

DRUGS ACTING ON CENTRAL NERVOUS SYSTEM

1. A 50-year-old man has a history of frequent episodes of renal colic with high-calcium renal stones. The most useful agent in the treatment of recurrent calcium stones is

- (a) Mannitol
- (b) Furosemide
- (c) Spironolactone
- (d) Hydrochlorothiazide
- (e) Acetazolamide

2. Which of the following drugs is correctly associated with its site of action and maximal diuretic efficacy?

- (a) Thiazides—distal convoluted tubule—10% of filtered Na⁺
- (b) Spironolactone—proximal convoluted tubule—40%
- (c) Bumetanide—thick ascending limb—15%
- (d) Metolazone—collecting tubule—2%
- (e) All of the above

3. Substance secreted into the blood by a neuron is

- (a) Neurohormone
- (b) Neuromodulator
- (c) Neuromediator
- (d) Neurotransmitter

4. Which of the following is a leukotriene receptor blocker?

- (a) Alprostadil
- (b) Aspirin
- (c) Ibuprofen
- (d) LTC₄
- (e) Zafirlukast

5. A molecule that stimulates nitric oxide synthase, especially the eNOS isoform, is

- (a) Acetylcholine
- (b) Citruline
- (c) Isoproterenol
- (d) Nitroglycerin
- (e) Nitroprusside

6. The primary endogenous substrate for nitric oxide synthase is

- (a) Acetylcholine
- (b) Angiotensinogen
- (c) Arginine
- (d) Citruline
- (e) Heme

7. Which of the following is a recognized effect of nitric oxide?

- (a) Arrhythmia
- (b) Bronchoconstriction
- (c) Constipation
- (d) Inhibition of acute graft rejection
- (e) Pulmonary vasodilation

8. cAMP is an example of

- (a) Neurohormone
- (b) Neuromodulator
- (c) Neuromediator
- (d) Neurotransmitter

9. One effect that theophylline, nitroglycerin, isoproterenol, and histamine have in common is

- (a) Direct stimulation of cardiac contractile force
- (b) Tachycardia
- (c) Increased gastric acid secretion
- (d) Postural hypotension
- (e) Throbbing headache

10. Which one of the following chemicals does not satisfy the criteria for a neurotransmitter role in the CNS?

- (a) Acetylcholine
- (b) Dopamine
- (c) Glycine
- (d) Nitric Oxide
- (e) Substance P

11. Neurotransmitters may

- (a) Increase chloride conductance to cause inhibition
- (b) Increase potassium conductance to cause excitation
- (c) Increase sodium conductance to cause inhibition
- (d) Increase calcium conductance to cause inhibition
- (e) Exert all of the above actions

12. Which of the following chemicals is most likely to function as a neurotransmitter in hierarchical systems?

- (a) Dopamine
- (b) Glutamate
- (c) Metenkephalin
- (d) Norepinephrine
- (e) Serotonin

13. Activation of metabotropic receptors located presynaptically causes inhibition by decreasing the inward flux of

- (a) Calcium
- (b) Chloride
- (c) Potassium
- (d) Sodium
- (e) None of the above

14. This compound decrease the functional activities of several CNS neurotransmitters, including dopamine, norepinephrine, and serotonin. At high doses it may cause parkinsonism-like extrapyramidal system dysfunction.

- (a) Amphetamine
- (b) Baclofen
- (c) Diazepam
- (d) Ketamine
- (e) Reserpine

15. This amine neurotransmitter is found in high concentration in cell bodies in the pons and brain stem; at some sites, release of transmitter is autoregulated via presynaptic inhibition.

- (a) Acetylcholine
- (b) Dopamine
- (c) Glutamate
- (d) Norepinephrine
- (e) Substance P

16. Suramin is an antagonists of _____ receptors

- (a) Purine
- (b) Somatostatin
- (c) Neuropeptide Y
- (d) Neurotensin

17. Which one of the following statements best describes the mechanism of action of benzodiazepines?

- (a) Benzodiazepines activate GABA_B receptors in the spinal cord
- (b) Their inhibition of GABA transaminase leads to increased levels of GABA
- (c) Benzodiazepines block glutamate receptors in hierarchical neuronal pathways in the brain
- (d) They increase the frequency of opening of chloride ion channels that are coupled to GABA_A receptors
- (e) They are direct-acting GABA receptor agonists in the CNS

18. Which one of the following statements about the use of triazolam in this elderly patient is accurate?

- (a) Ambulatory dysfunction does not occur in elderly patients taking one-half of the conventional adult dose
- (b) Hypertension is a common adverse effects of benzodiazepines in patients over 70 years of age
- (c) Over-the-counter cold medications may antagonize the hypnotic effects of the drug
- (d) She may experience amnesia, especially if she also drinks alcoholic beverages
- (e) Triazolam is distinctive in that it does not cause rebound insomnia on abrupt discontinuance

19. The most likely explanation for the increased sensitivity of elderly patients to a single dose of triazolam and other sedative-hypnotic drugs is

- (a) Changes in brain function that accompany the aging process
- (b) Decreased renal function
- (c) Increased cerebral blood flow
- (d) Decreased hepatic metabolism of lipid-soluble drugs
- (e) Changes in plasma protein binding

- 20. Induction of various forms of synaptic plasticity is more closely associated with _____ receptors**
- (a) AMPA (b) Kainate
(c) NMDA (d) All of the above
- 21. Which one of the following drugs may increase anticoagulant effects by displacement of warfarin from plasma protein binding sites and is inactive until converted in the body to an active metabolite?**
- (a) Buspirone (b) Chloral hydrate
(c) Clorazepate (d) Secobarbital
(e) Zaleplon
- 22. Which one of the following drugs has been used in the management of alcohol withdrawal states and in maintenance treatment of patient with tonic-clonic or partial seizure states? Its chronic use may lead to an increased metabolism of warfarin and phenytoin.**
- (a) Chlordiazepoxide (b) Meprobamate
(c) Phenobarbital (d) Triazolam
(e) Zolpidem
- 23. A 40-year-old patient with liver dysfunction is scheduled for a surgical procedure. Lorazepam can be used for preanesthetic sedation in this patient without concern for excessive CNS depression because the drug is**
- (a) A selective anxiolytic like buspirone
(b) Actively secreted in the renal proximal tubule
(c) Conjugated extrahepatically
(d) Eliminated via the lungs
(e) Reversible by administration of naloxone
- 24. This hypnotic drug facilitates the inhibitory actions of GABA, but it lacks anticonvulsant or muscle relaxing properties and has minimal effect on sleep architecture.**
- (a) Buspirone (b) Diazepam
(c) Flurazepam (d) Phenobarbital
(e) Zaleplon
- 25. The most frequent type of drug interaction that occurs in patients using drugs of the sedative hypnotic class is**
- (a) Additive CNS depression
(b) Antagonism of sedative or hypnotic actions
(c) Competition for plasma protein binding
(d) Induction of liver drug-metabolizing enzymes
(e) Inhibition of liver drug-metabolizing enzymes
- 26. A 42-year-old man with a history of alcoholism is brought to the emergency room in a confused and delirious state. