible will happen to her and nobody will be there to help.

**289.** A 17-year-old girl blushes, stammers, and feels completely foolish when one of her classmates or a teacher asks her a question. She sits at the back of the class hoping not to be noticed because she is convinced that the other students think she is unattractive and stupid.

**Items 290–294**

Match each vignette with the correct diagnosis.

- a. Somatization disorder
- b. Specific phobia
- c. Dissociative identity disorder
- d. Obsessive-compulsive disorder
- e. Dissociative fugue
- f. Post-traumatic stress disorder
- g. Body dysmorphic disorder
- h. Dysthymia

**290.** Two years after she was saved from her burning house, a 32-year-old woman continues to be distressed by recurrent dreams and intrusive thoughts about the event.

**291.** A 20-year-old student is very distressed by a small deviation of his nasal septum. He is convinced that this minor imperfection is disfiguring, although others can barely notice it.

**292.** A nun is found in a distant city working in a cabaret. She is unable to remember anything about her previous life.

**293.** A 35-year-old mother is distraught by recurrent intrusive thoughts about stabbing her baby.

**294.** For the past three years, a 24-year-old college student has suffered from chronic headaches, fatigue, shortness of breath, dizziness, ringing ears, and constipation. He is incensed when his primary physician recommends a psychiatric evaluation since no organic cause for his symptoms could be found.

**DIRECTIONS:** Each group of questions below consists of lettered options followed by numbered items. For each numbered item, select the appropriate lettered option(s). Each lettered option may be used once, more than once, or not at all. **Choose exactly the number of options indicated following each item.**

**Items 295–299**

Match the following vignettes with the most appropriate pharmacological treatment:

- a. Lorazepam
- b. Buspirone
- c. Imipramine
- d. Carbamazepine
- e. Clonidine
- f. Olanzapine
- g. Sertraline
- h. Nadolol

**295.** A young woman in line at a supermarket checkout suddenly experiences acute anxiety, shortness of breath, and dizziness. Her heart pounding, she runs out of the store. **(CHOOSE 3 OPTIONS)**

**296.** A woman washes her hands hundreds of times a day for fear of contamination. She cannot stop herself although her hands are raw and chafed. **(CHOOSE 1 OPTION)**

**297.** A Vietnam veteran startles and starts hyperventilating whenever he hears a sharp noise. **(CHOOSE 2 OPTIONS)**

**298.** A middle-aged bank teller with a past history of alcohol and benzodiazepine abuse, who describes himself as a “chronic worrier,” has been promoted to a position with increased responsibilities. Since the promotion, he has been constantly worrying about his job. He fears his superiors have made a “mistake” and they will soon realize he is not the right person for that position. He ruminates about unlikely future catastrophes, such as not being able to pay his bills and having to declare bankruptcy, if he is fired. He has trouble falling asleep at night and suffers from frequent headaches and “acid indigestion.” **(CHOOSE 3 OPTIONS)**

**299.** A talented 21-year-old violinist’s musical career is in jeopardy because he becomes acutely anxious whenever he is asked to play in front of an audience. **(CHOOSE 1 OPTION)**

# ANXIETY, SOMATOFORM, AND DISSOCIATIVE DISORDERS

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## Answers

**273. The answer is c.** (*Hales, 3/e, pp 570–573.*) The patient in the vignette displays typical symptoms of recurrent panic attacks. Panic attacks can occur in a wide variety of psychiatric and medical conditions. The patient is diagnosed with panic disorder when there are recurrent episodes of panic and there is at least one month of persistent concern, worry, or behavioral change associated with the attacks. The attacks are not due to the direct effect of medical illness, medications, or substance abuse and are not better accounted for by another psychiatric disorder. While anxiety can be intense in generalized anxiety disorder, major depression, acute psychosis, and hypochondriasis, it does not have the typical acute presentation described in the vignette.

**274. The answer is b.** (*Sadock, 7/e, pp 1520–1522.*) Hypochondriasis is characterized by fear of developing or having a serious disease. This fear is based on the patient's distorted interpretation of normal physical sensations or signs. The patient continues worrying even though physical exams and diagnostic tests fail to reveal any pathological process. The fears do not have the absolute certainty of delusions. Hypochondriasis can develop in every age group but onset is most common between 20 and 30 years of age. Both genders are equally represented and there are no differences in prevalence based on social, educational, or marital status. The disorder tends to have a chronic, relapsing course.

**275. The answer is d.** (*Sadock, 7/e, pp 1505–1511.*) Conversion disorder is characterized by the sudden appearance of one or more symptoms simulating an acute neurological illness, in the context of severe psychological stress. The symptoms with which conversion disorder manifests conform to the patient's own understanding of the medical condition and are not asso-

ciated with the usual diagnostic signs. Contrary to malingering and factitious disorder, conversion disorder is nonvolitional. Conversion disorder is more frequent in women, with a female to male ratio of 2–5 to 1. In childhood, both sexes are equally represented. Prevalence is highest in rural areas and among the underprivileged, undereducated, and the cognitively delayed. The sudden onset and the temporal relation to a severe stress help differentiate conversion disorder from more chronic conditions such as somatization disorder and personality disorders.

**276. The answer is e.** (*Sadock, 7/e, pp 1505–1511, 299–300.*) Many serious neurological disorders can be mistaken for conversion disorder. The differential diagnosis can be particularly challenging with multiple sclerosis, a disorder also characterized by the sudden appearance of neurological symptoms that, at least in the beginning, often resolve spontaneously. Other causes of possible diagnostic confusion are the fact that symptoms in multiple sclerosis may be precipitated by stress and that multiple sclerosis, like conversion disorder, is more frequent in women.

**277–278. The answers are 277-a, 278-c.** (*Sadock, 7/e, pp 1482–1484; Hales, 3/e, pp 600–610.*) Obsessions and compulsions are essential features of obsessive compulsive disorder (OCD). Obsessions are persistent thoughts or mental images that are subjectively experienced as intrusive and alien and characteristically provoke various levels of anxiety. Compulsions are repetitive acts, behaviors, or thoughts designed to counteract the anxiety elicited by the obsessions.

Obsessive-compulsive disorder usually has its onset from late childhood to early adulthood and has a lifetime prevalence of about 2.5%. Stress is usually associated with worsening of symptoms, but traumatic events do not cause this disorder. While there are a minority of patients who have periods of complete remission, about one-third have a fluctuating course and up to 60% have a constant or progressive course. Many patients are markedly improved by pharmacological intervention. The most commonly used agents are serotonin reuptake inhibitors such as clomipramine, fluoxetine, and sertraline.

**279. The answer is d.** (*Hales, 3/e, pp 722–727.*) Losing time and memory gaps, including significant gaps in autobiographical memory, are typical symptoms of dissociative identity disorder. Patients also report fluctuation

in their skills, well-learned abilities, and habits. This is explained as a state-dependent disturbance of implicit memory. Hallucinations in all sensory modalities are common. Dramatic changes in mannerisms, tone of voice, and affect are manifestations of personality switching.

**280. The answer is b.** (*Hales, 3/e, pp 716–719.*) Dissociative amnesia is the inability to recall important personal information, usually of a traumatic nature, which cannot be explained by ordinary forgetfulness. Dissociative amnesia is the most common of all dissociative disorders and is most frequent in the third and fourth decades of life. Although a minority of patients presents with comorbid diagnosis (other dissociative disorders, alcohol abuse, depression, and personality disorders), most patients with dissociative amnesia do not have other significant psychiatric history. The memory loss can extend from minutes to years. Most cases of dissociative amnesia resolve spontaneously, mostly after the stressful situation is removed and the individual feels safe. In cases that do not resolve spontaneously, hypnosis and interviews aided by medications (benzodiazepines and barbiturates) are used.

**281. The answer is e.** (*Schatzberg, 2/e, pp. 291–296.*) Buspirone and benzodiazepines have different chemical structures and buspirone's potency is equivalent to the potency of diazepam. Since it takes one to two weeks for the antianxiety effects to appear, buspirone is not useful for anxiety conditions that require acute intervention. Buspirone is less sedating than benzodiazepines and appears to have less potential for abuse.

**282–283. The answers are 282-d, 283-d.** (*DSM-IV, p 405; Hales, 3/e, pp 598–599.*) Specific phobias are characterized by an unreasonable or excessive fear of an object, an animal, or a situation (flying, being trapped in close spaces, heights, blood, spiders, etc.). Since the exposure to the feared situation, animal, or object causes an immediate surge of anxiety, patients carefully avoid the phobic stimuli. The diagnosis of specific phobia requires the presence of reduced functioning and interference with social activities and relationships due to the avoidant behavior, the anticipatory anxiety, and the distress caused by the exposure to the feared stimulus. In social phobias and performance anxiety, the patients fear social interactions (in general or limited to specific situations) and public performance (public speaking, acting, playing an instrument), respectively. In generalized anxiety disorder, the anxiety is more chronic and less intense than in a phobic disorder and it is

not limited to a specific situation or item. Agoraphobic patients fear places where escape may be difficult or help may not be available in case the patient has a panic attack. Agoraphobic patients are often prisoners in their own homes and depend on a companion when they need to go out.

No medication has proved to be effective in treating specific phobias. The treatment of choice in specific phobias is exposure, in vivo or using imaginal techniques. The patient can be exposed to the feared stimulus gradually or the patient can be asked to immediately confront the most anxiety-provoking situation (flooding).

**284. The answer is c.** (*DSM-IV*, pp 462–465.) Hypochondriasis is defined by DSM-IV as a persistent fear, despite medical reassurance, that one has a serious physical illness. The patient's beliefs are based upon misinterpretation of benign bodily symptoms. The belief is not of delusional proportions and the condition must persist for six months for this diagnosis to be made. It is estimated that from 3 to 14% of patients seen in a general medical practice may suffer from hypochondriasis.

**285. The answer is d.** (*Hales*, 3/e, pp 595–599.) The patient in the vignette suffers from social phobia, triggered by public speaking. Three major cognitive behavioral techniques, usually used in combination, have been proved to be effective in the treatment of this disorder: exposure, cognitive restructuring, and social skills training. Onset of social phobia is usually during adolescence or early adult years. Several classes of medications have also been proven effective in the treatment of social phobia, including MAO inhibitors, SSRIs, benzodiazepines, and beta blockers. Buspirone can be useful when social phobia and generalized anxiety disorder are comorbid.

**286. The answer is a.** (*Sadock*, 7/e, p 805.) Occasional depersonalization experiences are common in normal adults and children, especially when under stress. To meet the diagnostic criteria for depersonalization disorder, the experiences must be persistent and severe enough to cause distress. Symptoms of depersonalization are common in a variety of psychiatric disorders including other dissociative disorders, anxiety disorders, psychotic disorders, and depression.

**287–289. The answers are 287-f, 288-a, 289-d.** (*DSM-IV*, pp 403–417.) Phobic disorders include agoraphobia, specific phobias, and social phobia.

They are all characterized by overwhelming, persistent, and irrational fears that result in the overpowering need to avoid the object or situation that is generating the anxiety. Agoraphobia is the marked fear and avoidance of being alone in public places where rapid exit would be difficult or help would not be available. Social phobia is characterized by avoidance of situations in which one is exposed to scrutiny by others and by fears of being humiliated or embarrassed by one's actions. Specific phobias are triggered by objects (often animals), heights, or closed spaces. A large variety of objects are associated with simple phobias.

**290–294. The answers are 290-f, 291-g, 292-e, 293-d, 294-a.** (*DSM-IV*, pp 424–429, 446–450, 466–469, 481–484.) One of the most characteristic features of post-traumatic stress disorder (PTSD) is the occurrence of repeated dreams, flashbacks, and intrusive thoughts of the traumatic event. Hyperarousal, irritability, difficulties concentrating, exaggerated startle response, emotional numbing, avoidance of places and situations associated with the traumatic experience, dissociative amnesia, and a sense of foreshortened future are other symptoms displayed by patients with PTSD.

In body dysmorphic disorder, a person of normal appearance is preoccupied with some imaginary physical defect. The belief is tenacious and sometimes of delusional intensity. This diagnosis should not be made when the distorted ideations are limited to the belief of being fat in anorexia nervosa or are limited to uneasiness with one's gender characteristics in gender identity disorder. Patients with obsessive-compulsive disorder (OCD) experience persistent thoughts, impulses, or repetitive behaviors that they are unable to stop voluntarily. Obsessions and compulsions are experienced as alien and egodystonic and are the source of much distress. Somatization disorder is characterized by a history of multiple physical complaints not explained by organic factors. The diagnosis requires the presence of four pain symptoms, two gastrointestinal symptoms, one sexual symptom, and one pseudoneurological symptom over the course of the disorder. The essential feature of dissociative fugue is sudden travel away from home accompanied by temporary loss of autobiographic memory. Patients are confused about their identity and at times form new identities. Dissociative fugue may last from hours to months. During the fugue, individuals do not appear to have any psychopathology and usually they come to attention when their identity is questioned.

**295–299. The answers are 295-a, c, g, 296-g, 297-e, h, 298-b, c, g, 299-h.** (*Schatzberg, 2/e, pp 774–784.*) The young woman in vignette 295 suffers from panic disorder, which responds to a variety of psychotropic medications, including SSRIs (sertraline), tricyclic antidepressants (imipramine), and benzodiazepines (lorazepam). Panic disorder is also treated with MAO inhibitors, although due to the risk of hypertensive crises triggered by tyramine-rich foods, these medications are not usually used as a first-line treatment.

The patient with compulsive hand washing has OCD (obsessive-compulsive disorder), and she would respond to an SSRI, such as sertraline or clomipramine, a tricyclic antidepressant whose main effect is also a blockage of serotonin uptake. Treatment of OCD symptoms may require higher dosages and longer trial periods than recommended for depression. Before a trial is considered ineffective, the patient should have received minimum daily doses of sertraline 200 mg, fluoxetine 60 mg, fluvoxamine 300 mg, paroxetine 60 mg, and clomipramine 250 mg. Each drug trial should be no less than 12 weeks.

The Vietnam veteran's symptoms of autonomic hyperarousal are likely to respond to medications that inhibit adrenergic activity, such as alpha-2 agonists (clonidine) and beta blockers (propranolol).

The patient in vignette 298 presents with symptoms of generalized anxiety disorder (GAD). Imipramine, SSRIs, and buspirone are all effective in GAD. Benzodiazepines are also very effective in this disorder, but, since they may be addictive, they are not recommended for people with a history of substance abuse.

Beta-adrenergic receptor antagonists, such as nadolol, are effective in the treatment of specific forms of social phobias such as fear of public speaking and fear of playing or acting in front of an audience.

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# PERSONALITY DISORDERS, HUMAN SEXUALITY, AND MISCELLANEOUS SYNDROMES

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## Questions

**DIRECTIONS:** Each item below contains a question or incomplete statement followed by suggested responses. Select the **one best** response to each question.

**300.** A middle-aged man with a master's degree in chemistry lives alone in a halfway house and subsists on panhandling and collecting redeemable cans. He spends most of his money on keno tickets. Ten years ago he lost his job in a large firm because he had stolen company money to bet on horses. Afterward, he had several other jobs, all short-lived because he used to spend more time at the track than on the job. To support his gambling habit, through the years he borrowed large sums of money from friends and relatives, which he never repaid. Under which category is this disorder classified?

- a. Personality disorders
- b. Anxiety disorders
- c. Impulse control disorders
- d. Dissociative disorders
- e. Factitious disorders

**301.** A 7-year-old girl gets up at night and, still asleep, walks around the house for a few minutes before returning to bed. When she is forced to awake during one of these episodes, she is confused and disoriented. Choose the correct statement about this disorder.

- a. Violent outbursts are possible when the individual is suddenly awakened
- b. This behavior usually takes place during early morning hours
- c. This behavior coincides with periods of REM sleep
- d. This behavior is more common between ages 10 and 15
- e. With some effort, the particulars of the previous night's episodes can be remembered the next day

**302.** A 65-year-old woman lives alone in a dilapidated house, although her family members have tried in vain to move her to a better dwelling. She wears odd and out-of-fashion clothes and rummages in the garbage cans of her neighbors to look for redeemable cans and bottles. She is very suspicious of her neighbors and makes the sign against the “evil eye” whenever she happens to meet one of them. She was convinced that her neighbors were plotting against her life for a brief time after she was mugged and thrown on the pavement by a teenager. What is the most likely diagnosis?

- a. Autism
- b. Schizophrenia, paranoid type
- c. Schizotypal personality disorder
- d. Avoidant personality disorder
- e. Schizoid personality disorder

**303.** In narcolepsy, the polysomnographic recording typically shows

- a. Short REM sleep latency
- b. An absence of REM sleep in midcycle
- c. Spike and wave EEG recording
- d. Extreme muscular relaxation
- e. Decreased REM sleep density

**304.** A 24-year-old woman is chronically sleepy and fatigued. Her sleep is constantly interrupted because, as soon as she is falling asleep, an uncomfortable, “crawling” feeling in her calves forces her to walk or move her legs. A condition often associated with this disorder is

- a. Niacine deficiency
- b. Panic disorder
- c. Arteriosclerosis
- d. Pregnancy
- e. Obstructive apnea

**305.** An attractive and well-dressed 22-year-old woman is arrested for prostitution, but on being booked at the jail, she is found to actually be a male. The patient tells the consulting physician that he is a female trapped in a male body and he has felt that way since he was a child. He has been taking female hormones and is attempting to find a surgeon who would remove his male genitals and create a vagina. The most likely diagnosis is

- a. Homosexuality
- b. Gender identity disorder
- c. Transvestite fetishism
- d. Delusional disorder
- e. Schizophrenia

- 306.** Characteristically, personality disorders
- Are minor disturbances that respond quickly to treatment
  - Cause little impairment in adaptive functioning
  - Rarely cause any subjective distress
  - Are usually evident by adolescence
  - Often have periods of remission of up to one year
- 307.** Every four or five weeks, a usually well-functioning and mild-mannered 35-year-old woman experiences a few days of irritability, tearfulness, and unexplained sadness. During these days, she also feels fatigued and bloated and she eats large quantities of sweets. What is the most appropriate diagnosis?
- Cyclothymia
  - Borderline personality disorder
  - Dissociative identity disorder
  - Premenstrual dysphoric disorder
  - Minor depressive disorder
- 308.** A 65-year-old retired steel worker who has never had any sexual dysfunction experiences difficulty in obtaining and maintaining an erection shortly after he starts taking a medication prescribed by his primary care physician. What medication is most likely to cause such a side effect?
- Propranolol
  - Amoxicillin
  - Lorazepam
  - Bupropion
  - Thyroid hormones
- 309.** According to DSM-IV, the diagnosis of an adjustment disorder is limited to those patients
- Whose symptoms are in response to an identifiable stressor that occurred within the past two years
  - Who do not have social impairment due to their symptoms
  - Whose symptoms are an exacerbation of a preexisting axis II disorder
  - Whose distress is in excess of what would be expected as a result of the stressor
  - Whose symptoms persist for at least one year after the termination of the stressor

**Items 310–311**

A demanding 25-year-old woman begins psychotherapy stating she is both desperate and bored. She reports that for the past five or six years she has experienced periodic anxiety and depression and she has made several suicidal gestures. She also reports a variety of impulsive and self-defeating behaviors and sexual promiscuity. She wonders if she might be a lesbian, though most of her sexual experiences have been with men. She has abruptly terminated two previous attempts at psychotherapy. In both cases she was enraged at the therapist because he was unwilling to prescribe anxiolytic medications.

**310.** The most likely diagnosis is

- a. Dysthymia
- b. Histrionic personality disorder
- c. Antisocial personality disorder
- d. Borderline personality disorder
- e. Impulse control disorder not otherwise specified (NOS)

**311.** A common finding in the past history of patients with this diagnosis is

- a. Childhood sexual abuse
- b. Criminal activity before age 10
- c. Extreme shyness
- d. Compulsive orderliness
- e. Persistent magical and other odd beliefs

**Items 312–314**

A 32-year-old man comes for consultation accompanied by his wife of 10 years. The wife states that she can no longer tolerate his constant gloominess and brooding, his complaints of inadequacy, and his pessimism. She adds that he is also very negative, critical, and judgmental of others. He acknowledges that he has been this way as long as he can remember. He has no complaints regarding concentration, sleep, or appetite.

**312.** The most likely diagnosis is

- a. Avoidant personality disorder
- b. Dysthymia
- c. Major depressive disorder
- d. Obsessive-compulsive personality disorder
- e. Depressive personality disorder

**313.** The most common treatment for this condition is

- a. Desipramine
- b. Fluoxetine
- c. Behavior modification
- d. Family therapy
- e. Psychodynamic psychotherapy

**314.** The most common axis I disorder associated with this condition is

- a. Schizophrenia
- b. Major depressive episode
- c. Obsessive-compulsive disorder
- d. Phobic disorder
- e. Panic disorder

**315.** A 25-year-old high school dropout, with a history of assault, fraud, and attempted murder, hangs himself in his cell after he is arrested for the twelfth time. Choose the correct statement about this disorder:

- a. Suicide is very rare in people with antisocial personality disorder
- b. Conduct disorder almost always precedes antisocial personality disorder
- c. There is no connection between antisocial behavior and childhood trauma
- d. People with antisocial history usually have normal intelligence and do well in school
- e. Males and females are equally represented among inmates with antisocial personality disorders

**316.** A woman confides to her friends that for the past three years her husband has practically ceased to be interested in sex. Unless she solicits it, they go without sex for months. He is distressed and ashamed by his “deficiency” but nothing they have tried so far seems to rekindle his sexual desire. When he does engage in intercourse, he has no difficulty reaching and maintaining an erection or reaching an orgasm.

- a. Sexual aversion disorder
- b. Male erectile disorder
- c. Hypoactive sexual disorder
- d. Male homosexuality
- e. Normal variance of sexual desire

**317.** Estimates of the lifetime prevalence rates of all personality disorders in the general population range from

- a. 1 to 2 per 100
- b. 3 to 5 per 100
- c. 6 to 10 per 100
- d. 10 to 20 per 100
- e. 20 to 30 per 100

**Items 318–319**

A 33-year-old married man who suffers from chronic anxiety presents for a psychiatric consultation. He reports that his marriage is very happy and gives a sexual history that includes daily and satisfying sexual intercourse with his wife. He also masturbates three to four times weekly. He states that his sexual drive has been high ever since he was a teenager. His sexual fantasies are predominantly heterosexual, but occasionally he fantasizes about homosexual encounters while masturbating. During his adult years, on several occasions, while traveling alone, he has had both heterosexual and homosexual experiences. He remembers these experiences as pleasurable. The patient admits to some transient guilt about “stepping out” on his wife, but he is not excessively anxious or troubled about his sexual life.

**318.** On the basis of the patient’s sexual history, one could reasonably infer a diagnosis of

- Schizotypal personality disorder
- Antisocial personality disorder
- Narcissistic personality disorder
- Borderline personality disorder
- No personality disorder

**319.** Which of the following statements is most likely to be true given the history of occasional homosexual fantasies and several adult homosexual experiences?

- The patient is a repressed homosexual
- The absence of anxiety or concern about his sexuality suggests psychopathology
- He may be bisexual, but nothing in the history suggests sexual psychopathology
- There is a need for conjoint marital therapy
- The patient has gender identity disorder

**320.** Patients who have a paranoid personality disorder

- Usually also suffer from paranoia
- Have a predisposition to develop schizophrenia
- Often have a preoccupation with helping the weak and the powerless
- Usually present themselves in a quiet and humble fashion
- Are often litigious

**321.** Which of the following statements regarding vaginismus is true?

- It involves the outer one-third of the vagina
- It occurs only during attempted intercourse
- It is initiated by erotic arousal
- It makes female masturbation difficult
- It is under voluntary control

**Items 322–323**

A young librarian has been exceedingly shy and fearful of people since childhood. She longs to make friends but even casual social interactions cause her a great deal of shame and anxiety. She has never been at a party and she has requested to work in the least-active section of her library, even though this means lower pay. She cannot look at her rare customers without blushing and she is convinced that they see her as incompetent and clumsy.

**322.** Choose the correct diagnosis:

- a. Schizotypal
- b. Avoidant
- c. Dependent
- d. Schizoid
- e. Paranoid

**323.** Which anxiety disorder is most likely to be confused with this personality disorder?

- a. Generalized anxiety disorder
- b. Specific phobia
- c. Agoraphobia
- d. Social phobia
- e. OCD

**324.** Choose the correct statement about transvestite fetishism:

- a. Affected individuals identify themselves as members of the opposite sex and long for a sex change
- b. Affected individuals are almost always male homosexuals
- c. Males and females are equally represented
- d. Affected individuals are aroused when dressed as a woman
- e. The disorder rarely starts in childhood

**Items 325–326**

A 48-year-old male has been unable to have intercourse with his wife of 20 years since she disclosed to him that she was having an affair with his younger and more attractive work partner. He continues having spontaneous nocturnal erections.

**325.** This patient's sexual dysfunction is most likely

- a. Due to an organic disorder
- b. Psychogenic
- c. A form of paraphilia
- d. Unreversible
- e. Due to a sexual identity disorder

**326.** Choose the correct statement about nocturnal erections:

- a. They are usually a symptom of a psychiatric disorder
- b. They take place during non-REM sleep
- c. They can be decreased or absent in depression
- d. They take place in the first third of the night
- e. They are monitored during polysomnographic studies

**327.** A young woman presents to an emergency room vomiting bright red blood. Once she is medically stable, the intern who performs her physical exam notices that the enamel of her front teeth is badly eroded and her parotid glands are swollen. These medical complications are due to

- a. Inadequate caloric intake
- b. Purging
- c. Laxative abuse
- d. Diuretic abuse
- e. Ipecac toxicity

### Items 328–329

An off-Broadway actor consistently bores his friends and acquaintances by talking incessantly about his exceptional talent and his success on the stage. He does not seem to realize that other people do not share his high opinion of his acting talent and are not interested in his monologues. When his director criticizes the way he delivers his lines during a rehearsal, the actor goes into a rage and accuses him of trying to jeopardize his career out of jealousy.

**328.** Which personality disorder represents the most correct diagnosis?

- a. Histrionic
- b. Narcissistic
- c. Borderline
- d. Paranoid
- e. Antisocial

**329.** Choose the correct statement about this personality disorder:

- a. Individuals with this disorder have an unusually high self-esteem
- b. Its prevalence is 5% in the general population
- c. Females are more commonly affected than males
- d. Symptoms tend to decrease with aging
- e. Although narcissistic traits are common in adolescents, only a small minority develops a personality disorder later on

**330.** Choose the correct statement about factitious disorder:

- a. It is synonymous with malingering
- b. The patient's goal is to assume and maintain the sick role
- c. The patient's goal is to avoid unpleasant consequences or work
- d. Patients visit their PCP's office often but rarely are hospitalized
- e. It is easily diagnosed

**331.** A 3-year-old girl's preferred make-believe game is "playing house" with her dolls. She loves to experiment with her mother's makeup and states that, when she grows up, she will be a "Mummy." She is very offended when, by mistake, someone takes her for a boy. This behaviors show that the girl has a well-established

- a. Theory of the mind
- b. Sexual orientation
- c. Gender identity
- d. Gender neurosis
- e. Gender dysphoria

**DIRECTIONS:** Each group of questions below consists of lettered options followed by numbered items. For each numbered item, select one appropriate lettered option. Each lettered option may be used once, more than once, or not at all.

**Items 332–335**

Match each vignette with the correct diagnosis.

- a. Primary hypersomnia
- b. Narcolepsy
- c. Sleep terror disorder
- d. Circadian sleep disorder
- e. Primary insomnia
- f. Periodic limb movement disorder
- g. Sleep apnea
- h. Restless legs syndrome

**332.** A woman complains about her husband moving his legs constantly while he sleeps. She ends up being kicked several times every night. The husband has no memory of this nighttime activity, but he reports that he wakes up tired every morning despite getting what he considers an adequate amount of sleep (7 to 8 hours per night).

**333.** Due to her job's requirements, a per diem nurse works different shifts almost every week. She is constantly sleepy and fatigued but, even when she has days off, she has great difficulty falling asleep at night and remaining asleep for more than two to three hours at a time.

**334.** For the past two years a 28-year-old man has found himself in many dangerous or embarrassing situations due to his inconvenient habit of falling abruptly asleep in the middle of any activity. Once he hit a pole because he fell asleep while driving and his wife still teases him for "taking a nap" while they were having sex. The young man reports that he starts dreaming as soon as his eyes close and when he wakes up, 10 to 20 minutes later, he feels wide awake and refreshed.

**335.** A young man has felt consistently sleepy during the day for as long as he can remember. Although he sleeps from 9 to 11 hours every night, he wakes up unrefreshed and needs to take naps at least once a day in order to function. According to his wife and bed partner, he does not snore and he does not kick her while sleeping. Aside from the difficulties caused by his chronic sleepiness, his history is unremarkable.

**Items 336–339**

Match each paraphilia with the appropriate presentation.

- a. Frotteurism
- b. Sexual sadism
- c. Transvestic fetishism
- d. Fetishism
- e. Exhibitionism
- f. Sexual masochism
- g. Pedophilia
- h. Paraphilia not otherwise specified

**336.** The career of a prominent political figure is destroyed after it becomes common knowledge that for many years he has been making obscene phone calls to young women in his neighborhood.

**337.** For several years a 21-year-old male has masturbated while fantasizing about exposing his genitals to a female stranger. For a long time, fear of being arrested has kept him from acting out his fantasies, but recently he has not been able to resist the urge to expose himself to unsuspecting females.

**338.** A young male becomes very aroused when he rubs himself against the buttocks of young women in crowded subways at rush hour.

**339.** A man can become sexually aroused and can reach an orgasm only when he fingers a pair of lacy women's underwear.

# PERSONALITY DISORDERS, HUMAN SEXUALITY, AND MISCELLANEOUS SYNDROMES

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## Answers

**300. The answer is c.** (*Hales, 3/e, pp 783–786; DSM-IV, pp 615–618.*) Pathological gambling is found in the diagnostic category called “Impulse Control Disorders Not Elsewhere Classified,” together with pyromania, intermittent explosive disorder, trichotillomania, kleptomania, and impulse control disorder not otherwise specified. The DSM-IV criteria for pathological gambling are quite similar to the criteria for substance abuse disorders: preoccupation with gambling; need to gamble increasing amounts of money to obtain the same effects; unsuccessful efforts to stop or cut back; gambling is used to escape problems or relieve dysphoric mood; after money losses, the patient returns to gambling the next day to “break even”; the patient lies to family and friends to conceal losses and the extent of the involvement in gambling; the patient commits illegal acts to finance the habit; the patient has jeopardized important relationships or lost jobs because of gambling. The vast majority of compulsive gamblers are men. The prevalence is estimated to be 2 to 3% of the general population. Among psychiatric patients, the prevalence is 6.7%, and among substance abusers, it is estimated to be between 8 and 33%.

**301. The answer is a.** (*Sadock, 7/e, p 1694.*) Sleepwalking disorder is a parasomnia associated with slow-wave sleep. The patient is usually difficult to awaken, confused, and amnesic for the episode. Common in children, sleepwalking peaks between ages 4 and 8 years and usually disappears after adolescence. The person attempting to awaken the sleepwalker may be violently attacked. The severity of the disorder ranges from less than one episode per month without any problem to nightly episodes complicated by physical injury to the patient and others.

**302. The answer is c.** (*Sadock, 7/e, pp 1743–1744; DSM-IV, p 645.*) Schizotypal personality disorder, a cluster C disorder, is characterized by acute discomfort in close relationships, cognitive and perceptual distortions, and eccentric behavior beginning in early adulthood and present in a variety of contexts. Individuals with schizoid personality disorder do not present with the magical thinking, oddity, unusual perceptions, and odd appearance typical of schizotypal individuals. In schizophrenia, psychotic symptoms are much more prolonged and severe. Avoidant individuals avoid social interaction out of shyness and fear of rejection and not out of disinterest and suspiciousness. In autism, social interactions are more severely impaired and usually stereotyped behaviors are present.

**303. The answer is a.** (*Hales, 3/e, pp 962–963.*) In narcolepsy, REM periods are not segregated in their usual ultradian rhythm during sleep but, suddenly and repeatedly, they intrude into wakefulness. Nocturnal sleep shows a sleep-onset REM period or one that occurs very shortly after the onset of sleep. Fifteen to 30% of patients also show some nocturnal myoclonus or sleep apnea.

**304. The answer is d.** (*Sadock, 7/e, p 1691.*) The woman in the vignette suffers from restless legs syndrome, a disorder characterized by the irresistible urge to move one's legs while trying to fall asleep. Patients describe the unpleasant feelings in their calves as worms or ants crawling. Only moving the legs or walking alleviates the discomfort. Restless legs syndrome can be caused by pregnancy, anemia, renal failure, and other metabolic disorders.

**305. The answer is b.** (*DSM-IV, pp 532–538.*) In adolescents and young adults, gender identity disorder is characterized by a strong cross-gender identification, a persistent discomfort with one's sex, and clinically significant distress or impairment. Such patients usually trace their conviction to early childhood, often live as the opposite sex, and seek sex reassignment surgery and endocrine treatment. These patients feel a sense of relief and appropriateness when they are wearing opposite-sex clothing. In contrast, patients with transvestic fetishism are sexually aroused by this behavior. Homosexuality is not a diagnosis in DSM-IV. While some homosexuals cross-dress to seek a same-sex partner, they do not feel that they belong to the opposite sex, nor do they seek sex reassignment surgery.

**306. The answer is d.** (*DSM-IV, pp 629–634.*) Personality disorders are characterized as deeply ingrained, inflexible, dysfunctional patterns of perceiving, thinking about, and relating to the world. Personality disorders typically cause conflicted relationships as well as a general impairment of adaptive functioning. The pervasive personality traits characteristic of a personality disorder are generally recognizable by adolescence or even earlier, and they typically persist throughout most of adult life.

**307. The answer is d.** (*Hales, 3/e, pp 1430–1431.*) The physical and emotional symptoms of premenstrual dysphoric disorder (PMDD) are restricted to the late luteal phase of the menstrual cycle and resolve one or two days after the onset of the menstruation. Although most women of childbearing age experience some symptoms of PMDD during some of their menstrual cycles, only 5 to 9% meet the criteria for the diagnosis.

**308. The answer is a.** (*Crenshaw, 1996, pp 225–226.*) Among beta blockers, propranolol is the most likely to cause impotence (23%, according to Hogan et al., 1980). Furthermore, through its effect on the serotonin system, propranolol can also inhibit orgasm and reduce the sex drive. Fatigue and depressed mood, frequent propranolol side effects, can also have a negative effect on sexual function.

**309. The answer is d.** (*DSM-IV, p 623.*) According to DSM-IV, patients with adjustment disorders develop clinically significant symptoms in response to an identifiable psychosocial stressor. Symptoms must develop within three months of the onset of the stressor, and they have to be either significantly in excess of what could be normally expected in similar circumstances or cause considerable limitations in functioning.

**310–311. The answers are 310-d, 311-a.** (*DSM-IV, pp 650–654; Hales, 3/e, p 808.*) The patient's history and presenting symptoms are classic for the diagnosis of borderline personality disorder. Patients with borderline personalities present with a history of a pervasive instability of mood, relationships, and self-image beginning by early adulthood. Their behavior is often impulsive and self-damaging; their sexuality is chaotic; sexual orientation may be uncertain; and anger is intense and often acted out. Recurrent suicidal gestures are common. The shifts of mood usually last from a few hours to a few days. Patients often describe chronic feelings of boredom and emptiness.

Psychoanalytic theories have connected borderline personality disorder with a maternal inability to tolerate and encourage the 2- to 3-year-old child's efforts to become autonomous and a lack of empathy and understanding for the child's emotions. A considerable body of research has also documented a high frequency of neglect, abandonment, physical abuse, and sexual abuse in the history of individuals with this disorder.

**312–314. The answers are 312-e, 313-e, 314-b.** (*Sadock, 7/e, p 1333.*) Depressive personality disorder is found in Appendix B of the DSM-IV and is characterized by a constellation of personality traits including a gloomy mood, low self-esteem, a proneness to feel guilt and remorse, a tendency to criticize others, and a tendency to brood and worry. These traits emerge in adolescence or early adulthood. Dysthymia is characterized by predominant affective and somatic symptoms rather than pervasive cognitive, interpersonal, and intrapsychic personality traits. Major depression is episodic, with predominant mood and vegetative symptoms. Individuals with avoidant personality disorder are shy but not necessarily gloomy. Individuals with obsessive-compulsive personality are also not necessarily gloomy and tend to have restricted affective expression and to be controlling in relationships.

The most common treatment employed for patients with this diagnosis is psychodynamic psychotherapy or psychoanalysis. Antidepressant medications are not usually employed unless there is a superimposed major depression. Behavior modification might be employed to modify some specific behaviors, just as family therapy might be used to attempt to reduce interpersonal tensions. However, neither of these treatment methods would be expected to significantly alter the pervasive personality traits. The most common associated axis I condition found in depressive personality disorder is a major depressive episode. This is typically treated with antidepressant medications.

**315. The answer is b.** (*Sadock, 7/e, p 2033.*) Patients with antisocial and borderline personality disorders have an increased risk of suicide. A recent Finnish study reported that one-fifth of a random sample of 229 suicide victims had a cluster B diagnosis, in comparison to the estimated prevalence of 4 to 5% in the general population.

**316. The answer is c.** (*Sadock, 7/e, pp 1587–1588.*) Hypoactive sexual disorder is characterized by a lack of sexual desire and a frequency of sexual

activity clearly lower than expected for age and context. Patients have few or no sexual fantasies, lack awareness for sexual cues, and have little interest in initiating sexual experiences. Once they are involved in a sexual act, though, they function normally. Lack of desire may be due to chronic stress, prolonged abstinence, anxiety, or unconscious fear of sex or may be a sign of a deteriorating relationship. Hypoactive sexual disorder often starts during adolescence and may last a lifetime.

**317. The answer is d.** (*Sadock, 7/e, p 1723.*) Personality disorders are quite common in the general population. There is fairly good agreement that the lifetime prevalence rate of all personality disorders in the general population ranges from 11 to 23%, depending on the severity of impairment required for the diagnosis. There is less agreement about prevalence rates for specific personality disorders, largely because of sampling differences between various studies.

**318–319. The answers are 318-e, 319-c.** (*Sadock, 7/e, pp 1738–1739, 1581, 1612.*) There is nothing in the patient's history to suggest the presence of a personality disorder. The hallmark of a personality disorder is the presence of a constellation of behaviors or traits that cause significant impairment in social or occupational functioning or cause subjective distress. The patient in the vignette, on the contrary, reports a happy marriage and an ability to function well in social and occupational circumstances. While some persons in our society might object to his sexual behavior on moral grounds, such judgments are not a part of the diagnostic process.

Sexual behavior and fantasies range on a continuum, from exclusively heterosexual to exclusively homosexual. There are many men who are predominantly heterosexual but who have engaged in homosexual behavior or have occasional homosexual fantasies, and there are many predominantly homosexual men with capacity for heterosexual arousal. The presence of homosexual desire or behavior is not considered a sexual disorder, according to the diagnostic definitions of the American Psychiatric Association. While further therapeutic inquiry may uncover sexual conflict or marital disorder, the history provided does not necessarily suggest that will be the case.

**320. The answer is e.** (*Sadock, 7/e, pp 1741–1743.*) Persons with a paranoid personality disorder characteristically show marked suspiciousness of others and are extremely sensitive to any potential threat or injustice. They

frequently look for hidden motives or meanings, are contemptuous of the weak, and are very sensitive to issues of power and dominance. They often are moralistic or self-righteous and may be quite litigious. The percentage of affected persons who go on to develop schizophrenia is not known, but schizophrenia or paranoia is not the typical outcome.

**321. The answer is a.** (*Sadock, 7/e, pp 1593–1594.*) Vaginismus involves a spasm of the musculature of the outer one-third of the vagina and thereby interferes with sexual intercourse. Usually the spasm occurs in response to any attempted penetration, including vaginal examination. Some women with this disorder are able to become excited and reach orgasm through clitoral stimulation. The vaginal muscle spasm is not under voluntary control.

**322–323. The answers are 322-b, 323-d.** (*Sadock, 7/e, p 1747.*) Avoidant personality disorder is characterized by pervasive and excessive hypersensitivity to negative evaluation, social inhibition, and feelings of inadequacy. Impairment can be severe due to social and occupational difficulties. Males and females are equally affected. The prevalence ranges from 0.5 to 1.5% in the general population. Among psychiatric outpatients, the prevalence is as high as 10%. Avoidant personality disorder can be difficult to differentiate from social phobia. One differentiating factor is that in social phobia specific situations, rather than interpersonal contact, cause distress and are avoided.

**324. The answer is a.** (*DSM-IV, pp 530–531.*) In transvestite fetishism the patients, usually heterosexual males, experience recurrent and intense sexual arousal while they are cross-dressing. Masturbation with fantasies of sexual attractiveness while dressed as a woman usually accompanies the cross-dressing. Wearing an article of women's clothing, or dressing as a woman, can also be sexually exciting while having intercourse for these patients. The condition often begins in childhood or early adolescence. Males with this disorder consider themselves to be male, but some have gender dysphoria. For diagnostic purposes the behavior must persist over a period of at least six months.

**325–326. The answers 325-b, 326-c.** (*Hales, 3/e, pp 292, 748.*) During periods of REM sleep, men experience penile erections defined as nocturnal penile tumescence (NPT). NPT studies can be helpful in differentiating

patients with organic erectile problems from patients with psychogenic impotence. However, these findings are not absolute since many men have both organic and psychological causes for their impotence and nocturnal erections may be decreased or absent in depression. Polysomnography involves the recording of EEG activity during sleep, often combined with air-flow measurements, ECG monitoring, eye movement monitoring, and electromyographic recording. Polysomnography does not include NPT studies.

**327. The answer is b.** (*Sadock, 7/e, pp 1671–1672.*) Chronic exposure to gastric juices through vomiting can cause severe erosion of the teeth and pathological pulp exposure in bulimic patients. Parotid gland enlargement is commonly observed in patients who binge and vomit and esophageal tears, causing bloody emesis, can be a consequence of self-induced vomiting. The toxic effects of ipecac are cardiomyopathy and cardiac failure.

**328–329. The answers are 328-b, 329-e.** (*DSM-IV, pp 658–661.*) The essential feature of this personality disorder is a pervasive pattern of grandiosity, need for admiration, and lack of empathy that begins by early adulthood. Individuals with this disorder overestimate their abilities, inflate their accomplishments, and expect others to share the unrealistic opinion they have of themselves. They believe they are special and unique and attribute special qualities to those with whom they associate. When they do not receive the admiration they think they deserve, people with narcissistic personality react with anger and devaluation. The prevalence of the disorder is estimated at less than 1% of the general population, and 50 to 75% of those diagnosed with narcissistic personality are males. In contrast with their outward appearance, individuals with this disorder have a very vulnerable sense of self. Criticism leaves them feeling degraded and hollow. Narcissistic traits are common in adolescence but most individuals do not progress to develop narcissistic personality disorder.

**330. The answer is b.** (*Hales, 3/e, pp 695–700.*) Factitious disorder is characterized by an intentional production of physical or psychological signs or symptoms with the intent to assume the sick role. Patients are usually unaware of their motivations, although they know their role in creating the illness. Factitious disorder is not synonymous with malingering. The external incentives which motivate malingering (avoiding work, avoiding unpleasant consequences, or obtaining compensation) are absent in factitious disorder.

Multiple hospitalizations, invasive diagnostic procedures, and surgeries are common in the history of individuals with this disorder. The diagnosis may remain obscure for years, due to the covert nature of the disorder, the patient's habit of changing hospitals and doctors when suspicions are aroused, and the fact that, in some cases, genuine and feigned illnesses may coexist.

**331. The answer is c.** (*Sadock, 7/e, pp 2547, 2919.*) Gender identity refers to a person's perception of the self as male or female. Biological, social, and psychological factors contribute to its development. By 2½ years of age, children can consistently identify themselves as male or female and recognize others as male or female. Sexual orientation refers to the individual's sexual response to males, females, or both. Gender dysphoria refers to the discontent with their biological sex experienced by individuals with gender identity disorder. Theory of the mind refers to children's awareness that others have cognitive processes and an internal mental status similar to their own and to their ability to represent the mental status of others in their own mind.

**332–335. The answers are 332-f, 333-d, 334-b, 335-a.** (*Hales, 7/e, pp 1685–1692.*) Periodic limb movement disorder, once called nocturnal myoclonus, is characterized by very frequent, stereotyped limb movements, most frequently involving the legs. The movements are accompanied by brief arousal and disruption of sleep pattern, although the individual suffering from the disorder is only aware of being chronically tired during the day. Interviewing bed partners helps clarify the diagnosis.

Circadian sleep disorders are characterized by insomnia and chronic sleepiness. They are due to a lack of synchrony between an individual's internal circadian sleep-wake cycles and the desired times of falling asleep and waking. The disorder can arise from an idiopathic variance in the periodic firing of the hypothalamic suprachiasmatic nucleus, which regulates the circadian cycles. The sleep cycles may be delayed, advanced, non-24-cycle, or irregular. Traveling through several time zones and work shifts requiring considerable changes in sleep patterns are also responsible for the disorder.

Narcolepsy is a disorder of unknown origin characterized by an irresistible urge to fall asleep. Sleep attacks last from 10 to 20 minutes and may take place at very inopportune times. Patients may also experience cataplexy (sudden loss of muscle tone triggered by a strong emotion), hypnagogic hallucinations (hallucinations associated with falling asleep), and

sleep paralysis (the individual is unable to move on arousal, a benign but frightening experience that represents an intrusion of REM-sleep phenomena into wakefulness).

Primary hypersomnia is a chronic or recurrent disorder characterized by daytime sleepiness, excessive nighttime sleep, and need for daytime naps. Polysomnographic studies show an increase in slow wave sleep. To make this diagnosis, other causes of daytime sleepiness without sleep deprivation must be ruled out.

**336–339. The answers are 336-h, 337-e, 338-a, 339-d.** (*DSM-IV*, pp 522–532.) Scatologia (becoming sexually aroused while making obscene phone calls) is categorized under Paraphilias Not Otherwise Specified, together with necrophilia (becoming aroused by dead bodies), zoophilia (sexual arousal triggered by animals), coprophilia (sexual arousal linked to touching or smelling feces), and many others forms of paraphilias.

In exhibitionism, affected individuals become sexually aroused and sometimes masturbate while exposing their genitals to a stranger or while fantasizing about exposing themselves. There is no attempt to engage in a sexual activity with the stranger. Sometimes the individual is aroused by the stranger's surprise or shock, other times the exhibitionistic individual fantasizes that the observer will become sexually aroused.

Frotteurism involves touching or rubbing against a nonconsenting person while fantasizing about having an exclusive relationship with that person. The behavior usually occurs in crowded places, such as on public transportation or busy sidewalks.

In fetishism, the affected individual becomes sexually aroused and masturbates while holding, rubbing, or smelling a specific inanimate object. The fetish is required or strongly preferred for sexual excitement. This paraphilia usually starts by adolescence and, once established, tends to be chronic.

# SUBSTANCE-RELATED DISORDERS

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## Questions

**DIRECTIONS:** Each item below contains a question or incomplete statement followed by suggested responses. Select the **one best** response to each question.

### Item 340–341

A 19-year-old man is brought to the emergency room by his distraught parents, worried about his vomiting and profuse diarrhea. On arrival, his pupils are dilated, his blood pressure is 175/105, and his muscles are twitching. His parents report that these symptoms started two hours earlier. For the past couple of days he has been homebound due to a sprained ankle and, during this time, he has been increasingly anxious and restless, has been yawning incessantly and has had a runny nose.

- 340.** Although the parents denied any history of drug use, the emergency room doctors immediately recognize these symptoms as
- Heroin withdrawal
  - Alcohol withdrawal
  - PCP intoxication
  - Benzodiazepine withdrawal
  - Cocaine withdrawal

**341.** How many hours or days after the last use do the symptoms of this disorder usually peak?

- 6 hours
- 15 hours
- 48 hours
- 3 days
- 1 week

**342.** A 17-year-old male who spends most of his free time lifting weights has become very irritable, moody, and aggressive. What substance has he most likely been using for the past 12 months?

- Methamphetamine
- Heroin
- Tyroxine
- Testosterone
- High-protein supplements

**Items 343–344**

A 50-year-old male physician with a history of meperidine addiction arrive at the emergency room by ambulance. His respiration is shallow and infrequent, his pupils are constricted, and he is stuporous.

**343.** Another symptom of meperidine intoxication, especially in the context of chronic use is

- a. Ischemic stroke
- b. Liver failure
- c. Myocardial infarct
- d. Seizures
- e. Renal failure

**344.** The first treatment intervention for this patient should be

- a. Ensure adequate ventilation
- b. Naloxone, 0.8 mg per 70 kg of body weight intravenously (IV)
- c. Diazepam, 20 mg (IV)
- d. Forced diuresis
- e. Haloperidol, 2 mg intramuscularly (IM)

**345.** A 22-year-old man arrives at an emergency room, accompanied by several friends. He is agitated, confused, and apparently responding to frightening visual and auditory hallucinations. The patient is put in restraints after he tries to attack the emergency room physician. The patient's friends report that he had "dropped some acid" six or seven hours earlier. Another primary psychiatric illness should be seriously considered if the patient's psychosis should persist beyond

- a. 12 hours
- b. 24 hours
- c. 36 hours
- d. 48 hours
- e. 2 weeks

**Items 346–347**

A college freshman, who has never consumed more than one occasional beer in his life, is challenged to drink a large quantity of alcohol during his fraternity house's hazing ritual.

**346.** In a nontolerant person, signs of intoxication usually appear when the blood alcohol level reaches

- a. 20–30 mg/dL
- b. 100–200 mg/dL
- c. 300 mg/dL
- d. 400 mg/dL
- e. 500 mg/dL

**347.** In a nontolerant individual, death is likely to occur when the serum alcohol level reaches

- a. 100 mg/dL
- b. 200 mg/dL
- c. 300 mg/dL
- d. >400 mg/dL
- e. >600 mg/dL

**Items 348–349**

A 35-year-old man stumbles into the emergency room. His pulse is 100 beats per minute, his blood pressure is 170/95 mm Hg, and he is diaphoretic. He is tremulous and has difficulty relating a history. He does admit to insomnia the past two nights and sees spiders walking on the walls. He has been a drinker since age 19, but has not had a drink in 3 days.

**348.** The most likely diagnosis is

- a. Alcohol-induced psychotic disorder
- b. Wernicke's psychosis
- c. Alcohol withdrawal delirium
- d. Alcohol intoxication
- e. Alcohol idiosyncratic intoxication

**349.** Initial treatment usually includes

- a. Haloperidol, 10 mg IM
- b. Chlorpromazine, 50 mg IM
- c. Lithium, 300 mg PO (by mouth)
- d. Chlordiazepoxide, 50 mg PO
- e. Naloxone, 1 mg IV

**Items 350–351**

A 45-year-old housewife has been drinking in secret for several years. She started with one or two small glasses of Irish Cream per night to “help her sleep,” but, with time, her nightly intake has increased to 4 to 5 hard liquor shots. Now she needs a few glasses of wine in the early afternoon to prevent shakiness and anxiety. During the past year, she could not take part in several important family events, including her son's high school graduation, because she was too ill or she did not want to risk missing her nightly drinking. She is ashamed of her “secret” and has tried to limit her alcohol intake but without success.

**350.** This presentation is congruent with a diagnosis of

- a. Alcohol abuse
- b. Alcohol addiction
- c. Addictive personality disorder
- d. Alcohol dependence
- e. Alcohol-induced mood disorder

**351.** Choose the correct statement about this diagnosis:

- a. Males and females have the same lifetime risk of developing this disorder
- b. Race and religion do not affect its prevalence
- c. Prevalence among Asians is considerably higher than among Caucasians
- d. Native Americans have the lowest risk for this disorder, among the United States' ethnic groups
- e. Lifetime prevalence in women is 3 to 5%

**352.** What nonopioid medications can be used to treat some of the symptoms of opioid withdrawal syndrome?

- a. Chlordiazepoxide
- b. Haloperidol
- c. Methadone
- d. Phenobarbital
- e. Clonidine

**353.** A medical student is admitted for an appendectomy. The day after the surgery, he has a severe headache. Which one of his habits can best explain the headache?

- a. He smokes one to two joints every other day
- b. He drinks two to three beers once a week
- c. He often eats at the local Chinese restaurant
- d. He jogs three miles every day, rain or shine
- e. He drinks five to six cups of coffee a day

### Items 354–355

Three sturdy policemen, only with difficulty, succeed in dragging an agitated and very combative young man into an emergency room. Once there, as a safety measure, he is restrained since the young man reacts with rage and tries to hit anyone who approaches him. When it is finally safe to approach him, the resident on call notices that the patient has very prominent vertical nystagmus. Shortly thereafter, the patient has a generalized seizure.

**354.** Which of the following substances of abuse is the most likely to produce this presentation?

- a. Amphetamine
- b. Phencyclidine (PCP)
- c. Cocaine
- d. Meperidine
- e. LSD

**355.** Choose the therapeutic intervention most likely to be effective:

- a. Administer 50 mg of thiorazine IM every hour until calm
- b. Urine alkalinization
- c. Hemodialysis
- d. Hyperbaric oxygen
- e. Isolate patient in a quiet, dimly lit room to minimize sensory input

**356.** A factory worker is required to submit to random drug tests as part of the “drug free policy” his employers have adopted. If he used cocaine five days before the test was administered, which assay is most likely to detect cocaine metabolites?

- a. Blood
- b. Hair
- c. Saliva
- d. Semen
- e. Urine

**357.** Two policemen arrest a man in his twenties for speeding. They immediately notice a strong smell of alcohol on his breath and administer a Breathalyzer test. According to the instrument, the man’s blood alcohol level is 200 mg/dL, but he does not show any typical signs of intoxication. His gait is steady, his speech clear, and he does not appear emotionally disinhibited. What is the most likely explanation for such presentation?

- a. The Breathalyzer is defective
- b. A value of 200 mg/dL is below the intoxication level
- c. The man has developed a tolerance to the effects of alcohol
- d. The man has alcohol dependence
- e. The man has recently used cocaine, whose effects counteract the effects of alcohol intoxication

**358.** A woman swallows two amphetamines at a party and she quickly becomes disinhibited and euphoric. Afterward, she slaps a casual acquaintance because she takes a benign comment as a major offense and starts raving about being persecuted. What mechanism is responsible for these behaviors?

- a. Increased release of dopamine and norepinephrine in the synaptic cleft
- b. Inhibition of catecholamine reuptake
- c. Activation of NMDA aspartate receptors
- d. Blockade of dopamine receptors
- e. Sensitization of GABA receptors to GABA

**359.** A young woman is dropped on the doorstep of a local emergency room by two men who immediately leave by car. She is agitated and anxious and she keeps brushing her arms and legs “to get rid of the bugs.” She clutches at her chest, moaning in pain. Her pupils are wide, her BP is elevated. The substance she has most likely used is

- a. Alcohol
- b. Heroin
- c. Alprazolam
- d. Paint thinner
- e. Crack cocaine

**360.** A boy is adopted at birth by a Mormon couple who practice strict abstinence from alcoholic beverages. His biological father died in prison from alcoholic cardiomyopathy and complications of cirrhosis of the liver. He was serving a lengthy sentence for two armed robberies and several charges of assault and battery of girlfriends. The adopted boy was never given any information about his father's alcoholism and antisocial history. In comparison with the adoptive couple's biological son, this boy is more likely to

- Have a decreased tolerance to the intoxicating effects of alcohol
- Have an increased tolerance to the intoxicating effects of alcohol
- Have a lower IQ
- Have an aversion for alcohol
- Have a history of nocturnal enuresis

### Items 361–362

A young woman becomes flushed and nauseated immediately after drinking half a glass of wine. This happens every time she consumes even a small quantity of alcohol.

**361.** What is her race?

- Hispanic
- Caucasian
- Native American
- African American
- Asian

**362.** This particular response to alcohol is due to

- A problematic interaction between alcohol and a spice commonly used in this patient's country
- A conditioned autonomic reaction due to strong cultural rules against alcohol
- An inherited inactive acetaldehyde dehydrogenase enzyme
- An inherited hypoactive variant of P 450 enzyme
- An inherited inactive variant of alcohol dehydrogenase

**363.** A young lawyer has recently started to drink one or two martinis every night to wind down and relax after a stressful day in court. The drinks help him fall asleep quickly. What other effect can the alcohol have on sleep?

- Increase in duration of REM sleep
- Increase in duration of deep sleep
- A disruption of sleep pattern with rapid shifts from one cycle to another
- Vivid and disturbing dreams
- Hypnopompic hallucinations

**364.** There is good evidence that marijuana smoking significantly decreases one's ability to drive an automobile for up to

- 30 minutes
- 1 hour
- 4 hours
- 6 hours
- 24 hours

**Items 365–366**

A 16-year-old male with a long record of arrests for breaking and entering, assault and battery, and drug possession is found dead in his room with a plastic bag on his head. For several months he had been experiencing headaches, tremors, muscle weakness, unsteady gait, and tingling sensations in his hands and feet.

**365.** These symptoms (and the manner the boy died) suggest that the boy was addicted to

- a. PCP
- b. Crack
- c. Methamphetamine
- d. Glue sniffing
- e. Heroin

**366.** Choose the correct statement about this substance of abuse.

- a. It is the most used substance among eighth graders, after alcohol and nicotine
- b. Accidental death is a rare event even in frequent users
- c. Prevalence rates are higher among African Americans and Hispanics
- d. Risk of addiction is very high, even after a single use
- e. Medical complications are bothersome but not serious

**367.** After taking one dose of an over-the-counter cold medication containing pseudoephedrine, a 27-year-old professional football player sees flashes of light and brightly colored triangles and circles on the white walls of his apartment. He also sees trailing images following moving objects and what seems to be “a pattern” in the air. He has had similar experiences in the past, mostly when he was ill or very tired. What past experience is more likely to be the cause of such perceptions?

- a. He sniffed paint thinner twice at age 14
- b. He used LSD four or five times at age 22
- c. He smoked three to four joints every day from age 17 to 21
- d. He drinks five to six cups of coffee a day
- e. He used to binge on alcohol once a week during college years

**368.** The drug of abuse 3,4-methylenedioxymethamphetamine (MDMA), often known as “ecstasy,”

- a. Produces a “high” lasting 5 to 7 days
- b. Does not cause hallucinations
- c. Causes hypotension
- d. Increases appetite
- e. Typically triggers suspiciousness and paranoia

**DIRECTIONS:** The group of questions below consists of lettered options followed by numbered items. For each numbered item, select **one** appropriate lettered option. Each lettered option may be used once, more than once, or not at all.

**Items 369–372**

Match each definition with the correct term.

- a. Tolerance
- b. Potentiation
- c. Withdrawal
- d. Dependence
- e. Addiction
- f. Substance abuse

**369.** A maladaptive pattern of substance use that leads to clinically significant impairment or distress

**370.** Requirement of a larger dose of the drug to obtain the same effect

**371.** A physiologic state that follows cessation of or reduction in drug use

**372.** A syndrome characterized by compulsive substance use in spite of the serious problems this causes, inability to stop, and clinically significant symptoms following cessation of substance use

# SUBSTANCE-RELATED DISORDERS

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## Answers

**340–341. The answers are 340-a, 341-c.** (*Sadock, 7/e, pp 1045–1046.*) Withdrawal symptoms from short-acting drugs such as heroin or morphine can start within 8 to 12 hours after the last dose and generally reach peak severity 48 hours after the last dose. Craving, anxiety, dysphoria, yawning, lacrimation, pupil dilatation, rhinorrhea, and restlessness are followed in the more severe cases by piloerection (“cold turkey”), twitching muscles and kicking movements of the lower extremities (“kicking the habit”), nausea, vomiting, diarrhea, low-grade fever, and increased blood pressure, pulse, and respiratory rate. Untreated, the syndrome resolves in 7 to 10 days. With longer-acting opiates, such as methadone, the onset of symptoms is delayed for one to three days after the last dose and peak symptoms do not occur until the third to eighth day. Symptoms may last for several weeks. Although very distressing, the opioid withdrawal syndrome is not life-threatening in healthy adults, but deaths have occurred in debilitated patients with other medical conditions during acute withdrawal.

**342. The answer is d.** (*Sadock, 7/e, pp 1091–1092.*) Anabolic steroids include the natural male hormone testosterone and many synthetic analogues. They all have muscle-building (anabolic) and masculinizing (androgenic) effects. They are widely abused by individuals who want to increase their muscle mass and strength, to improve athletic performance, or improve personal appearance. Irritability, aggressiveness, hypomania, and mania are common consequences of anabolic steroid abuse, especially in individuals taking large doses (1000 mg of testosterone equivalent per week or more). Psychotic symptoms have been described, but are much less common.

**343–344. The answers are 343-d, 344-a.** (*Hales, 3/e, p 1013; Sadock, 7/e, pp 1046, 1052.*) Severe opiate intoxication is associated with respiratory depression, stupor or coma, and, sometimes, pulmonary edema. Less

severe intoxication is associated with slurred speech, drowsiness, and impaired memory or attention. Early on, the pupils are constricted, but if the patient becomes anoxic due to the respiratory depression, they dilate. Blood pressure is typically reduced. Meperidine intoxication in a chronic user is often complicated by delirium or seizures due to the accumulation of normeperidine, a toxic metabolite with cerebral irritant properties.

Naloxone, an opiate antagonist, is used to reverse the effects of the opiates. The first treatment intervention, though, is to assure that the patient is adequately ventilated. Tracheopharyngeal secretions should be aspirated and the patient should be mechanically ventilated until naloxone is administered and a positive effect on the respiratory rate is noticed. The usual initial dose of naloxone is 0.8 mg, slowly administered intravenously. If there is no response, the dose can be repeated every few minutes. In most cases of opiate intoxication, 4 to 5 mg of naloxone (total dose) are sufficient to reverse the CNS depression. Buprenorphine, though, may require higher doses. Diazepam is used to treat alcohol withdrawal symptoms. Forced diuresis is used in the treatment of salicylates and acetaminophen overdoses, not opiate intoxication. Haloperidol, an antipsychotic medication, is not used for the acute treatment of opiate intoxication.

**345. The answer is e.** (*Sadock, 7/e, pp 1020, 1070.*) Most cases of intoxication with a hallucinogen are over within several hours, but prolonged drug-induced psychoses may occur, especially with phencyclidine (PCP), in which the psychosis may last several weeks. In some instances the drug appears to precipitate a latent psychotic illness, and if the psychosis persists beyond two weeks, this should be seriously considered.

**346–347. The answers are 346-a, 347-d.** (*Sadock, 7/e, pp 961–962.*) Behavioral changes, slowing of motor performance, and decrease in the ability to think clearly may appear with a blood alcohol level as low as 20–30 mg/dL. Most people show significant impairment of motor and mental performance when their alcohol levels reach 100 mg/dL. With blood alcohol concentration between 200 and 300, slurred speech is more intense and memory impairment, such as blackout and anterograde amnesia, becomes common. In a nontolerant person, a blood alcohol level over 400 mg/dL can produce respiratory failure, coma, and death. Due to tolerance, chronic heavy drinkers can present with fewer symptoms even with blood alcohol levels greater than 500 mg/dL.

**348–349. The answers are 348-c, 349-d.** (*Sadock, 7/e, p 962.*) Alcohol withdrawal delirium (delirium tremens) is the most severe form of alcohol withdrawal. In this syndrome, coarse tremor of the hands, insomnia, anxiety, agitation, and autonomic hyperactivity are accompanied by severe agitation, confusion, and tactile or visual hallucinations. Withdrawal phenomena start within eight hours of cessation of drinking, when alcohol use has been heavy and prolonged. Symptoms reach peak intensity between the second and the third day of abstinence and are usually markedly diminished by the fifth day. In a milder form, withdrawal symptoms may persist for weeks, as part of a protracted syndrome. Wernicke's psychosis is an encephalopathy caused by severe thiamine deficiency, usually associated with prolonged and severe alcohol abuse. It is characterized by confusion, ataxia, and ophthalmoplegia. In alcohol hallucinosis, vivid auditory hallucinations start shortly after cessation or reduction of heavy alcohol use. Hallucinations may present with a clear sensorium and are accompanied by signs of autonomic instability less prominent than in alcohol withdrawal delirium.

Benzodiazepines are the preferred treatment for alcohol withdrawal delirium. Diazepam and chlordiazepoxide are the most commonly used. Elderly patients or patients with severe liver damage may tolerate better intermediate-acting benzodiazepines, such as lorazepam and oxazepam. Thiamine (100 mg) and folic acid (1 mg) are routinely administered to prevent CNS damage secondary to vitamin deficiency. Thiamine should always be administered prior to glucose infusion, because glucose metabolism may rapidly deplete the patient's thiamine reserve in case of long-lasting poor nutrition. When the patient has a history of alcohol withdrawal seizures, magnesium sulfate should be administered.

**350–351. The answers are 350-d, 351-e.** (*DSM-IV, pp 181, 195–196; Sadock, 7/e, p 954.*) A diagnosis of alcohol dependence requires the presence of compulsive drinking with ineffective attempts to stop or cut down; evidence of a severe impairment of occupational, social, and family life due to the great deal of time the patient spends procuring and consuming alcohol or recovering from its effects; persistent drinking in excess in spite of the problems alcohol causes; and, possibly, physical symptoms and signs of withdrawal and tolerance. Three to 5% of the female population has a diagnosis of alcohol dependence. In males, the lifetime prevalence is estimated at 10%. Race, socioeconomic status, and religion greatly affect the prevalence

of alcohol use and abuse. In the United States, Eskimos, Native Americans, and Irish people have the highest rates of severe alcohol problems. Asians tend to have low rates of alcoholism due to a genetic variant of aldehyde dehydrogenase, which causes disulfiram-like symptoms after the ingestion of small quantities of alcohol.

**352. The answer is e.** (*Sadock, 7/e, p 1053.*) Clonidine, an alpha-2 adrenergic receptor agonist, is used to suppress some of the symptoms of mild opioid withdrawal. Clonidine is given orally, starting with doses of 0.1 to 0.3 mg three or four times a day. In outpatient settings, a daily dosage above 1 mg is not recommended due to the risk of severe hypotension. Clonidine is more effective on symptoms of autonomic instability, but is less effective than methadone in suppressing muscle aches, cravings, and insomnia. Clonidine is particularly useful in the detoxification of patients maintained on methadone.

**353. The answer is e.** (*Sadock, 7/e, p 988.*) Postoperative headache due to caffeine withdrawal is a common occurrence, since patients are usually required to abstain from food and drink prior to their surgery. Although the frequency and the severity of withdrawal headaches increase with the daily dosage of caffeine consumed, caffeine withdrawal can occur even with a relatively low daily intake, such as 100 mg (the equivalent of one cup of brewed coffee) a day.

**354–355. The answers are 354-b, 355-e.** (*Sadock, 7/e, p 1069.*) Phencyclidine (PCP) intoxication is characterized by neurological, behavioral, cardiovascular, and autonomic manifestations. Intoxicated patients are often agitated, rageful, aggressive, and scared. Due to their exaggerated and distorted sensory input, they may have unpredictable and extreme reactions to environmental stimuli. Nystagmus and signs of neuronal hyperexcitability (from increased deep tendon reflexes to status epilepticus) and hypertension are typical findings.

No medication is useful in the treatment of PCP intoxication. Hemodialysis is not effective due to the extremely large volume of distribution of PCP. Acidification and not alkalization of urine has been used in the attempt to trap the ionized form of PCP in the urine, but with little effect. Supportive measures and minimization of sensory input are main interventions in PCP intoxication.

**356. The answer is e.** (*Sadock, 7/e, p 1007.*) All the listed body fluids are used to detect cocaine use, except for semen. Blood and saliva will provide the best level of current usage, while urine assay will detect use over the preceding several days. Hair analysis can reveal the drug over weeks or months, but has little clinical applicability.

**357. The answer is c.** (*Sadock, 7/e, pp 944–945; DSM-IV, p 181.*) After prolonged use, most drugs of abuse (and some medications) produce adaptive changes in the brain that are manifested by a markedly diminished responsiveness to the effects of the substance that has been administered over time, a phenomenon called tolerance. Anyone who does not show signs of intoxication with an alcohol level of 150 mg/dL has developed a considerable tolerance.

**358. The answer is a.** (*Sadock, 7/e, pp 973–974, 1072.*) The main mechanism of action of amphetamines is the release of stored monoamines in the synaptic cleft. Cocaine inhibits the reuptake of the neurotransmitters released in the synapse. Benzodiazepines and barbiturates act by increasing the affinity of GABA receptors for their endogenous neurotransmitter, GABA (gamma-aminobutyric acid). NMDA aspartate receptors are activated by phencyclidine (PCP). Antipsychotic medications act by blocking dopamine receptors.

**359. The answer is e.** (*Sadock, 7/e, pp 1004–1007.*) Cocaine intoxication is characterized by euphoria but suspiciousness, agitation, anxiety, and hyperactivity are also typical presenting symptoms. Signs of sympathetic stimulation, such as tachycardia, cardiac arrhythmias, hypertension, pupillary dilatations, perspiration, and chills are also present. Visual and tactile hallucinations, including hallucinations of bugs crawling on the skin, are present in cocaine-induced delirium. Among the most serious acute medical complications associated with the use of high doses of cocaine are coronary spasms, myocardial infarcts, intracranial hemorrhages, ischemic cerebral infarcts, and seizures.

**360. The answer is b.** (*Sadock, 7/e, pp 945–946.*) Children of alcoholics are at higher risk of developing alcoholism than children of nonalcoholic parents and they tend to be more tolerant to the intoxicating effect of alcohol. Most studies have found no difference in intelligence among subjects with and without family history of alcoholism.

**361–362. The answers are 361-e, 362-c.** (*Sadock, 7/e, p 955.*) Ten percent of Asian men and women lack the form of acetaldehyde dehydrogenase responsible for metabolizing low blood concentrations of acetaldehyde (they are homozygous for an inactive form of the enzyme). Approximately 40% of Asian men and women are heterozygous for this specific enzyme variation. Homozygous individuals, due to the rapid accumulation of acetaldehyde, develop facial flushing, nausea, and vomiting after ingestion of small quantities of alcohol. Heterozygous individuals can tolerate some alcohol, but are more sensitive to its effects. This enzyme variation is found only in Asian people.

**363. The answer is c.** (*Sadock, 7/e, p 957.*) Alcohol may help a person fall asleep but it also disrupts sleep patterns by causing rapid alternation between sleep stages (sleep fragmentation), inhibition of stage 4 sleep, and depression of REM sleep.

**364. The answer is d.** (*Sadock, 7/e, p 997.*) Marijuana has been clearly demonstrated to decrease judgment, impair ability to estimate time and distance, and impair motor function. As with alcohol, these effects make accidents one of the major dangers of smoking marijuana. These two substances may also potentiate each other. Up to 17% of drivers in fatal accidents have tested positive for cannabinoids. Driving ability is significantly affected for several hours after smoking, and the ability of experienced pilots to fly is significantly decreased for 24 hours.

**365–366. The answers are 365-d, 366-a.** (*Sadock, 7/e, p 1026.*) Inhalant abuse is associated with very serious medical problems. Hearing loss, peripheral neuritis, paresthesias, cerebellar signs, and motor impairment are common neurological manifestations. Muscle weakness due to rhabdomyolysis, irreversible hepatic and renal damage, cardiovascular symptoms, and gastrointestinal symptoms such as vomiting and hematemesis are also common in chronic severe abuse. Many adolescents experiment with inhalants and, among eighth graders, inhalants are next only to nicotine and alcohol as a drug of abuse, but only a few become chronic users and maintain the habit into adulthood. Death by asphyxiation, aspiration, respiratory depression, arrhythmias, and accidents is a significant risk among chronic users.

**367. The answer is b.** (*Sadock, 7/e, p 1021.*) Hallucinogen-induced visual disturbances may persist for years after cessation of drug use. Sporadic visu-

al symptoms are called “flashbacks,” while more lingering hallucinations are considered to be a “hallucinogenic persistent perception disorder.” These disorders are not dose-dependent and may develop after a single use. Perceptual symptoms include geometric hallucinations, flashes of color, and afterimages. Patients often complain about the persistence of trailing images while an object moves through the visual field. The entire visual field may be described as grainy or reticulated and patients at times complain that they “can see the air.” Patients’ reality testing is intact and they know that their perceptions are not “real.” Symptoms are triggered by stimulants, including caffeine and decongestants, marijuana, fatigue, and infections. Most people recover completely in five years, but for others symptoms may be irreversible.

**368. The answer is b.** (*Sadock, 7/e, pp 980–981.*) MDMA (“ecstasy”) is a drug that was tried in the 1970s as an adjunct to psychotherapy and later became popular as a recreational drug. MDMA is not usually associated with hallucinations. After ingestion there is an initial phase of disorientation, followed by a “rush” that includes increased blood pressure and pulse rate, as well as sweating. Users experience euphoria, increased self-confidence, and peaceful feelings of empathy and closeness to other people. Effects usually last four to six hours. MDMA decreases appetite and it has been associated with cardiac arrhythmia and death.

**369–372. The answers are 369-f, 370-a, 371-c, 372-d.** (*DSM-IV, pp 181–185; Sadock, 7/e, pp 925–932.*) These terms are commonly confused or used ambiguously. The term *substance abuse* describes a maladaptive behavioral pattern characterized by recurrent use in spite of academic, social, or work problems; use in situations in which changes in mental status may be dangerous (driving); and recurrent substance-related legal problems. Tolerance refers to the pharmacological adaptation due to which a larger dose of a drug becomes necessary over time to achieve the same effect. Dependence is a condition in which withdrawal symptoms occur if the drug is stopped, usually leading to further drug use despite adverse consequences. With respect to drugs of abuse, tolerance and dependence often coexist. The term addiction is often confused with dependence and refers to a whole repertoire of behaviors that serve to maintain drug use. Addiction contains the connotation of loss of control over a behavior.

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# PSYCHOTHERAPIES

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## Questions

**DIRECTIONS:** Each item below contains a question or incomplete statement followed by suggested responses. Select the **one best** response to each question.

### Items 373–374

A 40-year-old woman, with a history of chaotic interpersonal relationships, enters psychoanalytic psychotherapy. She alternates between periods in which she idealizes the therapist and the progress of the therapy and periods of unrelenting anger, when she is convinced that the therapist is unhelpful and that the therapeutic work is worthless.

**373.** The defense mechanism used by this patient in this particular scenario is called

- a. Reaction-formation
- b. Denial
- c. Projection
- d. Projective
- e. Splitting

**374.** In which of the following diagnoses is this defense mechanism most commonly encountered?

- a. Schizophrenia
- b. Major depressive episodes
- c. Obsessive-compulsive disorder
- d. Schizoid personality disorder
- e. Borderline personality disorder

**375.** In psychoanalytic theory, the phenomenon of transference

- a. Occurs only in relationships between therapist and patient
- b. Has a negative effect on the treatment because it distorts reality
- c. Interferes with the reconstruction of the patient's past
- d. Refers to the displacement of feelings and beliefs originally connected with an important figure of the patient's childhood onto the analyst
- e. Only manifests in the patient's dreams

**Items 376–377**

A 25-year-old woman suffering from recurrent depression becomes very distressed when her supervisor asks her to revise a project she has been working on for weeks. “I don’t do anything right. I must be the most incompetent person in the firm. I will lose my job for sure!” she states, sobbing, to her therapist.

**376.** According to the cognitive model, her depression is a consequence of

- a. Anger turned toward the self
- b. Lack of self-cohesiveness due to early parental empathic failure
- c. Unresolved oedipal complex
- d. Maladaptive negative beliefs
- e. Difficulty mastering the challenges of adulthood

**377.** The therapist asks the patient to write down her catastrophic thoughts. Then they discuss more adaptive and realistic alternatives. This fundamental intervention of cognitive therapy is called

- a. Desensitization
- b. Interpretation
- c. Confrontation
- d. Consolation
- e. Cognitive restructuring

**378.** The development of a transference neurosis during psychoanalytic treatment

- a. Typically occurs in the early stage of the analytic treatment
- b. Occurs only with severely disturbed patients
- c. Is an integral part of the therapeutic process
- d. Usually involves a reenactment of adolescent conflicts with authority figures
- e. Involves negative but not positive feelings toward the analyst

**379.** Psychotherapy for personality disorders is made more difficult by the fact that character traits are usually

- a. Ego-dystonic
- b. Ego-syntonic
- c. Unlikely to cause major difficulties
- d. Difficult to identify
- e. Unrecognized by important persons in the patient’s life

**380.** Under hypnosis, a woman who was sexually abused by her father during most of her childhood sobbingly pleads, “Daddy, please do not hurt me.” At the end of the session, she states she understands better why she always had a strong sense of revulsion when her father touched her. This experience is an example of

- a. Conversion symptom
- b. Histrionic trait
- c. Visual hallucination
- d. Reaction formation
- e. Abreaction

**381.** A patient in psychoanalysis has been talking about trivial everyday matters and complaining about having nothing to say for several sessions. His therapist points out to him that, until the patient's father's aloofness and rejecting behavior was discussed, the patient was considerably more active and insightful. This recent change is a manifestation of the patient's

- a. Countertransference
- b. Ego strength
- c. Projective identification
- d. Resistance
- e. Erotic transference

**382.** A woman who suffers from bulimia is profoundly ashamed of her disorder, and for years she has kept her bingeing and purging a secret. After she joins an eating disorder support group she is greatly relieved to hear that other group members have engaged in similar practices and that they feel as ashamed and helpless as she does. This factor, common to all types of therapeutic groups and self-help groups, is called

- a. Universality
- b. Cohesion
- c. Consensual validation
- d. Multiple transference
- e. Interaction

**383.** A college student is in therapy due to a long history of excessive worrying, mild depression, and underachievement. He arrives at his session upset and anxious because he just learned that he studied the wrong material for the exam he is supposed to take the following week. The therapist reminds the patient that he has done well in his exams so far and one mistake is not going to compromise his studies. At the same time, the therapist encourages the patient to not give up and suggests that they spend some time devising an efficient study program to make up for the lost time. These interventions are commonly used in

- a. Psychoanalysis
- b. Object relation psychotherapy
- c. Interpersonal psychotherapy
- d. Supportive psychotherapy
- e. Existential psychotherapy

**384.** In psychoanalytic psychotherapy, the occurrence of countertransference is

- a. An essential component of the therapeutic process
- b. Almost always harmful to the process
- c. A sign that the patient should be referred to another therapist
- d. A sign that the therapist's unresolved conflicts are irreconcilable with the treatment
- e. An indication that the therapist dislikes the patient

**385.** Client-centered psychotherapy stresses which of the following characteristics in the therapist?

- a. Ability to be real and present in the relationship with the patient
- b. Ability to remain neutral
- c. Ability to confront and set limits
- d. Training in hypnotic therapy
- e. Ability to give sound advice

**386.** A 35-year-old physician with a successful private practice is tormented by feelings of inadequacy and doubts about her skills. After months of therapy, she is able to trace back these feelings to her perfectionist mother's constant disapproval. In session, she describes feeling intensely ashamed and "exposed" when a colleague pointed out to her that she had made a minor diagnostic error. A psychotherapist following Kohut's therapeutic guidelines would respond to this statement

- a. By empathizing with the patient's distress
- b. With an interpretation of her reaction in view of her childhood experiences
- c. By asking the patient to make a list of all the times she made a correct diagnosis
- d. By asking the patient to free associate
- e. By teaching deep muscle relaxation

**387.** A young man in psychoanalysis has recurrent dreams of snakes shedding their skins. Such images are called by Jungian psychotherapists

- a. Phallic representations
- b. Archetypes
- c. Shadows
- d. Primary processes
- e. Manifest content of the dream

**388.** Cognitive psychotherapy focuses on

- a. Unconscious and repressed memories
- b. Faulty ideas and beliefs
- c. Transference manifestations
- d. Dream interpretation
- e. Relaxation techniques

**389.** A patient perceives his analyst as wise, caring, and helpful. During his sessions, he talks at length about his warm feelings toward the analyst. Freud believed this type of transference

- a. Should be analyzed
- b. Should not be analyzed
- c. Usually slows down the therapeutic process
- d. Is usually a response to the analyst's unconscious need for gratification
- e. Usually conceals negative feelings

**Items 390–392**

**390.** The teachers of an autistic, mentally retarded boy who lives in a residential center are concerned about the severity of his self-injurious behavior. A psychologist conducting a functional behavioral analysis would be most interested in

- a. The teachers' feelings toward the student
- b. The parents' psychiatric history
- c. The child's IQ
- d. The consequences of the behavior
- e. The quality of the child's early interaction with his mother

**391.** The psychologist observes that the child's head banging and self-biting dramatically increase when his teachers are involved with other students. He also notices that the self-abusive behavior causes the teachers to turn their attention to the patient, either to scold or to physically restrain him. In a behavioral model, the teachers' response is an example of

- a. An aversive stimulus
- b. A reinforcer
- c. A conditioned stimulus
- d. A secondary gain
- e. A reminder

**392.** The psychologist recommends that the teachers ignore the child's self-abusive behaviors. After three weeks, the target behaviors in the classroom are much decreased in frequency. The mechanism involved in the behavioral improvement is called

- a. Counterconditioning
- b. Suppression
- c. Habituation
- d. Desensitization
- e. Extinction

**393.** A phobic patient who has an overwhelming fear of snakes is shown the picture of a cobra while she practices deep muscle relaxation. This technique is called

- a. Desensitization
- b. Reframing
- c. Contingency management
- d. Flooding
- e. Operant conditioning

**394.** A 25-year-old man seeks psychiatric consultation because of anxiety, conflict with his new wife, and a chaotic work history. Examination reveals the presence of an underlying paranoid personality. Psychotherapy is suggested as part of the recommended treatment. Which of the following therapies is most likely to be contraindicated?

- a. Hypnosis
- b. Cognitive therapy
- c. Family therapy
- d. Supportive psychotherapy
- e. Psychodynamic psychotherapy

**395.** A patient in psychoanalysis is always anxious to please. However, he states that he has recently begun to feel frightened in the presence of the analyst and that he has had fantasies about the analyst attacking him. Subsequently, the patient talks at length of his father and of his life-long struggle to please him at any cost. After listening to the patient's associations, the analyst comments that the patient's fantasies about him appear to be closely connected with the patient's way of relating to his father. The analyst also adds that the passive and compliant relationship the patient has with his idealized father may represent a reaction to his fear of his father's retaliation. The analyst's comments represent an example of

- a. Confrontation
- b. Interpretation
- c. Clarification
- d. Desensitization
- e. Flooding

**396.** An individual's ability to be hypnotized is primarily related to

- a. The existence of severe psychopathology
- b. The patient's compliance
- c. The patient's suggestibility
- d. The hypnotist's power of persuasion
- e. A lack of strength of character

**397.** The parents of a 20-year-old man recently diagnosed with paranoid schizophrenia are having difficulty dealing with their son's decline in function. Once an honor student with many friends and an active social life, he now spends his days barricaded in his room, surveying the street with binoculars, watching out for his "enemies." Helpful family therapy intervention includes

- a. Teaching the parents about the importance of reducing expressed emotions in the family transactions
- b. Unmasking the family "game" and freeing the identified patient from the role of "symptom bearer"
- c. Encouraging parents to openly discuss their feelings of loss and disappointment with their schizophrenic son
- d. Discussion of the secondary gains provided by the patient's symptoms
- e. Discussion of the parents' marital problems and how the patient's disorder affects them

**398.** A couple presents for sex therapy because, due to the husband's premature ejaculation, their marriage has not been consummated, although they have been married for several months. The behavioral treatment for the husband's premature ejaculation will probably include

- a. Exploration of the husband's relationship with his domineering mother
- b. Discussion of the wife's unexpressed masochistic fantasies
- c. Interpretation of the husband's recent dreams of having a passionate relationship with another man
- d. Squeeze technique and stop and start technique
- e. Instruction to masturbate several times a day with the goal to reach an orgasm as fast as possible

**399.** A 49-year-old man with hypertension and anxiety is attached to an apparatus that measures skin temperature and emits a tone proportional in loudness to the temperature. This is an example of a therapeutic technique called

- a. Hypnosis
- b. Behavior modification
- c. Supportive psychotherapy
- d. Placebo therapy
- e. Biofeedback

**400.** A 16-year-old boy is hospitalized on the adolescent ward of a mental hospital. He consistently avoids bathing and personal hygiene and is resistant to changing his behavior. A system is established wherein the patient earns "points" for accomplishing various aspects of personal hygiene. Points can be redeemed at the snack shop, or they can "purchase" extra activity passes. This is an example of a treatment method called

- a. Token economy
- b. Social skills training
- c. Classical conditioning
- d. Reward system
- e. Cognitive remediation

**401.** A high school teacher is respected and loved by both his students and his colleagues because he easily diffuses tense moments with an appropriate light remark and he always seems to be able to find something funny in any situation. The defense mechanism he uses is called

- a. Displacement
- b. Humor
- c. Reaction formation
- d. Regression
- e. Distortion

**402.** The cognitive approach to the treatment of panic disorder includes

- a. Teaching the patient to hyperventilate as soon as he or she starts feeling anxious
- b. Taking the patient to a crowded place and preventing escape until the patient's anxiety has peaked
- c. Educating the patient about the harmless nature of the physical symptoms he or she experiences at the beginning of the panic attack
- d. Imaginary exposure in the therapist's office
- e. Empathic response from the therapist to the patient's suffering

**403.** A country doctor with a busy practice feels satisfied and fulfilled when he can make a difference in the lives of his patients. Which defense mechanism is he employing, according to psychoanalytic theory?

- a. Reaction formation
- b. Altruism
- c. Sublimation
- d. Asceticism
- e. Idealization

**404.** A teenage girl with trichotillomania is taught to make a tight fist whenever she feel the impulse to pull her hair. This is an example of

- a. Habit reversal training
- b. Extinction
- c. Simple conditioning
- d. Flooding
- e. Desensitization

**405.** A 34-year-old mathematician is in psychoanalytic psychotherapy because of anxiety, depression, and marital problems, which seemed to begin shortly after the death of his mother. They had an intensely dependent and ambivalent relationship with each other. When the patient discusses his mother and her death, he is unemotional and detached. This is an example of

- a. Projection
- b. Isolation
- c. Splitting
- d. Reaction formation
- e. Projective identification

**406.** The concept of abstinence as encountered in Freud's guidelines for psychoanalytic psychotherapy refers to

- a. A prohibition to start sexual relationships with patients
- b. A recommendation to analysts to scrupulously maintain an unimpeachable lifestyle
- c. A prohibition for therapists to gratify their own wishes at the expense of the patient
- d. The requirement for therapists to function as a "blank screen" for the patient's fantasies
- e. The frustration on the part of the therapist of the patient's regressive wishes

**407.** Interpersonal psychotherapy was developed in the 1970s by Gerard Klerman as a time-limited treatment for major depressive disorders. This type of therapy focuses on

- a. Childhood losses
- b. Current interpersonal relationships
- c. Intrapsychic conflicts
- d. Making the unconscious conscious
- e. Correcting distorted beliefs

**408.** A young woman has suffered from contamination fears for years and her hands are raw from hand washing. Her therapist takes her to the bathroom and instructs her to touch the toilet seat and afterward stops her from washing her hands. The patient's anxiety rapidly increases and, after a peak, it declines. This technique, often used in the behavioral treatment of obsessive compulsive disorder (OCD), is called

- a. Exposure
- b. Desensitization
- c. Counterconditioning
- d. Operational conditioning
- e. Functional behavioral analysis

**DIRECTIONS:** The group of questions below consists of lettered options followed by numbered items. For each numbered item, select the **one** appropriate lettered option(s). Each lettered option may be used once, more than once, or not at all.

**Items 409–412**

For each patient, select the one most appropriate therapeutic option.

- a. Psychoanalysis
- b. Brief individual psychotherapy
- c. Cognitive therapy
- d. Behavior therapy
- e. Family therapy
- f. Group therapy

**409.** A young woman with no previous psychiatric history develops an incapacitating fear of driving after being involved in a minor automobile accident.

**410.** A 40-year-old, married, successful businessman with a satisfying family life is preoccupied with thoughts of becoming involved with a younger woman. He has no prior psychiatric history and no other complaints.

**411.** A 16-year-old girl begins acting out sexually and skipping school. These symptoms coincide with the onset of frequent arguments between her parents, who have been threatening marital separation.

**412.** An intelligent 25-year-old single woman, who has a successful career, complains of multiple failed relationships with men, unhappiness, and a wish “to sort out my life.” A previous experience in individual psychotherapy was somewhat helpful.

**Items 413–418**

Match the correct defense mechanism with each vignette.

- a. Distortion
- b. Repression
- c. Reaction formation
- d. Sublimation
- e. Somatization
- f. Intellectualization
- g. Suppression
- h. Isolation
- i. Introjection
- j. Projection
- k. Identification with the aggressor

**413.** A patient starts wheezing and coughing whenever her therapist challenges her, but she insists she is not at all distressed or angry.

- 414.** A woman feels jealous and hurt when, at a family gathering, her husband flirts with her younger cousin. She makes a conscious decision to put her feelings aside and to wait for a more appropriate moment to confront her husband and explore her own emotions.
- 415.** A man visits his domineering and demanding elderly mother at her nursing home. When she starts browbeating him for his “lack of devotion,” he has a sudden urge to shout at her. The next day, when he talks with his therapist about his visit, he minimizes the impact of his mother’s constant badgering and has no memory of his brief moment of rebellion.
- 416.** A 34-year-old auto mechanic has a lifelong grudge against his more successful older brother, who, in his eyes, was their parents’ favorite, but he has a hard time admitting it even to himself. Instead, he tells his friends that his brother envies his good looks and his success with women.
- 417.** A college student majoring in psychology is fluent and articulate in her psychoanalytic sessions. For months she has been talking in great detail about her childhood and her complex interactions with her parents. She dutifully reports her dreams and fantasies. She uses such terms as “my oedipal complex” and “my oral fixation” and makes statements such as “I need to work on my object relations problems.”
- 418.** A man who was beaten for every little infraction throughout his childhood idealizes his parents and describes them as “good people who did not spare the rod.” He is angry and baffled when he is ordered to start counseling and to attend parenting classes after the school’s nurse reports to the department of social services that his children consistently come to school covered with bruises.

# PSYCHOTHERAPIES

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## Answers

**373–374. The answers are 373-e, 374-e.** (*Sadock, 7/e, pp 588–591.*) The concept of splitting as an unconscious ego defense was first introduced by Melanie Klein and later elaborated by Otto Kernberg, two of the main theorists of the Object Relation movement. Although this defense is occasionally used by patients with neurotic disturbances, splitting is a defense mostly encountered in more severely disturbed patients, such as patients with personality disorders and, in particular, borderline personality disorder. According to the object relation theory, patients with severe personality disorders, due to faulty parenting during infancy, have not been able to form stable and realistic intrapsychic representations of themselves and of the important people in their lives. Instead of seeing themselves and others as consistent entities containing both good and bad traits, they perceive the negative and positive aspects as separate, irreconcilable parts. Splitting, by allowing the manifestation of only one side of the ambivalence at a time, preserves the “good objects,” which, otherwise, in the patient’s experience, would consistently risk being contaminated and neutralized by the “bad objects.” In the case described in the vignette, in order to preserve her view of her therapist as helpful and kind (and her positive feelings toward him), the patient has to “split” the less-than-perfect traits of the therapist as well as all her negative thoughts and feelings toward him. Unfortunately, when disappointments, real or imagined, bring the negative side of the ambivalence into focus, patients who use splitting as a main defense temporarily lose contact with the positive side.

**375. The answer is d.** (*Sadock, 7/e, pp 2066–2067; Hales, 3/e, pp 1161–1162.*) Transference, according to the classical Freudian psychoanalytic theory, refers to the projection of feelings, thoughts, and attitudes once connected to important figures in the patient’s past onto the analyst. Due to transference, patients unconsciously reenact with the analyst “old scripts” instead of consciously remembering and processing the past. Freud did not distinguish between the real patient-analyst relationship and transference,

and he did not talk about the real traits in the analyst that can affect the transference. In the contemporary psychoanalytic movement, transference is considered a mixture of reality and reenactment, and it is well accepted that the analyst's personal characteristics influence both the quality and the intensity of the transference. Transference is not limited to the patient-analyst relationship but can take place in any meaningful relationship. Transference does not hinder the treatment; on the contrary, the analysis of the transference helps patients understand how their past still affects their emotional reactions and behaviors. Verbal and nonverbal communication, overt behavioral patterns, omissions, and dreams are some of the ways transference manifests itself.

**376–377. The answers are 376-d, 377-e.** (*Sadock, 7/e, pp 2167–2171, 2810.*) Cognitive therapy is based on the principle that psychopathology derives from the patient's faulty, distorted beliefs about him- or herself and the world (schemas). Negative schemas derive from past negative experiences and evoke powerful emotions. The goal of cognitive therapy is to replace negative and maladaptive beliefs and thought patterns with more adaptive, positive ones. In this process, called cognitive restructuring, while the patient reviews with the therapist the automatic thoughts that accompany his or her distressing emotions ("Everybody hates me!" or "I will never amount to anything"), logical errors are identified, the validity of the negative assumptions is challenged by more realistic evidence ("I have several friends who care for me, so it is not true that everybody hates me"), and alternative explanations for events are explored ("My friend did not ignore me because I am worthless, but, most likely, he was distracted").

**378. The answer is c.** (*Sadock, 7/e, p 2067.*) In psychoanalytic theory, *transference neurosis* refers to the replication of the patient's childhood conflicts and dynamics with the analyst. Transference neurosis takes place in the middle part of therapy and is characterized, on the side of the patient, by intense transference feelings toward the analyst and regression. The development of transference neurosis is an essential part of the psychoanalytic treatment, because once old conflicts are brought into the present, they can be analyzed, understood, and, finally, resolved.

**379. The answer is b.** (*Hales, 3/e, pp 795–796.*) Although personality disorders cause considerable suffering for patients and people with whom they

relate, these patients usually are oblivious to the fact that their characterological traits and maladaptive behaviors create and perpetuate their suffering (e.g., their traits are egosyntonic). On the contrary, these patients tend to blame others for their difficulties and deny that they have any problems. Relatives, friends, and coworkers usually have a much better understanding of the patient's dysfunctional traits than the patient has.

**380. The answer is e.** (*Sadock, 7/e, p 2143.*) Hypnosis is a useful instrument in the treatment of traumatized patients, especially when the memory of the traumatic event or events has been repressed. Through abreaction (or reenactment), the traumatic experience is once again available to the conscious mind, becomes less powerful, and can be gradually integrated into the patient's current view of her- or himself in a meaningful way.

**381. The answer is d.** (*Sadock, 7/e, pp 2065–2066.*) Freud noticed that patients, in spite of their suffering and their overt desire to change, tended to cling to their symptoms and resisted the analyst's efforts to produce insight. He called these powerful internal forces that oppose change "resistance." Resistance takes place at any point in the treatment and particularly when unacceptable impulses or thoughts threaten to come into consciousness or a maladaptive defense mechanism is challenged. Resistance can manifest itself in many different ways, including withholding important thoughts from the analyst, falling silent during sessions, forgetting appointments, forgetting to pay the analyst, falling asleep during session, and considering dropping out of treatment. The possible manifestations of resistance are countless and depend on the patient's defense mechanisms and personality. In other words, the patient's intrapsychic defenses manifest as resistance in the context of his or her interpersonal relationship with the analyst. Freud thought that resistance should be uncovered by the analyst but not challenged or interpreted. Modern analysts believe that resistance should be analyzed through the patient's free associations, supported by the analyst's observations.

**382. The answer is a.** (*Sadock, 7/e, p 2149.*) Universality, the awareness that the patient is not alone or unique in his or her suffering and that others share similar symptoms and difficulties, is a powerful healing factor in group therapy. The other items listed are also factors that facilitate the therapeutic group process. Cohesion refers to the sense that the group is work-

ing together toward a common goal. Consensual validation refers to the confirmation of the patient's reality through comparison with other group members' experiences and conceptualizations. Multiple transference refers to the projections of feelings, thoughts, and wishes that belong to the patients' past experiences onto other group members and the group leaders. Interaction refers to the free exchange of ideas and feelings with the group members.

**383. The answer is d.** (*Sadock, 7/e, pp 2076–2078.*) Supportive psychotherapy is characterized by an emphasis on the nurturing, caring role of the therapist and a focus on current reality. Although insight-oriented strategies such as interpretations can be used, they are not the main therapeutic instruments. Supportive psychotherapy aims to foster and maintain a positive transference all the time, to provide the patient with a consistently safe and secure atmosphere. Consoling, advice, reality testing, environmental manipulation, reassurance, and encouragement are strategies commonly used in supportive psychotherapy.

**384. The answer is a.** (*Hales, 3/e, p 1162.*) Countertransference, defined as the therapist's transference response toward the patient, is an important component of the patient-therapist relationship and is practically inevitable during the course of the treatment. Although countertransference can interfere with the treatment occasionally, especially when it is not consciously recognized by the therapist and is acted out, this process is most of the time a useful tool in psychoanalysis. Through a thoughtful analysis of his or her countertransference, the therapist can often obtain useful information about and insight into the patient's experience.

**385. The answer is a.** (*Sadock, 7/e, pp 2209–2211.*) Client-centered psychotherapy was first proposed by Carl Rogers in the 1940s and subsequently gained great popularity. Client-centered therapy is based on the concept that each person has an innate instinct to grow, integrate, and become more functional as well as an innate capacity to resolve his or her psychological problems, if provided with a facilitative environment. The aim of the therapy is to create a supportive and accepting interpersonal environment that makes the patient feel relaxed and understood and ready for personal growth. Rogers postulated that three conditions are necessary for the creation of a facilitative relationship: genuineness (the therapist's ability to

be real in the relationship with the patient), unconditional positive regard for the patient, and empathic understanding of the patient's experiences.

**386. The answer is a.** (*Sadock, 7/e, pp 593–596.*) Heinz Kohut, one of the founders of the Self Psychology school of psychoanalysis, believed that patients' symptoms stemmed from a fragmented and unstable sense of self caused by unempathic, harsh, or neglectful parenting during the first years of life. According to Kohut, the goal of the therapist is to understand the patients' needs for validation and empathy and meet these needs, at least partially, in the treatment. In contrast, classical psychoanalysis stresses the importance of frustrating the patient's infantile needs, which, in the end, will be renounced and not fulfilled. Although Kohut did not reject the use of the classical tools of psychoanalysis, such as interpretations and free associations, providing a corrective emotional response to the patient was central to his theory. The other two therapeutic interventions listed among the options, reality testing the patient's beliefs through a logical examination of facts and relaxation techniques, belong to the realms of cognitive therapy and behavioral therapy, respectively.

**387. The answer is b.** (*Sadock, 7/e, p 621.*) According to Carl Jung, archetypes are powerful symbolic images that emerge from the collective unconscious, that part of the psychic apparatus that preserves the collective knowledge and experience of humankind. Archetypes emerge in dreams, fantasy, art, and free associations and their interpretation provides useful insights into the patient's intrapsychic processes. In the scenario described in this vignette, the snakes shedding their skin are usually interpreted as a symbol for change and renewal. The term *shadow* refers, also in Jungian psychology, to the part of the psychic apparatus that contains the person's traits and characteristics that are unacceptable to the conscious mind. Primary processes, manifest and latent content of dreams, and phallic representations are concepts encountered in Freudian psychoanalytic theories.

**388. The answer is b.** (*Sadock, 7/e, pp 2167–2171.*) Cognitive therapy is based on the concept that psychopathology is a consequence of distorted beliefs and faulty assumptions. Common thinking errors described in the cognitive model are arbitrary inference (drawing a conclusion in the absence of supporting evidence), selective abstraction (focusing on only one small part of a situation or event, ignoring other, usually more positive, as-

pects), overgeneralization (drawing a general conclusion on the basis of a single incident), magnification (of problems) and minimization (of positive factors), personalization (tendency to relate external events to oneself without reason for doing so), and dichotomous thinking (extreme, black-or-white thinking). Psychoanalysis depends on dream interpretation, transference manifestation, and recovery of repressed memories. Relaxation techniques belong to the realm of behavioral therapy.

**389. The answer is b.** (*Sadock, 7/e, pp 2066–2067.*) Freud felt that “unobjectionable positive transference,” defined as the patient’s perception of the therapist as caring and helpful, is always helpful to the therapeutic process and should not be analyzed. Critics of Freud’s theories pointed out that sometime an overt positive transference may conceal less-flattering feelings. Furthermore, patients’ positive perceptions of the therapist are not necessarily all projections from past experiences, since the therapist’s personality and behavior have powerful effects on the form and content of the transference.

**390–392. The answers are 390-d, 391-b, 392-e.** (*Sadock, 7/e, pp 417–420, 2095–2096.*) Behavioral analysis is based on the concept that behavior is shaped by its consequences. Behaviors that are followed by desired consequences (positive reinforcers) or that cause the elimination of unpleasant consequences (negative reinforcers) increase the probability that the behavior will happen again. Events that may be reinforcing for some people may be aversive for others. For example, scolding and other types of negative attention can be reinforcing for some individuals (such as the boy in the vignette) and function as deterrents for others. Behavioral analysis is commonly used to design appropriate behavioral interventions for self-injurious behavior in patients with mental retardation. Observing and quantifying the patient’s behavior under various controlled circumstances allows the identification of what, in that particular situation, reinforces the unwanted behavior. Once the reinforcer is identified, its removal from the environment will cause a decrease or disappearance of the target behavior, a process called extinction. An aversive stimulus or punishment is any stimulus that, when presented contingently with a behavior, causes the decrease of that behavior. Time-out is a form of aversive stimulus. An unconditioned stimulus, a term derived from the theory of classical conditioning, refers to the stimulus that naturally elicits a certain response (e.g., salivation at the

sight of food). The conditioned stimulus is the neutral stimulus that, after being closely associated to an unconditioned stimulus for some time, elicits the same response as the unconditioned stimulus, or conditioned response (e.g., nausea elicited by the mere sight of the room where a patient has received chemotherapy in the past).

**393. The answer is a.** (*Sadock, 7/e, pp 2113–2114.*) All behavioral treatments for phobias have in common exposure to the feared stimulus. Desensitization is based on the concept that when the feared stimulus is presented paired with a behavior that induces a state incompatible with anxiety (e.g., deep muscle relaxation), the phobic stimulus loses its power to create anxiety (counterconditioning). For desensitization to work, the anxiety elicited by the exposure has to be low. Treatment starts with exposure to stimuli that produce minimal anxiety and proceeds to stimuli with a higher anxiety potential. Operant conditioning refers to the concept that behavior can be modified by changing the antecedents or the consequences of the behavior (contingency management). Flooding is another exposure-based treatment for phobia, based on extinction rather than counterconditioning. Reframing is an intervention used in family therapy and refers to giving a more acceptable meaning to a problematic behavior or situation.

**394. The answer is a.** (*Sadock, 7/e, pp 2132–2133.*) Hypnosis is not recommended for suspicious and paranoid patients who are likely to respond negatively to the loss of control that hypnosis evokes. These patients usually refuse to cooperate with the hypnotic inductions. Another category of patients who may have unplanned and potentially negative reactions to hypnosis are individuals with a history of trauma, who may undergo spontaneous abreactions.

**395. The answer is b.** (*Sadock, 7/e, p 2068.*) Interpretations, the cornerstone of psychoanalytic psychotherapy, are explanatory statements made by the analyst that link a symptom, a behavior, or a feeling to its unconscious meaning. Ideally, interpretations help the patient become more aware of unconscious material that has come close to the surface. Confrontation and clarification are also used in psychoanalytic psychotherapy. In confrontation, the analyst points out to the patient something that the patient is trying to avoid. Clarification refers to putting together the information the patient has so far provided and reflecting it back to him or her

in a more organized and succinct form. Flooding and desensitization are exposure techniques used in behavioral therapy.

**396. The answer is c.** (*Sadock, 7/e, pp 2128–2136.*) The ability to experience trance is connected to the convergence of three factors: absorption, dissociation, and suggestibility. Absorption refers to the ability to focus attention on a detail, while reducing peripheral awareness. Dissociation refers to a functional separation of some of the elements of the identity from consciousness. The more the individual's attention is focused on a particular object, the more likely it is that peripheral information will slip out of consciousness. Suggestibility refers to a tendency to accept suggestions or signals with a relative suspension of judgment. High levels of hypnotizability are not connected with psychopathology or character weakness. On the contrary, people with severe psychiatric disturbances often are not hypnotizable.

**397. The answer is a.** (*Sadock, 7/e, pp 2159–2160, 2164.*) Family interventions that have been proved to be effective in the treatment of schizophrenic patients include teaching the family members about schizophrenia, emphasizing the importance of keeping the interpersonal communications at a low emotional quotient (schizophrenic patients tend to relapse when exposed to the intense negative emotions of family members), and helping the family learn more adaptive ways to cope with stress. Discussing marital problems in front of the patient and sharing with the patient the distressing details of the parents' own struggles with his or her mental illness are bound to have negative effects. "Uncovering the family game" was one of the goals of systemic family therapy created by Selvini-Palazzoli and the Milan group. This model was accepted in the 1960s when schizophrenia was considered the consequence of pathological parenting. In view of what is now known about schizophrenia's biological etiology, this theory is not considered valid anymore.

**398. The answer is d.** (*Sadock, 7/e, pp 1602–1603.*) Treatment of sexual dysfunctions relies on specific exercises, called sensate focus exercises, aimed at decreasing anxiety, to teach the couple to give and take pleasure without the pressure of performance and to increase communication between partners. Furthermore, specific problems are addressed with special techniques. The squeeze technique, used to treat premature ejaculation, aims to raise the threshold of penile excitability by firmly squeezing the coronal ridge of the penis, so as to abruptly decrease the level of excitation,

at the earliest sensation of impending orgasm. In the start-and-stop technique, stimulation is repeatedly stopped for a few seconds as soon as orgasm is impending and resumed when the level of excitability decreases.

**399. The answer is e.** (*Sadock, 7/e, p 2019.*) Biofeedback refers to a therapeutic process in which information about the individual's physiological functions, such as blood pressure and heart rate, are monitored electronically and "fed back" to the individual by means of lights, sounds, or electronic gauges. Biofeedback allows individuals to control a variety of body responses and, in turn, to modulate pain and the physiological component of unpleasant emotions such as anxiety.

**400. The answer is a.** (*Sadock, 7/e, p 3214.*) In the token economy model, the desired behavior is reinforced by tokens that can be exchanged for privileges or desired items. In the token economy, as in other interventions aimed at changing behaviors through contingency management, the techniques are implemented by someone other than the patient and require a precise control of the patient's sources of reinforcement. For these reasons, a token economy is usually used for children, at home or in classroom settings, and for retarded or otherwise poorly functioning hospitalized patients.

**401. The answer is b.** (*Sadock, 7/e, pp 584–585.*) Individuals who use humor as a defense mechanism are able to make use of comedy to express feelings and thoughts with potentially disturbing content without experiencing subjective discomfort and without producing an unpleasant effect on others. Humor is a mature defense, together with sublimation, altruism, asceticism, anticipation, and suppression. Displacement refers to the shifting of an emotion or a drive from one object to another (for example, the shifting of unacceptable aggressive feelings toward one's parents to the family cat). In distortion, the external reality is grossly rearranged to conform to internal needs. Regression is described as the attempt to return to an earlier status of development or phase of functioning, in the hope of having one's needs gratified. Reaction formation refers to the substitution of an unacceptable feeling or thought with its opposite.

**402. The answer is c.** (*Sadock, 7/e, p 2174.*) The cognitive treatment of panic disorder focuses on the patient's tendency to make catastrophic interpretations about body sensations or states of mind. This approach in-

cludes a careful exploration of the patient's bodily symptoms before and during the panic attack and of the automatic thoughts that accompany them. Other more realistic interpretations of symptoms are discussed and the patient is encouraged to come up with less-catastrophic scenarios ("Even if I have a panic attack in a store, the world does not end"). Exposure techniques are part of behavioral therapy. Empathy with the patient's suffering is a necessary element of all doctor-patient interactions but, in this case, it does not represent a specific therapeutic technique.

**403. The answer is b.** (*Sadock, 7/e, p 585.*) Altruism, a mature ego defense mechanism, is described as the use of constructive service to others in order to vicariously gratify one's own needs. It may include a form of benign and constructive reaction formation. Sublimation, the achieving of impulse gratification by altering the originally objectionable goal with a more acceptable one, and asceticism, obtaining gratification from renunciation of "base" pleasures, are also mature ego defenses. Reaction formation, described as the transformation of an unconscious, objectionable thought or impulse into its opposite, is a neurotic defense. Idealization refers to perception of others or oneself as totally good, at the expense of a more realistic, ambivalent representation. Extremes of idealization and devaluation characterize the defense mechanism known as splitting.

**404. The answer is a.** (*Sadock, 7/e, p 2108.*) Habit reversal training is used to eliminate dysfunctional habits such as nail biting, tics, and hair pulling. The patient is taught to recognize the triggering stimuli and the behaviors present at the very beginning of the dysfunctional habit (for example, touching the face for hair pulling). Patients are then instructed to perform an action incompatible with the habit whenever they become aware that they are on the verge of pulling their hair or biting their nails. Fist clenching is used as a competitive maneuver in both nail biting and hair pulling. Afterward, the patient is encouraged to engage in a reparatory behavior (brushing the hair or filing the nails) to remove the stimulus that may trigger future events.

**405. The answer is b.** (*Sadock, 7/e, pp 584–585, 591–592.*) Isolation, a neurotic defense, refers to the splitting off the affective component, usually unpleasant or unacceptable, from an idea or thought. Projection is a primitive, narcissistic defense characterized by the transposition of unacceptable

feelings and ideas onto others. In projective identification, after projecting his or her own feelings and impulses onto another person, the individual acts in such a way that the other person feels compelled to act out such feelings (e.g., a patient avoids becoming conscious of his anger by projecting it onto another person, then acts in a way that triggers the other person's angry feelings). Splitting and reaction formation are also discussed in the explanation to question 403.

**406. The answer is e.** (*Sadock, 7/e, p 2069.*) Abstinence refers to Freud's recommendations that transference wishes should not be satisfied but analyzed. Other technical guidelines Freud provided were neutrality, which refers to the therapist's maintaining a nonjudgmental stance toward the patient, and anonymity, which refers to the therapist's functioning as a mirror or a blank wall where the patient can project his or her fantasies.

**407. The answer is b.** (*Sadock, 7/e, pp 2178–2179.*) Interpersonal therapy is based on the theories of the interpersonal school of Harry Stack Sullivan and Bowlby's research on infantile attachment. Interpersonal therapy is centered on the concept that interpersonal attachments are essential for survival and emotional well-being and that loss of interpersonal relationships cause depression. Interpersonal therapy postulates four interpersonal problem areas: complicated mourning, interpersonal role disputes (conflicts with a significant other), role transition (any change in life status that can cause distress), and interpersonal deficits (lack of social skills). After an initial diagnostic evaluation and a detailed exploration of the patient's current relationship and social functioning, the therapist links the depressive symptoms with the patient's interpersonal situation in the framework of one of the four interpersonal problem areas. The therapy process then focuses on current problems and on what goes on in the patient's life outside the office. The therapist maintains an active, nonneutral, and supportive stance. Role playing and direct advice are often used.

**408. The answer is a.** (*Sadock, 7/e, pp 2115, 2174.*) Since compulsive behaviors rapidly neutralize the anxiety created by obsessional thoughts, in the treatment of OCD, response prevention needs to be coupled with exposure to the feared stimulus for the exposure to be effective. Anxiety rapidly rises when the patient is prevented from performing the neutralizing compulsive behavior (e.g., washing hands after touching a contaminated

object), but subsequently it declines (extinction). Extinction refers to the progressive disappearance of a behavior or a symptom (in this case, anxiety) when the expected consequence does not happen (getting sick due to contamination).

**409–412. The answers are 409-d, 410-b, 411-e, 412-a.** (*Sadock, 7/e, pp 2113, 2189–2199, 2157, 2063.*) Behavioral interventions (desensitization, flooding, graduate exposure) are the treatments of choice for phobias.

Brief individual insight-oriented psychotherapy is characterized by a limited, predetermined number of sessions and the fact that the focus of the treatment remains on specific problematic areas in the life of the patient. Deep restructuring of the patient's psychological apparatus is not the goal of brief therapy. Highly motivated patients who function relatively well are good candidates for this type of therapy.

Family therapy aims to improve the level of functioning of the family and the individual by altering the interactions among the family members. There are many different approaches to family therapy (psychodynamic, solution-oriented, narrative, systemic, strategic, structural, transgenerational, to name only a few). Each school focuses on a particular aspect of the family dynamics and uses different techniques to obtain the desired results. For example, the structural school focuses on patterns of engagement-enmeshment and on family boundaries and hierarchies. The solution-oriented approach focuses on solutions and minimizes the importance of problems.

Psychoanalytic psychotherapy is suited to patients with relatively good ego strengths, normal or superior intelligence, ability to abstract and think symbolically, and a genuine wish to understand themselves. Although Freud had originally restricted the indications for psychoanalysis to patients with neuroses of a hysterical, phobic, or obsessive-compulsive nature, it is now felt that this type of therapy benefits a much larger range of patients, including patients with depressive and anxiety disorders, high-functioning borderline and narcissistic personality disorders, avoidant personality disorder, and obsessive-compulsive personality disorder. Psychoanalysis is also helpful for individuals who do not have a psychiatric diagnosis but experience problems with intimacy, interpersonal relationships, assertiveness, self-esteem, and so forth.

**413–418. The answers are 413-e, 414-g, 415-h, 416-j, 417-f, 418-k.** (*Sadock, 7/e, pp 584–585.*) In somatization, psychic phenomena, such as

emotions, instead of being acknowledged and verbalized, are expressed with bodily symptoms. Suppression refers to the conscious or semiconscious decision to postpone paying attention to a disturbing feeling or thought. Repression, on the contrary, is defined as the unconscious removal of an objectionable feeling or thought from consciousness. Projection refers to the attribution of one's unacceptable impulses or feelings to others (in the case in the vignette, the objectionable feeling is jealousy). Intellectualization is the excessive use of intellectual processes to avoid dealing with emotions. In identification with the aggressor, the victim (in this case, the father, when he was an abused boy) internalizes the characteristics of the people he or she fears in order to gain a sense of control over overwhelming anxiety.

# PSYCHOPHARMACOLOGY AND OTHER SOMATIC THERAPIES

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## Questions

**DIRECTIONS:** Each item below contains a question or incomplete statement followed by suggested responses. Select the **one best** response to each question.

- 419.** A young man with a psychotic disorder is started on a neuroleptic medication. Two days after the beginning of the treatment, he cannot stop pacing and he is unable to sit. He reports that he feels “jittery” and complains that his legs are moving on their own. These symptoms are
- A rare neuroleptic side effect
  - More frequent with low-potency neuroleptics
  - More likely to occur in recent onset psychosis
  - Rarely associated with the new atypical neuroleptics
  - Well tolerated by most patients
- 420.** The medication most likely to prove helpful is
- A sedative hypnotic
  - A beta blocker
  - Phenytoin
  - A neuroleptic of higher potency
  - An anticholinergic medication
- 421.** A 25-year-old man with major depression discusses the potential benefits and side effects of various antidepressants with his psychiatrist. He clearly indicates that he does not want a medication that could decrease his libido or interfere with his ability to obtain and maintain an erection. Which of the listed antidepressants would be appropriate for this patient?
- Bupropion
  - Clomipramine
  - Amitriptyline
  - Sertraline
  - Paroxetine
- 422.** Which of the following drugs is a tricyclic antidepressant?
- Fluoxetine
  - Nortriptyline
  - Phenelzine
  - Tranlycypromine
  - Clonazepam

**423.** A 12-year-old boy is very distraught because every time he thinks or hears the word “God” or passes in front of a church, swear words pop into his mind against his will. He also feels compelled to repeat the end of every sentence twice and to count to 20 before answering any question. If he is interrupted, he has to start from the beginning. A medication proven to be effective in this disorder is

- a. Alprazolam
- b. Clomipramine
- c. Propranolol
- d. Phenobarbital
- e. Lithium

**424.** A 16-year-old boy with ADHD has been increasingly irritable, sad, and withdrawn for several weeks. Which medication has been proven to be effective for depression and ADHD, in children and adults?

- a. Clonidine
- b. Pemoline
- c. Imipramine
- d. Fluvoxamine
- e. Bupropion

**425.** A young man is diagnosed with paranoid schizophrenia. His persecutory delusions and command auditory hallucinations are well controlled by 10 mg of haloperidol per day, but he is apathetic and withdrawn and shows a remarkably flat affect. Among the listed antipsychotic medications, which one can ameliorate negative symptoms of schizophrenia?

- a. Chlorpromazine
- b. Fluphenazine
- c. Risperidone
- d. Olanzapine
- e. Thioridazine

**426.** During steady-state conditions, the half-life of a drug refers to

- a. The drug’s expiration date
- b. How long it takes to absorb the drug following ingestion
- c. How long the drug will remain at least 50% active
- d. How long it will take to metabolize one-half the drug
- e. How long it will take before the medication has half the desired effect

- 427.** A 32-year-old male who is taking sertraline to address his incapacitating social phobia has had great difficulty falling asleep since the treatment was started two weeks earlier. His psychiatrist prescribes trazodone, 50 to 100 mg at bedtime, for his insomnia. A few days later, the patient is puzzled when he has an erection that lasts for 35 minutes. Choose the correct statement.
- Priapism is one of the SSRIs' sexual side effects
  - Among the SSRIs, sertraline is the only drug known to cause priapism
  - Priapism usually does not result in significant sequelae
  - The risk of developing priapism with trazodone is higher with high doses (600–800 mg per day)
  - The risk of developing priapism with trazodone is higher with low doses (50–150 mg per day)
- 428.** A 25-year-old woman has used 30 mg/day of diazepam for the past 20 months. Which of the following statements is most likely to be true?
- She is probably not physically dependent
  - She probably is physically dependent
  - Benzodiazepine abuse by patients who are prescribed the medication for treatment of an anxiety disorder is common
  - A return of anxiety symptoms after abrupt discontinuation of treatment is a sign of psychological dependence
  - Concern about physical dependency is not necessary at this dosage level
- 429.** In TCA overdose, the ingested quantity likely to prove fatal is
- 500 mg
  - 750 mg
  - 1 to 2 g
  - 2 to 3 g
  - 4 to 6 g

**430.** A 78-year-old man with Parkinson's disease and a past history of recurrent depression has been increasingly sad, tearful, and withdrawn for several weeks. He has stopped eating to atone for past "sins" and hears the voice of the devil telling him that he will be damned for all eternity because he "has failed his family and God." He is hospitalized after an unsuccessful attempt to kill himself by hanging. Since in the past the patient has not had a good response to antidepressants and, given the seriousness of his status, ECT is recommended. Choose the correct statement:

- a. ECT is associated with a relatively high mortality in older people
- b. ECT is very effective in severe, psychotic depression
- c. ECT is not as effective as antidepressants
- d. ECT is contraindicated in patients with Parkinson's disease
- e. ECT is not effective in psychiatric disorders other than depression

**431.** A 30-year-old male has taken sertraline, 100 mg per day, for the past eight months as treatment for dysthymic disorder. Decreased libido and delayed orgasm have been a problem since the beginning of the treatment but for a while the patient tolerated these side effects because, thanks to the medication, he has felt happier, more confident, and more energetic. He now presents to his psychiatrist's office reporting that, since he is getting married, these sexual side effects represent a more serious problem. He does not want to change antidepressants because, aside from the sexual problems, he is pleased with its effects. Which of the following medications could be helpful in these circumstances?

- a. Clonazepam
- b. Amitriptyline
- c. Propranolol
- d. Fluoxetine
- e. Cyproheptadine

**432.** A double-blind, placebo-controlled, crossover treatment study means

- a. The subject does not know whether he or she is getting drug or placebo during the study and is not told after completion of the study
- b. The researcher does not know if the subject is getting drug or placebo and is not told after completion of the study
- c. The subject is not told what he or she is taking and is switched from drug to placebo in mid study
- d. Neither the patient nor the researcher knows whether drug or placebo is being used, and a switch is made in mid study
- e. The researcher is not told whether placebo or drug is being used and a switch is made at mid study

**Items 433–434**

A 48-year-old woman with a past history of recurrent psychotic depression is admitted to a locked ward during a relapse. On the day of admission, she is placed on nortriptyline, 50 mg, and risperidone, 2 mg, at bedtime. Ten days later, the patient reports with great concern that her “nipples are leaking.”

**433.** Which class of medications is known to cause this condition?

- a. Benzodiazepines
- b. Neuroleptics
- c. Serotonin reuptake inhibitors
- d. Antiseizure medications with mood-stabilizing properties
- e. Beta blockers

**434.** What mechanism is responsible for the condition?

- a. Excessive release of monoamines in the synaptic cleft
- b. Blockage of serotonin reuptake
- c. Activation of the NMDA aspartate receptors
- d. Dopamine receptor blockade
- e. Sensitization of gamma-aminobutyric acid (GABA) receptors to the agonistic effects of endogenous GABA

**435.** A 56-year-old woman with bipolar disorder who has been managed with lithium for years is brought to the emergency room by her relatives with clear signs of lithium toxicity. She is tremulous, ataxic, somnolent, and her lithium level is 1.8. There were no recent changes in dosage and she is not dehydrated. During the previous week, she has been taking several daily doses of an over-the-counter medication. What medication has she used?

- a. Acetylsalicylate
- b. Acetaminophen
- c. Ibuprofen
- d. Diphenhydramine
- e. Pseudoephedrine

**436.** The benzodiazepine with the shortest half-life is

- a. Alprazolam
- b. Lorazepam
- c. Oxazepam
- d. Diazepam
- e. Fluorazepam

**437.** Which of the following antipsychotic medications is the most potent?

- a. Chlorpromazine
- b. Thiothixene
- c. Trifluoperazine
- d. Haloperidol
- e. Thioridazine

**438.** A 25-year-old elementary school teacher with bipolar disorder develops high fever with chills, bleeding gums, extreme fatigue, and pallor three weeks after starting a carbamazepine trial. What side effect is she experiencing?

- a. Steven-Johnson syndrome
- b. Acute aplastic anemia
- c. Serotonin syndrome
- d. Neuroleptic malignant syndrome
- e. Malignant hyperthermia

**439.** A 35-year-old nurse with a diagnosis of bipolar disorder has been stable on lithium therapy for two years. For the past three months, she has been easily fatigued, more sensitive to cold, and excessively sleepy for several weeks. Her hair is dry and brittle and her face is puffy. Her medical workup will probably show

- a. An elevated TSH
- b. Abnormal liver functions
- c. Leukopenia
- d. A blunted cortisol response to ACTH
- e. Hypocholesterolemia

**440.** A 26-year-old male with a diagnosis of paranoid schizophrenia remains severely psychotic after several trials of typical and atypical neuroleptics. He has received haloperidol, perphenazine, molindone, risperidone, and olanzapine at optimal therapeutic dosages but his thought processes remain disorganized. He continues to believe that malevolent entities poison his water and his food, and he has assaulted at least one person in response to command auditory hallucinations. What medication can be helpful in this case?

- a. Loxapine
- b. Thioridazine
- c. Quetiapine
- d. Clozapine
- e. Fluphenazine

**441.** A 22-year-old man is being treated with fluoxetine for depression, while his twin brother, also depressed, is placed on phenelzine, a monoamine oxidase inhibitor (MAOI). Hoping to achieve faster symptom relief, the first man adds his brother's MAO inhibitor to his daily fluoxetine. He soon becomes confused and develops visual hallucinations and severe myoclonic jerks. On examination, he is flushed and diaphoretic. His temperature is 39.5°C (103°F). The most likely diagnosis is

- a. Meningitis
- b. Cerebral vascular incident
- c. Neuroleptic malignant syndrome
- d. Serotonin syndrome
- e. Anticholinergic syndrome

**442.** A man who has psychotic depression is placed on imipramine and perphenazine. When he develops Parkinsonian symptoms, benzotropine mesylate 2 mg per day is added to the medications he already receives. One week later, his wife reports that the patient has become unusually forgetful and that he appears disoriented when he gets up during the night to use the bathroom. On physical examination, the man appears slightly flushed, his skin and palms are dry, and he is tachycardic. He cannot remember the date and has trouble concentrating. He showed none of these symptoms during his last appointment. The diagnosis is

- a. Anticholinergic syndrome
- b. Neuroleptic malignant syndrome
- c. Schizophreniform psychosis
- d. Toxic brain syndrome
- e. Cerebrovascular accident

**443.** A 43-year-old high school teacher becomes despondent, tearful, and withdrawn two weeks after starting a medication for her arthritis prescribed by her family doctor. Which of the following medications is likely to cause these symptoms?

- a. Ibuprofen
- b. Cortisone
- c. Acetaminophen
- d. Acetylsalicylate
- e. Imipramine

**444.** A 56-year-old woman who was diagnosed with paranoid schizophrenia in her early twenties has received daily doses of various typical neuroleptics for many years. For the past two years, she has had symptoms of tardive dyskinesia. Discontinuation of the neuroleptic is not possible because she becomes aggressive and violent when she is not medicated, in response to command hallucinations. Which of the following medications has been proven to be effective in treating this disorder?

- a. Benztropine
- b. Amantidine
- c. Propanolol
- d. Diphenhydramine
- e. Clozapine

**445.** The best indicator of the severity of a TCA overdose is

- a. Pupillary reactivity
- b. Fluctuation of body temperature
- c. QRS prolongation
- d. Liver transaminase level
- e. Respiratory rate

**446.** The mechanism of action of antipsychotic drugs is believed to involve blockade at receptor sites for which of the following compounds?

- a. Histamine
- b. Dopamine
- c. Acetylcholine
- d. Epinephrine
- e. Gamma-aminobutyric acid

**447.** A woman with bipolar disorder gives birth to a little girl with spina bifida. During the first trimester of her pregnancy, this woman probably was treated with

- a. Sertraline
- b. Perphenazine
- c. Clonazepam
- d. Lithium
- e. Valproate

**448.** A 45-year-old homeless man with paranoid schizophrenia has been hospitalized six times in three months because he is not compliant with his oral antipsychotic medications. During his last hospitalization, he agreed to switch from his oral preparation of fluphenazine to an injectable, long-acting form. What is the duration of action of a single dose of fluphenazine decanoate?

- a. 24 hours
- b. 3 days
- c. 2 weeks
- d. 1 to 2 months
- e. 2 to 4 months

**449.** An elderly man develops acute urinary retention and blurred vision after taking an antidepressant for three days. Which medication is most likely to cause such side effects?

- a. Venlafaxine
- b. Paroxetine
- c. Bupropion
- d. Nefazodone
- e. Amitriptyline

**450.** A middle-aged man takes daily doses of warfarin as prophylaxis for pulmonary embolism. His doctor is baffled because the patient's warfarin dose needs to be readjusted almost every week to maintain an optimal level of anticoagulation. A medical student who has just finished his rotation in psychiatry remembers that several antidepressants can affect the blood level of other medications by inhibiting the P 450 system. In fact, when asked, the patient reports that his primary care physician had prescribed "something to cheer me up." The patient then adds that, since he had been feeling better, for several months he had been taking the medication only when he felt "down." Which of the following antidepressants is most likely to cause such a complication?

- a. Mirtazapine
- b. Sertraline
- c. Bupropion
- d. Venlafaxine
- e. Desipramine

**451.** A 9-year-old girl has significant social difficulties due to her unusual behaviors. Her grunts, her motor tics, and her coprolalia are a constant cause of embarrassment and shame. What medication can relieve her symptoms?

- a. Methylphenidate
- b. Clomipramine
- c. Sertraline
- d. Trazodone
- e. Haloperidol

**452.** An 8-year-old boy with ADHD has been constantly clearing his throat and blinking his eyes for the past three weeks, since he was placed on methylphenidate. These symptoms have been present, on and off, for several years, but they have been greatly worsened by the stimulant. What medication can be used to treat both ADHD symptoms and tics?

- a. Dextroamphetamine
- b. Paroxetine
- c. Clonazepam
- d. Clonidine
- e. Propranolol

**453.** During a two-month period, a 72-year-old woman who has senile dementia becomes increasingly withdrawn, shows little interest in food, has trouble sleeping, and appears to become more severely demented. Her medical status is unchanged. Which of the following courses of treatment would be the most reasonable?

- a. Diphenhydramine at bedtime to improve sleep
- b. Diazepam, 5 mg three times daily
- c. A trial of tricyclic antidepressants
- d. A trial of perphenazine, 2 mg at bedtime
- e. Sertraline, 25 mg in morning

#### **Items 454–455**

A 34-year-old woman with a history of alcohol abuse has her first relapse after two years of sobriety. Fearing that she may not be able to stay away from alcohol, she asks her primary care physician to prescribe disulfiram. The following week she arrives at the emergency room with facial flushing, hypotension, tachycardia, nausea, and vomiting. She denies any recent ingestion of alcohol.

**454.** What could have caused her symptoms?

- a. Aged cheese
- b. Cough syrup
- c. An overripe mango
- d. Two 30-mg tablets of pseudoephedrine
- e. A bar of chocolate

**455.** The effect of disulfiram depends on

- a. Monoamine oxidase inhibition
- b. Lactate dehydrogenase inhibition
- c. Dopamine receptor blockade
- d. Alpha-2 receptor antagonism
- e. Acetaldehyde dehydrogenase inhibition

**456.** A young male requests treatment after he is involved in a potentially fatal car crash because he fell asleep while driving. For several years, he has been suddenly falling asleep in very inconvenient situations. Choose the most appropriate medication for this disorder.

- a. Melatonin
- b. Clonazepam
- c. Methylphenidate
- d. Thyroxine
- e. Bromocriptine

**457.** For several weeks, a 72-year-old retired physician with Parkinson's disease and mild dementia has been talking about "those horrible people that come to bother me every night." He is convinced that someone is plotting against him and has nailed his window shut for fear of intruders. More recently he has started showing signs of thought disorder, mostly in the evening and at night. Choose the antipsychotic medication least likely to worsen the patient's Parkinsonism.

- a. Haloperidol
- b. Perphenazine
- c. Fluphenazine
- d. Clozapine
- e. Chlorpromazine

**458.** Before a tricyclic trial is considered ineffective, the patient should have received a therapeutic daily dose of the medication for

- a. 3 to 4 days
- b. 1 week
- c. 2 weeks
- d. 3 to 4 weeks
- e. 10 to 12 weeks

**Items 459–460**

A young woman with a previous diagnosis of bipolar disorder is hospitalized during an acute manic episode. She is elated, sexually provocative, and speaks very fast, jumping from one subject to the other. She tells the nurses that she has been chosen by God to be "the second virgin Mary." BUN, creatinine, electrolytes, TSH, and an ECG are within normal limits.

**459.** What other test is necessary before starting the patient on lithium?

- a. Pregnancy test
- b. Total bilirubin
- c. EEG
- d. Iron-binding capacity
- e. Chest x-ray

**460.** After appropriate tests are obtained, lithium treatment is started. Within what time interval can the effects of this medication be noticed?

- a. Less than 24 hours
- b. 1 to 4 days
- c. 7 to 14 days
- d. 2 to 3 weeks
- e. 1 to 2 months

**461.** A 25-year-old kindergarten teacher has been asked to run a group for parents once a month. Although pleased with this opportunity, she experiences severe anticipatory anxiety. At the beginning of the first meeting, her heart starts pounding, her mouth is dry, and she is so anxious that she has to ask a colleague to take her place. She consults a psychiatrist who recommends propranolol, to be taken before the feared meetings. This medication would be contraindicated if the patient

- a. Is overweight
- b. Is allergic to bee stings
- c. Used to sleepwalk as a child
- d. Has asthma
- e. Has a sister who abuses alcohol

**462.** Which of the following hormones is used in the treatment of depression?

- a. Progesterone
- b. Cortisol
- c. ACTH
- d. Levothyroxine
- e. Prolactin

**463.** A 32-year-old woman of Anglo-Saxon descent is prescribed nortriptyline for her first episode of major depression. The initial dose is 25 mg at bedtime, gradually increased over the next week to 50 mg at bedtime. Two days after the dosage increase, she develops urinary retention, blurred vision, and severe constipation. Her blood level is 280 (recommended therapeutic window is 50–150) 12 hours after the last dose. What can explain this toxic blood level?

- a. The patient smokes 15 cigarettes a day
- b. The patient takes carbamazepine, 200 mg three times a day, to treat trigeminal neuralgia
- c. The prescribed dose is excessively high
- d. The patient has taken 800 mg of ibuprofen every day for the past week for headaches
- e. The patient is a poor metabolizer

**464.** A patient with refractory schizophrenia has been almost free of active psychotic symptoms and has been functioning considerably better since he was placed on clozapine, 500 mg a day, but he has experienced two episodes of grand mal seizure. Which medication is recommended?

- a. Carbamazepine
- b. Valproate
- c. Lorazepam
- d. Phenobarbital
- e. Phenytoin

**465.** A patient reports that she has become depressed with the onset of winter every year for the past six years. This patient could benefit from

- a. Phototherapy
- b. Biofeedback
- c. Electroconvulsive therapy
- d. Benzodiazepines
- e. Steroid medication

**466.** A 7-year-old girl is taken hostage with other bystanders during an armed robbery. She is freed by police intervention after 10 hours of captivity, but only after she has witnessed the shooting death of two of her captors. Months after this event, she has flashbacks and frightening nightmares. She startles at every noise and experiences acute anxiety whenever she is reminded of the robbery. A medication that could decrease her level of arousal is

- a. Clonidine
- b. Methylphenidate
- c. Bupropion
- d. Valproate
- e. Thioridazine

**467.** A 72-year-old man with a long history of recurrent psychotic depression is hospitalized during a relapse. He has prostatic hypertrophy, coronary heart disease, and recurrent orthostatic hypotension. Which is the most appropriate antipsychotic medication for this patient?

- a. Chlorpromazine
- b. Clozapine
- c. Thioridazine
- d. Haloperidol
- e. Olanzapine

**468.** A 47-year-old businessman who has taken paroxetine, 40 mg per day for six months, for depression leaves for a two-week business trip overseas and forgets his medication at home. Since his depression has been in full remission for at least three months, he decides to stop the treatment without talking with his psychiatrist. Two days later, he becomes very irritable, tearful, dizzy, and nauseated. He shivers and feels like he has a bad cold. What is the cause of such symptoms?

- a. Acute depressive relapse
- b. Serotonin syndrome
- c. SSRI discontinuation syndrome
- d. Secondary effects of jet lag and sleep deprivation
- e. Food poisoning

**469.** The benzodiazepines' action depends on their interaction with which of the following receptors?

- a. Gamma-aminobutyrate (GABA)
- b. Serotonin
- c. NMDA-glutamate
- d. Dopamine
- e. Acetylcholine

### Items 470–471

A woman with atypical depression who has responded well to a MAOI presents to an emergency room with severe headache. Her blood pressure is 180/110. She states that she has been carefully avoiding high-tyramine foods as she was told, but admits that a friend gave her two tablets of a “cold medication” shortly before her symptoms started.

**470.** What over-the-counter medication is contraindicated with MAOI treatment?

- a. Pseudoephedrine
- b. Acetaminophen
- c. Diphenhydramine
- d. Ibuprofen
- e. Guaifenesin

**471.** If her symptoms were due to a dietary indiscretion, what food would be the most probable cause of her symptoms?

- a. Two slices of pepperoni pizza
- b. A bagel with cream cheese
- c. Three ounces of grilled, fresh meat
- d. Three fresh apples
- e. A serving of fresh, grilled cod

**472.** A young woman is embarrassed by her peculiar tendency to collapse on the floor whenever she feels strong emotion. Since this disorder is caused by REM sleep intrusion during daytime, a neurologist prescribes a medication that reduces REM sleep. Choose the correct medication:

- a. Clonazepam
- b. Methylphenidate
- c. Pimozide
- d. Desipramine
- e. L-dopa

### Items 473–474

A mentally retarded male adolescent who has been increasingly aggressive and agitated receives several consecutive IM doses of haloperidol, totaling 30 mg in 24 hours, as a chemical restraint. The next day, he is rigid, confused, and unresponsive. His blood pressure is 150/95, his pulse is 110, and his temperature is 102°F. His white blood cell (WBC) count is 25,000 and CPK level is 1200 u/L.

- 473.** The diagnosis is
- Acute dystonic reaction
  - Neuroleptic-induced Parkinson's
  - Malignant hyperthermia
  - Neuroleptic malignant syndrome
  - Catatonia
- 474.** What medication can be effective in treating this condition?
- Bromocriptine
  - Carbamazepine
  - Chlorpromazine
  - Lithium
  - Propranolol
- 475.** A 7-year-old boy who wets the bed at least three times a week and has not responded to appropriate behavioral interventions is diagnosed with ADHD. What medication is indicated to treat both disorders?
- Bupropion
  - Dextroamphetamine
  - Clonidine
  - Risperidone
  - Imipramine
- 476.** A 72-year-old retired college professor's memory and cognitive functions have slowly but progressively deteriorated for over two years. His wife asks his doctor for a medication that can slow her husband's decline. Which class of medications can ameliorate the symptoms of dementia?
- Serotonin reuptake inhibitors
  - TCAs
  - Atypical neuroleptics
  - Cholinesterase inhibitors
  - Beta blockers
- 477.** The serum level of lithium at which therapeutic benefit levels off and side effects increase usually is
- 0.5 meq/L
  - 1.0 meq/L
  - 1.5 meq/L
  - 2.0 meq/L
  - 3.0 meq/L
- 478.** The most worrisome cardiovascular side effect of TCAs is
- Decreased myocardial contractibility
  - Slowing of cardiac conduction
  - Increased risk for cardiac ischemia
  - Toxic cardiomyopathy
  - Thickening of mitral valve cusps

**DIRECTIONS:** The group of questions below consists of lettered options followed by numbered items. For each numbered item, select one lettered option. Each option can be chosen once, more than once, or not at all.

**Items 479–482**

For each vignette select the most likely diagnosis.

- a. Parkinsonian tremor
- b. Akathisia
- c. Neuroleptic malignant syndrome
- d. Dystonia
- e. Anticholinergic syndrome
- f. Seizure activity
- g. Rabbit syndrome
- h. Lithium-induced tremor
- i. Akinesia

**479.** A 35-year-old painter with bipolar disorder is very frustrated by a fine tremor of her hands that worsens when she works and makes her smudge her paintings.

**480.** An 18-year-old male is admitted to a locked psychiatric unit after he assaulted his father. He is convinced that his family members have been substituted with malevolent aliens and hears several voices that comment on his actions and call him demeaning names. Two days after initiating treatment, he develops a painful spasm of the neck muscles and his eyes are forced in an upward gaze.

**481.** A 55-year-old man diagnosed with schizophrenia in adolescence has been successfully treated with medications for many years. He has a coarse, pill-rolling tremor that worsens at rest and improves during voluntary movements.

**482.** A 45-year-old woman with schizoaffective disorder has received neuroleptic medications, antidepressants, and mood stabilizers for at least 20 years. She presents with very rapid chewing movements. Other facial muscles, her trunk, and extremities are not affected and her tongue does *not* dart in and out of her mouth when she is asked to protrude it.

# PSYCHOPHARMACOLOGY AND OTHER SOMATIC THERAPIES

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## Answers

**419–420. The answers are 419-c, 420-b.** (*Sadock, 7/e, pp 2267–2268; Schatzberg, 2/e, pp 363–364; Hales, 3/e, p 1069.*) Akathisia is characterized by a subjective feeling of restlessness and an inability to stay still. This disorder manifests itself with pacing, shifting of position, and constant leg movements. Akathisia is a very common side effect of neuroleptic treatment, with a prevalence estimated between 20 and 75%. It usually arises during the first few days of treatment and it is more frequent in individuals with a recent onset psychosis. High-potency typical neuroleptics are more likely to cause akathisia than typical low-potency antipsychotic medications. Although atypical neuroleptic medications have a considerably lower prevalence of it, occasionally they do have this side effect. Akathisia can be very distressing and can be a cause of treatment noncompliance. Akathisia can be misdiagnosed for a worsening of the psychotic illness. In these cases, it gets worse when the neuroleptic that precipitated the syndrome is increased. Beta blockers, especially propranolol, are the treatment of choice in akathisia. More selective beta blockers such as atenolol and metoprolol have the advantage of not triggering bronchospasm in susceptible patients, but they appear to be less effective than propranolol.

**421. The answer is a.** (*Schatzberg, 2/e, p 710.*) Tricyclic antidepressants such as clomipramine and amitriptyline and SSRIs such as paroxetine and sertraline, as well as MAOIs, can cause erectile dysfunction, delayed ejaculation, anorgasmia, and decreased libido. Bupropion, mirtazapine, trazodone, and nefazodone, in contrast, do not affect sexual functions in a negative way.

**422. The answer is b.** (*Schatzberg, 2/e, pp 199–213.*) Tricyclic drugs include imipramine, desipramine, amitriptyline, and nortriptyline. They are

effective in the treatment of depression; several anxiety disorders including panic disorder, generalized anxiety disorder, and separation anxiety; enuresis; and ADHD. Clomipramine, a TCA with serotonin reuptake-inhibiting properties, is effective in the treatment of obsessive-compulsive disorder. Tricyclic antidepressants have different side effect profiles. For example, desipramine has less anticholinergic activity than imipramine, and nortriptyline is less likely to cause orthostatic hypotension than amitriptyline.

**423. The answer is b.** (*Schatzberg, 2/e, p 208.*) Clomipramine is a tricyclic antidepressant effective in the treatment of obsessive-compulsive disorder in both children and adults. Its efficacy is thought to be related to its effects on the serotonin system.

**424. The answer is e.** (*Schatzberg, 2/e, pp 259–260.*) Bupropion is an effective antidepressant and it has been found to be as effective as stimulants in treating ADHD in children and adults. It may exacerbate tics in children with comorbid Tourette's disorder.

**425. The answer is d.** (*Schatzberg, 2/e, pp 333, 339.*) Olanzapine and clozapine are the only antipsychotic medications that ameliorate negative symptoms in schizophrenic patients. Both are associated with fewer relapses and an improvement in quality of life, but olanzapine has a more benign side effect profile than clozapine.

**426. The answer is d.** (*Schatzberg, 2/e, pp 159–161.*) The elimination half-life of a drug, usually referred to as simply half-life, refers to how long it will take the body to metabolize one-half of the drug. A steady state exists when, after a period of continued dosing, the quantity of medication entering the body equals the amount exiting the body. The time required to reach a steady state equals the total of four or five elimination half-lives. Knowing the half-life is important in determining how often a drug should be administered. Drugs with shorter half-lives require more frequent dosing than drugs with longer half-lives.

**427. The answer is e.** (*Schatzberg, 2/e, p 254; Sadock, 7/e, pp 2487–2488.*) Priapism, an abnormally prolonged erection, is estimated to happen in 1 in every 10,000 patients treated with trazodone. The risk for this side effect is higher during the first month of treatment and at low doses. If priapism de-

velops, trazodone should be discontinued immediately and the patient should seek emergency treatment if the erections last for more than an hour or are significantly painful. The exact cause of trazodone-induced priapism is unknown but this side effect is thought to be due to an alpha-2 antagonistic action in the circulatory system of the penis. If untreated, prolonged priapism can cause permanent impotence.

**428. The answer is b.** (*Schatzberg, 2/e, p 854.*) Physiological dependence on benzodiazepines is common after long treatment, even at therapeutic doses. Most patients who are physiologically dependent on prescribed benzodiazepines do not increase the doses without their physicians' consent nor do they abuse the medications in other ways. An acute return of anxiety after abrupt discontinuation of the treatment is part of the benzodiazepine withdrawal syndrome, with or without psychological dependence.

**429. The answer is d.** (*Sadock, 7/e, p 2245; Schatzberg, 2/e, pp 204–205.*) Although one patient survived an overdose of 10 grams of amitriptyline, TCAs are usually fatal at dosages between 2 and 3 grams. The ingestion of 700 to 1400 mg causes moderate to severe toxicity. The TCAs' narrow therapeutic window makes them unsuited for highly suicidal patients unless the medication is dispensed under careful supervision.

**430. The answer is b.** (*Schatzberg, 2/e, pp 528–538; Sadock, 7/e, pp 2512–2513.*) Electroconvulsive therapy (ECT) is considered the treatment of first choice in severe psychotic depression and depressed patients who are refractory to medications or cannot tolerate antidepressant side effects. ECT is also used for the treatment of acute mania, catatonia, neuroleptic malignant syndrome, and Parkinson's disease. ECT has been proven as effective or superior to all pharmacological agents to which it has been compared. There are no absolute contraindications for ECT. Relative contraindications include a recent myocardial infarct, illnesses that increase intracranial pressure, medical disorders that disrupt the blood-brain barrier, recent cerebrovascular incidents, cerebral aneurysms, and bleeding disorders. ECT is a safe procedure. The risk of death has been estimated at 1 in every 25,000 treatments, which is roughly equivalent to the risk of death in patients exposed to general anesthesia alone.

**431. The answer is e.** (*Schatzberg, 2/e, p 776; Sadock, 7/e, p 2241.*) Cyproheptadine has been used to reverse the negative effects of SSRIs on

sexual function. Other medications used for this purpose are yohimbine, bethanecol, amantidine, and bupropion.

**432. The answer is d.** (*Sadock, 7/e, p 2365.*) Double-blind crossover studies are done to control for individual differences in drug response and the placebo effect. The term *double-blind* refers to the fact that neither the subject nor the researcher knows whether the substance being taken is placebo or drug. The term *crossover* refers to changing from drug to placebo, or vice versa, in mid study, again without the knowledge of the subject or researcher.

**433–434. The answers are 433-b, 434-d.** (*Sadock, 7/e, p 2372; Schatzberg, 2/e, p 319.*) Dopamine receptor blockade causes hyperprolactinemia, which in turn can cause breast enlargement, galactorrhea (abnormal discharge of milk from the breast), and suppression of testosterone production in men.

**435. The answer is c.** (*Schatzberg, 2/e, p 408.*) Several nonsteroidal anti-inflammatory drugs, including ibuprofen, naproxen, diclofenac, and indomethacin, can increase plasma lithium levels and have been associated with toxicity. The mechanism of action is thought to be an inhibition of renal tubular prostaglandin synthesis.

**436. The answer is e.** (*Sadock, 7/e, pp 2318–2322.*) Fluorazepam has a half-life of five hours, considerably shorter than most of the other benzodiazepines. Due to its short duration of action and rapid absorption, fluorazepam is commonly prescribed for insomnia. Benzodiazepines with longer half-lives tend to cause undesired daytime drowsiness.

**437. The answer is d.** (*Hales, 3/e, pp 310–312.*) The potency of an antipsychotic describes its relative ability to block postsynaptic dopamine receptors. Haloperidol and fluphenazine are examples of high-potency neuroleptics. Chlorpromazine and thioridazine are low-potency, while perphenazine and molindone are considered to have intermediate potency. The potency of the neuroleptic will affect its therapeutic dosage (effective daily doses of haloperidol are usually between 5 and 20 mg while chlorpromazine requires dosages of 200 to 600 mg a day). Low- and high-potency neuroleptics also differ in their side effects profiles. In general, the

lower-potency medications are more anticholinergic and sedating and are more likely to cause hypotension. The higher-potency medications tend to cause more extrapyramidal side effects.

**438. The answer is b.** (*Schatzberg, 2/e, p 438.*) Aplastic anemia is a rare, idiosyncratic, non-dose-related side effect of carbamazepine. Steven-Johnson syndrome is a potentially life-threatening exfoliative dermatitis, also rarely associated with carbamazepine treatment. Neuroleptic malignant syndrome, serotonin syndrome, and malignant hyperthermia are not associated with this medication.

**439. The answer is a.** (*Schatzberg, 2/e, p 404.*) The patient in the vignette presents with several signs and symptoms of hypothyroidism. Lithium negatively affects several thyroid functions, including TSH activity, thyroid hormone synthesis and release, and peripheral metabolism of thyroxin. Although 30% of patients on lithium have an elevated TSH, the prevalence of clinical hypothyroidism is estimated to be 5% and more common in women.

**440. The answer is d.** (*Schatzberg, 2/e, p 333.*) Clozapine has been proved effective in a significant percentage of schizophrenic patients refractory to other neuroleptics. Clozapine is also approved for the treatment of patients who experience intolerable extrapyramidal symptoms on other neuroleptics and for the treatment of tardive dyskinesia. Unlike the other typical and atypical neuroleptics (besides olanzepine), clozapine is effective for the positive as well as the negative symptoms of schizophrenia. Due to the risk of agranulocytosis it carries (1 to 2%), clozapine is not approved for patients who can tolerate and benefit from other medications.

**441. The answer is d.** (*Schatzberg, 2/e, p 228.*) Serotonin syndrome is characterized by abdominal pain, diarrhea, excessive sweating, fever, tachycardia, elevated blood pressure, alteration of mental status including delirium, myoclonus, increased motor activity, and mood changes. In the most severe cases, hyperpyrexia, shock, and death can occur. This syndrome is due to an overactivation of serotonergic receptors by an excess of serotonin. Serotonin syndrome can develop whenever two serotonergic medications are combined; the most frequent cause is the coadministration of a MAO inhibitor and an SSRI or a tricyclic antidepressant. For this reason, when switching

from a TCA or an SSRI to a MAO inhibitor, a washout period of two weeks is recommended (five weeks with fluoxetine, given its long half-life).

**442. The answer is a.** (*Sadock, 7/e, p 2281.*) Phenothiazines, tricyclic antidepressants, and antiparkinsonian agents (such as benzotropine mesylate) all have anticholinergic properties. The action of these drugs becomes additive when they are administered in combination. It is not uncommon for persons receiving such a combination to show evidence of a mild organic brain syndrome, including difficulty in concentrating, impaired short-term memory, and disorientation, which often is more noticeable at night, and dry skin (due to inhibition of sweating).

**443. The answer is b.** (*Sadock, 7/e, p 1927.*) A number of drugs can cause depression. These include several adrenocortical steroids, such as prednisone and cortisone; estrogens and progestins found in birth control pills; thyroid medications; antihypertensive medications; antiparkinsonian medications, and many others. These drugs may cause depression directly or upon withdrawal. Ibuprofen, acetylsalicylate, and acetaminophen do not cause depression and imipramine is used to treat depression.

**444. The diagnosis is e.** (*Sadock, 7/e, pp 2369–2370.*) Discontinuation of the antipsychotic medication or a dosage decrease are the initial interventions recommended when tardive dyskinesia is first diagnosed. If discontinuation is not possible and dosage decrease is not effective, clozapine has been proved effective in ameliorating and suppressing the symptoms of tardive dyskinesia.

**445. The answer is c.** (*Sadock, 7/e, p 2345; Schatzberg, 2/e, pp 204–210.*) Tricyclic antidepressants have type I, quinidine-like antiarrhythmic properties. Like quinidine, they have a membrane-stabilizing effect that results in slowing of cardiac conduction, and, at high levels, they cause potentially fatal heart blocks. Since cardiac arrhythmias are the main cause of death following a TCA antidepressant overdose, ECG monitoring is essential. The QRS prolongation is the most accurate indicator of the severity of the overdose.

**446. The answer is b.** (*Sadock, 7/e, pp 2363–2365.*) Antipsychotic drugs block dopamine receptor sites. Blockade of dopamine receptors in the limbic system is believed to be responsible for the antipsychotic effects. Block-

ade in the basal ganglia receptors results in the extrapyramidal symptoms that accompany neuroleptic treatment.

**447. The answer is e.** (*Sadock, 7/e, pp 1948–1950.*) Carbamazepine and valproate are associated with an increased risk of neural tube defects and spina bifida when they are used during the first trimester of pregnancy. The risk is thought to be higher with valproate. Use of lithium during the first trimester has been associated with cardiac anomalies, and, more specifically, with Ebstein's anomaly. If medications are necessary to treat severe manic symptoms during pregnancy, neuroleptics are usually preferred because there is no conclusive evidence that their use even in the first trimester causes fetal malformations.

**448. The answer is c.** (*Sadock, 7/e, pp 2374–2376.*) Long-acting injectable antipsychotic medications are not used for the treatment of acute psychosis but can be advantageous for the maintenance treatment of patients not compliant with oral medications. Furthermore, since the variation of drug absorption and the effects of first-pass hepatic metabolism are bypassed, drug concentrations may be more consistent with depot preparations. In the United States, haloperidol decanoate, fluphenazine decanoate, and fluphenazine enanthate are the only antipsychotics available in injectable depot form. Maintenance doses for long-acting fluphenazine range from 12.5 to 50 mg IM every two weeks. For haloperidol decanoate, the effective dose range is between 25 to 200 mg IM every four weeks.

**449. The answer is e.** (*Sadock, 7/e, p 2497.*) Urinary retention, blurred vision, constipation, and dry mouth are common anticholinergic side effects associated with tricyclic antidepressants. Among these medications, amitriptyline has the most powerful atropinic properties. Venlafaxine, bupropion, trazodone, and nefazodone do not have significant anticholinergic effects.

**450. The answer is b.** (*Schatzberg, 2/e, pp 937–938.*) Interaction between warfarin and SSRIs, in particular sertraline, paroxetine, and fluvoxamine, may increase coagulation time through enzymatic inhibition and possibly by displacing warfarin from protein-binding sites and increasing the levels of the unbound, biologically active warfarin. Using sertraline erratically may cause significant fluctuations of coagulation time.

**451. The answer is e.** (*Schatzberg, 2/e, pp 830–83.*) Dopamine antagonists are effective in reducing the symptoms of Tourette's disorder in 60 to 70% of the cases. Haloperidol and pimozide are the most commonly used, but other antipsychotics including fluphenazine and risperidone have proven to be effective in open clinical trials. Alternative medications are alpha-2 agonists and calcium channel blockers.

**452. The answer is d.** (*Sadock, 7/e, p 2840.*) Alpha-2 adrenergic agonists such as clonidine and guanfacine are useful in the treatment of Tourette's disorder and in the treatment of children with ADHD who develop significant tics during treatment with stimulants. Clonidine is more effective for impulsivity and hyperactivity, less effective for distractibility and short attention span.

**453. The answer is e.** (*DSM-IV, p 344; Schatzberg, 2/e, p 967.*) Depression in elderly persons, especially those who already have some evidence of dementia, may present with a worsening of cognitive functions. Differentiating progressing dementia from depression may be difficult. If the onset of symptoms is reasonably abrupt (one or two months) and the patient has other signs suggestive of depression (e.g., changes in sleeping and eating habits accompanied by motor retardation or agitation), depression should be considered. It certainly is preferable to consider a trial of antidepressants, which might be beneficial, rather than to assume a person's dementia is progressive and untreatable. Among the antidepressants, SSRIs such as sertraline are preferred to TCAs because they lack anticholinergic and cardiotoxic side effects and do not cause orthostatic hypotension.

**454–455. The answers are 454-b, 455-e.** (*Schatzberg, 2/e, p 852; Sadock, 7/e, p 2529.*) Disulfiram inhibits the enzyme acetaldehyde dehydrogenase, one of the main enzymes in the metabolism of ethyl alcohol. Ingestion of alcohol, even in small quantities, causes accumulation of toxic acetaldehyde and a variety of unpleasant symptoms, including facial flushing, tachycardia, vomiting, and nausea. Many over-the-counter cough and cold medications contain as much as 40% alcohol and can precipitate such a reaction. The intensity of the disulfiram-alcohol interaction varies with each patient and with the quantity of alcohol consumed. Extreme cases are characterized by respiratory depression, seizures, cardiovascular collapse, and even death. For this reason, the use of disulfiram is recommended only with highly motivated patients who will agree to carefully avoid any food or medication containing alcohol.

**456. The answer is c.** (*Sadock, 7/e, p 1687.*) There is no cure for narcolepsy but stimulants such as methylphenidate, pemoline, and amphetamine can ameliorate daytime sleepiness. Medications that reduce REM sleep such as TCAs and SSRIs are used if cataplexy is also present.

**457. The answer is d.** (*Schatzberg, 2/e, p 946.*) Clozapine is the preferred treatment for psychotic symptoms in patients with Parkinson's disease. Due to its relative sparing of the nigrostriatal dopaminergic system and its anticholinergic effects, clozapine does not worsen and may in fact ameliorate Parkinsonian symptoms. Typical antipsychotic medications, on the contrary, tend to aggravate the extrapyramidal symptoms of patients with Parkinson's.

**458. The answer is d.** (*Sadock, 7/e, p 2501.*) If there is no change in symptomatology after three to four weeks of treatment at an adequate dosage, another antidepressant should be considered. If there is a partial response, the trial should be continued for another two or three weeks.

**459–460. The answers are 459-a, 460-c.** (*Schatzberg, 2/e, pp 405–406, 398, 737.*) A pregnancy test is necessary before initiating lithium treatment because this medication has been associated with congenital malformations. The risk for major malformations with lithium treatment during the first trimester is between 4 and 12% (in the general population, such risk is between 2 and 4%). The most common anomalies associated with lithium are cardiovascular. Ebstein's anomaly (i.e., a congenital downward displacement of a distorted tricuspid valve into the right ventricle) is significantly more frequent in children who were exposed to lithium during the first trimester of pregnancy, with an incidence of 0.1 to 0.7%, 20 to 140 times greater than the general population.

In acute mania, 7 to 14 days are necessary for an initial response to lithium treatment and, in some patients, improvement may not start until the third or fourth week of treatment. For this reason, most clinicians now prescribe a benzodiazepine or a neuroleptic in combination with lithium during the early stage of treatment of acute mania.

**461. The answer is d.** (*Schatzberg, 2/e, pp 359, 782.*) Propranolol and other beta blockers, taken one hour before public speaking or other events which can trigger performance anxiety, reduce symptoms of sympathetic activity such as tremor, tachycardia, and sweating which may

serve as cues for reinforcing anxiety and fear. Since beta-receptor blockade causes bronchospasm, these medications are contraindicated in patients with asthma.

**462. The answer is d.** (*Sadock, 7/e, pp 2478–2482.*) The connection between thyroid function and mood disorders has been known for more than a century, since nineteenth-century physicians noticed that hypothyroidism was accompanied by depression. All the hormones of the hypothalamic-pituitary-thyroid axis have been used in the treatment of depression, alone or in combination with other agents, although the most commonly used are liothyronine and levothyroxine.

**463. The answer is e.** (*Sadock, 7/e, pp 2493–2494.*) Approximately 5 to 10% of Caucasian individuals metabolize nortriptyline and desipramine at a much slower rate than the general population, due to an inherited deficiency of the P 450 isozyme 2D6. These individuals, known as poor metabolizers, develop toxic levels at very low medication doses.

**464. The answer is b.** (*Schatzberg, 2/e, p 334.*) The occurrence of seizures during clozapine treatment is dose-related and increases considerably with dosages greater than 400 mg a day. Valproate is considered the safest and the best tolerated anticonvulsant for patients taking clozapine who experience seizures. Carbamazepine should be avoided because the bone marrow suppression risk of this medication can increase the clozapine's risk for agranulocytosis.

**465. The answer is a.** (*Sadock, 7/e, p 2532.*) Patients with seasonal depression and bipolar depression with a seasonal component can benefit from exposure to bright light, in the range of 1500 to 10,000 lux or more for one to two hours every day before dawn. Phototherapy is effective alone in mild cases and, in more severe cases, as an adjunct to medication treatment.

**466. The answer is a.** (*Sadock, 7/e, p 1498.*) Practically every class of medication has been used to treat post-traumatic stress disorder, including every family of antidepressant, mood stabilizers, anxiolytics, and inhibitors of adrenergic activity such as clonidine and propranolol. Clonidine and beta blockers can be particularly useful, alone or in combination with other medications, to treat symptoms of hyperarousal.

**467. The answer is d.** (*Schatzberg, 2/e, pp 944–947.*) High-potency neuroleptics, such as haloperidol and fluphenazine, being low in anticholinergic side effects and less likely to cause postural hypotension, are preferred to low-potency medications such as chlorpromazine in elderly patients with cardiovascular problems and prostatic hypertrophy. Clozapine is not recommended due to its powerful anticholinergic effects, its tendency to cause hypotension, and its risk for agranulocytosis. Thioridazine is the least appropriate medication in this case, because aside from sharing the side effects profile of the other low-potency neuroleptics, it can cause fatal arrhythmias by prolonging the QT interval. Finally, olanzapine is not appropriate in this patient because it causes significant postural hypotension.

**468. The answer is c.** (*Schatzberg, 2/e, pp 229–230.*) Abrupt discontinuation of an SSRI causes a variety of symptoms that can be quite distressing for the patient. The most common physical symptoms are dizziness, nausea, vomiting, lethargy, flulike symptoms (chills and aches), and sensory and sleep disturbances. Commonly reported psychological symptoms are irritability, anxiety, and crying spells. Symptoms usually emerge one to three days after the last dose. Paroxetine and sertraline, due to their shorter half-life, are the SSRIs most likely to cause a discontinuation syndrome and should be tapered over several weeks. Due to its long half-life and its active metabolites, fluoxetine can be stopped abruptly without problems.

**469. The answer is a.** (*Sadock, 7/e, pp 2318–2319.*) Benzodiazepines bind to GABA receptors, which represent the main cortical and thalamic inhibitory system, and potentiate the response of these receptors to GABA. Benzodiazepines do not have any direct effect on the GABA receptors unless GABA is present.

**470–471. The answers are 470-a, 471-a.** (*Schatzberg, 2/e, p 244.*) Over-the-counter medications containing sympathomimetic agents such as pseudoephedrine can cause severe hypertensive crises in patients on MAOIs, due to the inhibition of their main metabolic pathway. Tyramine, a powerful hypertensive agent, is contained in many foods and is usually metabolized by monoamine oxidase. Foods to be avoided by patients on MAOIs include tyramine-rich foods such as aged cheese, salami, sausage, overripe fruit, liquors, red wine, pickled fish, sauerkraut, and brewer's yeast. Chocolate, coffee, tea, beer, and white wine can be used in small quantities.

**472. The answer is d.** (*Sadock, 7/e, p 1687.*) Many antidepressants, including SSRIs, TCAs, and MAOIs, suppress REM sleep and can be useful in the treatment of cataplexy. The other medications listed do not affect sleep cycles.

**473–474. The answers are 473-d, 474-a.** (*Sadock, 7/e, p 2369.*) Neuroleptic malignant syndrome (NMS) is a relatively rare but potentially fatal complication of neuroleptic treatment. Its main features are hyperthermia, severe muscular rigidity, autonomic instability, and changes of mental status. Associated findings are increased CPK, increased liver transaminase activity, leukocytes, and myoglobinuria. The mortality rate can be as high as 30% and can be higher when the syndrome is precipitated by depot forms. Neuroleptic malignant syndrome is more common in young males, when high-potency neuroleptics are used in high doses and when dosage is escalated rapidly.

The first step in management of NMS is discontinuation of all antipsychotic medications. Supportive treatments include treatment of extrapyramidal symptoms with antiparkinson medications, correcting fluid imbalances, treating fever, and managing hypertension or hypotension. Dopaminergic agents such as dantrolene, bromocriptine, and amantidine are used in the treatment of the more severe cases.

**475. The answer is e.** (*Schatzberg, 2/e, pp 208–209.*) Imipramine is effective in the treatment of nocturnal enuresis, through a still-unknown mechanism. Its beneficial effects in this disorder may be related to its anticholinergic properties or an effect on the sleep process. Imipramine is also used with good results in the treatment of children and adults with ADHD, although it is not as effective as the stimulants. Imipramine can be helpful in patients with comorbid anxiety or tics, patients who do not tolerate stimulants, or patients who have a history of substance abuse.

**476. The answer is d.** (*Sadock, 7/e, pp 3103–3105.*) The use of anticholinesterase inhibitors in Alzheimer's disease is based on the observation that this disorder is characterized by a massive loss of cholinergic neurons. Direct cholinergic stimulation has not been effective in the treatment of dementia, but several cholinesterase inhibitors such as tacrine, donepezil, metrifonate, and galantamine have been quite effective in improving the cognitive functions of Alzheimer's patients.

**477. The answer is c.** (*Sadock, 7/e, p 2388.*) The lithium level considered effective for acute mania is between 1 mEq/L and 1.5 mEq/L. Levels above 1.5 mEq/L carry a risk of toxicity that outweighs the potential benefits. Lithium levels need to be interpreted in the context of the clinical presentation, because some patients, especially the medically ill and the elderly, may present with clear symptoms of lithium toxicity at levels below 1.5 mEq/L.

**478. The answer is b.** (*Sadock, 7/e, pp 2498–2499.*) Tricyclic antidepressants have a quinidine-like antiarrhythmic effect and slow cardiac conduction. Although at therapeutic dosages they may have a beneficial effect on ventricular excitability, in patients with preexisting prolonged QRS or in any person at toxic dosages, TCAs can cause a fatal heart block. TCAs do not affect cardiac contractility or cardiac output nor do they cause cardiomyopathy or valvular deformities.

**479–482. The answers are 479-h, 480-d, 481-a, 482-g.** (*Sadock, 7/e, pp 818–819.*) Lithium causes a benign, high-frequency, fine tremor that worsens during activities requiring fine motor control. Dose reductions, elimination of caffeine, slow-release lithium preparations, and beta blockers are the main therapeutic interventions. A severe tremor at any time during lithium treatment may be a sign of toxicity.

Neuroleptic-induced dystonia is characterized by intermittent or sustained muscle spasms, usually involving the head and neck. Common symptoms include torticollis (neck spasms), tongue spasms that interfere with speech, and oculogyric crises (eyes forced in an upward gaze). Opisthotonus can also occur, but is less frequent. Dystonic reactions are more common in young males, at the beginning of the treatment, and when high-potency neuroleptics are used. Anticholinergic medications such as benztropine and diphenhydramine, administered IM, are the treatments of choice. Coarse, pill-rolling, nonintentional tremor (improves with intentional movements and worsens at rest) is characteristic of Parkinson's disease and neuroleptic-induced Parkinsonism. Cogwheel rigidity, a stiff gait with short steps, and expressionless face and speech are other common Parkinsonian symptoms. Rabbit syndrome is an uncommon extrapyramidal, neuroleptic-induced syndrome often confused with tardive dyskinesia. In this syndrome, the chewing movements are much more rapid and regular than the orofacial choreoathetoid movements typical of tardive dyskinesia. Furthermore, the tongue and other parts of the body are not involved.

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# LAW AND ETHICS IN PSYCHIATRY

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## Questions

**DIRECTIONS:** Each item below contains a question or incomplete statement followed by suggested responses. Select the **one best** response to each question.

**483.** A 50-year-old man is suing his psychiatrist for malpractice because he developed an acute serotonin syndrome while under treatment for depression. To successfully sue for malpractice, the former patient must prove that there was deviation from the standard of care, that this deviation bore a direct causal relationship to damages that resulted to him, and which other of the following?

- a. Incompetence
- b. Malfeasance
- c. Duty
- d. Intent
- e. Exploitation

**484.** A 56-year-old woman at the last stages of amyotrophic lateral sclerosis asks for her life support to be stopped and to be allowed to die. Her family members disagree with her decision and go to court to keep the patient alive. A psychiatric evaluation finds the patient mentally sound and fully able to understand the consequences of her decision. Referring to the Supreme Court's decision on the *Cruzan v. Director* case, the court decides that

- a. The family's desires overrule the patient's wishes
- b. Terminating one's life is illegal
- c. A legal guardian must be appointed to make decisions on behalf of the patient
- d. Since the patient's life expectancy is more than two weeks she cannot be allowed to die
- e. The patient is competent and as such she has the right to refuse unwanted medical treatment

**Items 485–487**

A 26-year-old man is brought to the emergency room by the local police late one night, in the dead of winter. The police tell the psychiatrist on call that the man was preaching aloud at a nearby busy intersection, walking among the traffic while scantily clad, despite the freezing temperatures. On interview, the psychiatrist notes that the man displays delusions of special connections to God and delusions that he is on a mission to save the world from sin. The patient refuses voluntary admission, stating that he must get back to his divine mission. He is therefore admitted involuntarily, based on concerns that he is unable to care for himself in a manner that places him at risk for self-harm. On the inpatient unit, he is noted to be mild mannered and soft spoken. He refuses all forms of treatment, stating that God is his only healer. While not particularly disruptive and not aggressive in any way, staff are nevertheless concerned about the patient's refusal of treatment. In fact, he is noted to be trying very persistently to "convert" the other patients and staff on the unit, sometimes to their marked irritation. A decision is made by the staff to medicate the patient against his will. Subsequently, members of the patient's family bring suit against the clinical team working with the patient.

**485.** On what grounds was the emergency room psychiatrist justified in hospitalizing the patient involuntarily?

- a. Patient was at risk for causing imminent harm to himself
- b. The patient was mentally ill
- c. The patient was at risk for causing damage to others
- d. The patient's psychiatric disorder is likely to worsen in the future without treatment
- e. The patient had a good response to treatment in the past

**486.** On what grounds would the lawsuit initiated by the family most likely be brought?

- a. The involuntary treatment violated the family's constitutional rights
- b. The treatment violated the family's religious beliefs
- c. The patient had a right to refuse treatment because he was not in any immediate danger
- d. The treatment could have caused side effects
- e. The patient did not have a history of aggressive behavior

**487.** About one year later, another lawsuit is brought against the clinical team, this time by both the patient and his family. They note that the patient has developed some persistent movements of his mouth, over which he appears to have no control. On what grounds would such a lawsuit most likely be brought?

- a. No patient can be treated without having given informed consent
- b. The patient received the wrong medications
- c. The patient received excessively high doses of medications
- d. The family had not given informed consent for the treatment
- e. The doctors had not told the family that the treatment was potentially harmful

**488.** The standard for criminal responsibility in most U.S. federal courts is the

- a. Product rule
- b. M’Naghten rule
- c. American Law Institute test
- d. Irresistible impulse rule
- e. Currens test

**489.** Privileged communication means

- a. Psychiatrists have the privilege of disclosing information about a patient to other psychiatrists or physicians
- b. The information revealed by psychiatrists at a probate hearing is handled as privileged
- c. Psychiatrists are granted by the court the “privilege” to disclose information about a specific patient
- d. Patients have the statutory right to prevent psychiatrists from disclosing confidential information
- e. Psychiatrists can reveal some but not all information

**490.** The landmark decision in *Tarasoff v. Regents of California* held that a therapist has an obligation to

- a. Protect the confidentiality of information obtained during therapy
- b. Warn the university when students are involved in any illegal activities
- c. Report to university authorities the presence of a student who is involved in illegal drug sales
- d. Warn the potential victim of a potentially violent patient
- e. Seek informed consent from patients of the student health center who are given neuroleptic medications

**491.** The most common cause of malpractice claims is

- a. Improper treatment
- b. Suicide
- c. Improper sexual involvement
- d. Failure to treat psychosis
- e. Restraints

**492.** A patient with a family history of Huntington's disease wishes to select his nephew as the person to make decisions about health care if he should become incompetent. The necessary document is called a

- a. Last testament
- b. Durable power of attorney
- c. Informed consent
- d. Competency document
- e. Contract

**493.** A patient is constantly critical of his psychiatrist and the psychiatric treatment. The psychiatrist is not legally bound to continue treatment if

- a. Dismissed by the patient, who is believed to be competent
- b. The patient is given ample medication to last until a new therapist can be found
- c. The psychiatrist recommends the patient seek a new therapist
- d. The patient is uncooperative with the treatment
- e. The doctor explains the action to the family

**494.** The principle of beneficence means to

- a. Prevent harm and promote well-being
- b. Do no harm
- c. Treat indigent population without monetary compensation
- d. Provide health care to the entire population
- e. Build the patient-doctor relationship on trust

**495.** In *Tarasoff-II*, the second decision by the California Supreme Court on the case, the original *Tarasoff* ruling was revised by

- a. Requiring the warning of only "identifiable" potential victims
- b. Imposing legal liability on police
- c. Requiring hospitalization of patients deemed dangerous
- d. Instituting a duty to protect potential victims, not just warn them
- e. Requiring use of neuroleptic medication

**496.** A male psychiatrist and his patient fall in love. The psychiatrist terminates treatment, and they begin a sexual relationship. Which of the following statements about the relevant moral and legal issues for the psychiatrist are true?

- a. He is in violation of the American Psychiatric Association's guidelines for ethical conduct
- b. He is liable to malpractice suits
- c. He is in jeopardy of having his license revoked
- d. He is liable for prosecution for rape
- e. All of the above

**497.** Which of the following are exceptions to the legal and ethical issue of testimonial privilege?

- a. A court order exists
- b. Child custody is the issue
- c. The psychiatrist is the subject of a lawsuit by the patient
- d. The patient makes his or her mental state or condition a legal issue, such as emotional damage due to injury
- e. All of the above

**DIRECTIONS:** The group of questions below consists of lettered options followed by numbered items. For each numbered item, select one lettered option. Each lettered option may be used once, more than once, or not at all.

**Items 498–500**

Match each statement to the appropriate legal concept.

- a. M’Naghten rule
- b. Irresistible impulse rule
- c. American Law Institute: Model Penal Code
- d. Durham rule
- e. Mens rea elements

**498.** Psychiatric testimony should be addressed only for the issue of state of mind and criminal intent at the time of the crime

**499.** An accused is not criminally responsible if the unlawful act was the product of mental disease or mental defect

**500.** The defendant must have the volition (freedom of will) to refrain from the criminal act

# LAW AND ETHICS IN PSYCHIATRY

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## Answers

**483. The answer is c.** (*Sadock, 7/e, pp 3272–3273.*) In a malpractice lawsuit, the plaintiff must show that the four elements of malpractice are present by a preponderance of evidence. These are the so-called four Ds of malpractice: a **duty** on the part of the psychiatrist existed toward the patient; a **deviation** from the standard of practice occurred; this deviation bore a **direct causal** relationship to the untoward outcome; and **damages** occurred as a result.

**484. The answer is e.** (*Hales, 3/e, pp 1514–1515.*) Nancy Cruzan had been in a vegetative state and kept alive by feeding tubes for over four years. Because her prognosis was hopeless, her parents went to court to have the feeding stopped so that she could die. The case ultimately found its way to the Supreme Court, which ruled that competent persons have a constitutional right to refuse unwanted medical treatment. The court left it to the states to decide how to handle the situation of the incompetent patient, and in many states, that has limited the rights of families to make decisions unless there is an advance directive such as a “living will” and a “durable power of attorney.”

**485–487. The answers are 485-a, 486-c, 487-a.** (*Hales, 3/e, pp 1504–1505, 1500–1501, 1509–1511.*) The emergency room psychiatrist was justified in hospitalizing the patient involuntarily because the patient appeared to be mentally ill and unable to care for his own basic needs. In this case, being properly clothed to avoid the potential harmful effects of exposure to cold would be considered a basic need. The essential criteria that must be met in order for an involuntary hospitalization to be justified are as follows: There must be evidence for the presence of mental illness; the patient must be at risk for causing imminent harm to him- or herself or to others; the patient must be unable to provide for his or her basic needs.

In the absence of strong evidence for imminent danger or risk of harm to self or others, patients maintain the right to refuse treatment, even when he or she has been hospitalized involuntarily. Since the patient was residing on a hospital unit at the time the unwanted treatments were administered, he was at no immediate risk of the sort that originally led to his admission. Nor was there any evidence that he was acting in ways that placed himself or others in immediate danger or risk of harm. The family's beliefs and rights are not relevant in this context.

No patient may be treated against his or her own will, nor may any treatments be administered without the patient's having made a truly informed decision about the treatment. In this case, where it was believed that the patient was not capable of making an informed decision about the treatment, an evaluation of competency must be conducted and a substituted judgment must be sought.

**488. The answer is c.** (*Sadock, 7/e, pp 3286–3287.*) Most U.S. federal courts presently use the American Law Institute (ALI) test, or a minor variation, to determine criminal responsibility. The ALI standard states, "It shall be a defense that the defendant at the time of the proscribed conduct, as a result of mental disease or defect, lacked substantial capacity either to appreciate the wrongfulness of his conduct or to conform his conduct to the requirements of the law." Many jurisdictions have appended a section that states, "The terms mental disease or defect do not include an abnormality manifested only by repeated criminal or otherwise antisocial conduct." This provision is designed to prevent persons with antisocial personalities from offering an insanity defense. Recent decisions in some jurisdictions suggest that the federal judiciary may be moving back toward M'Naghten.

**489. The answer is d.** (*Sadock, 7/e, p 3281.*) Privileged communication must be provided by statute. Where the privilege exists, it is essentially "owned" by the person whose medical information is being sought. Persons may waive the privilege and allow their psychiatrists to testify. Because there are many qualifications to statutory privilege, some feel that the concept is almost meaningless.

**490. The answer is d.** (*Sadock, 7/e, pp 3277–3279, 3297–3298.*) The *Tarassoff* decision was a landmark case in determining that psychotherapists have an obligation to warn third parties who are in danger. In this instance, the

therapist had an obligation to warn the potential victim of a student who had threatened to kill the girl who had rejected him. He ultimately killed her, thus prompting the litigation.

**491. The answer is a.** (*Sadock, 7/e, p 3273.*) Improper treatment is the most common reason for malpractice claims in psychiatry, accounting for 33% of all claims. This is followed by attempted or completed suicide, which account for 20% of all claims.

**492. The answer is b.** (*Hales, 3/e, pp 1515–1516.*) Patients are increasingly aware and concerned about who will make decisions for them if they lose the ability to make their own decisions. This might be from a recurrent mental illness such as bipolar disorder, a medical illness, or later-life vegetative states. The durable power of attorney allows the selection of a decisionmaker in advance who can then act without the necessity of a court proceeding.

**493. The answer is a.** (*Sadock, 7/e, p 3292–3294.*) There is no legal obligation to accept any patient for therapy, but once the doctor-patient relationship is established, there are legal and ethical obligations on the doctor to keep informed about the patient's condition and to provide needed care. Abandonment that results in injury may establish grounds for malpractice. The safety and welfare of the patient is paramount. To simply provide medication does not account for the fact that the patient may decompensate and injure him- or herself during the period of time it takes to find a new psychiatrist. The therapist may terminate treatment with an uncooperative or noncompliant patient, but only if assistance is given in finding a new therapist.

**494. The answer is a.** (*Sadock, 7/e, p 3290; Hales, 3/e, p 1605.*) The principle of beneficence refers to preventing or removing harm and promoting well-being. This principle, along with that of nonmaleficence (doing no harm), has been until recently the primary driving force behind medical and psychiatric practice throughout history. Now economic considerations figure much more prominently than ever before in clinical decision making. *The Fiduciary Principle* states that the doctor-patient relationship is built on a sense of honor and trust that the doctor will act competently and responsibly in partnership with the patient, and with the patient's consent. This

trust is earned and maintained by continuous attention to the patient's needs, a concept known as "responsibility."

**495. The answer is d.** (*Sadock, 7/e, pp 3277–3279.*) Tarasoff-I held that psychotherapists and the police have a duty to warn third parties who are in danger. Tarasoff-II stated that once a therapist has reasonably determined that a patient poses a serious danger of violence to others, he or she "bears a duty to exercise reasonable care to protect the foreseeable victim of that danger." This is an expansion of the more narrow duty to warn. It also exempted the police from liability. There is no explicit requirement for specific treatment, such as medications or hospitalization, though these might well be employed by the psychiatrist in the management of potentially violent persons.

**496. The answer is e.** (*Sadock, 7/e, pp 3281–3282, 3292–3293.*) In "The Principles of Medical Ethics with Annotations Especially Applicable to Psychiatry," the American Psychiatric Association (APA) unequivocally states that sexual activity with patients is unethical. Such activity is viewed as a misuse and exploitation of the transference relationship, which may activate sexual feelings in both patient and therapist. Psychiatrists have been prosecuted for rape in a few instances, loss of licensure or other licensure action is not uncommon, and malpractice suits with substantial settlements are increasingly common. While some have advocated that a "waiting period" of a year might be a reasonable way to approach this ethical issue, the APA has pointed out that the transference may persist long after treatment ends.

**497. The answer is e.** (*Sadock, 7/e, p 3281.*) Testimonial privilege is a right that belongs to the patient, not to the doctor. It is not time-limited and therefore does not end no matter how long it has been since the doctor last saw the patient. The clinician may be ordered by the court to divulge information ordinarily considered privileged, and a patient loses the privilege if suing the doctor or if the patient is claiming emotional harm as a part of a lawsuit against someone. Many jurisdictions consider information relative to child-custody decisions to lie outside this privilege as well.

**498–500. The answers are 498-e, 499-d, 500-b.** (*Hales, 3/e, pp 1520–1523; Sadock, 7/e, pp 3286–3288.*) The AMA has recommended, and some states have codified, that the insanity defense be abolished. There is

considerable question as to whether this can be done constitutionally. Such attempts often direct that the psychiatrist should testify only as to the “mens rea elements” in criminal trials. This is testimony that addresses the issue of whether the defendant possessed a criminal intent or state of mind at the time of the crime.

The Durham rule, a 1954 decision by the District of Columbia Circuit Court, eliminated the cognitive issues that were associated with the M’Naghten rule, as well as the concept of irresistible impulse that had expanded it in some jurisdictions in order to introduce the concept of volitional control over one’s behavior. It gave wide latitude to psychiatric testimony. It was rejected in 1972 because there was simply too much variation in psychiatric opinion as to what constituted the “product of mental disease or mental defect.” Most federal circuit courts and approximately 25 states have adopted at least parts of the rule developed by the ALI. The rule has at least some elements of cognitive (M’Naghten) and volitional (irresistible impulse) determinations. However, it is no longer an issue of “all or nothing.” The word *appreciate*, for example, acknowledges that a psychotic person may “know” right from wrong, but may lack an ability to truly comprehend the substance and consequences of the behavior. Consider the case of a psychotic who knows that murder is morally and legally wrong, but who kills a neighbor while acting under the influence of paranoid delusions and compelling hallucinations. In 1843, Daniel M’Naghten was accused of killing the secretary of the prime minister of Great Britain. He was acquitted on grounds of insanity, and public outrage led to the development of the M’Naghten test regarding criminal insanity. It is a test primarily related to cognitive functions. It became the test of insanity in many jurisdictions in the United States and is still retained by some states. The Model Penal Code developed by the American Law Institute (ALI) did not attempt to define mental disease or defect, but it did specify that “the terms ‘mental disease’ or ‘defect’ do not include an abnormality manifested only by repeated criminal or otherwise antisocial conduct.” This reflected the opinion that sociopaths should not be able to evade criminal responsibility for their acts by claiming that their behavior was on the basis of their psychiatric problem.

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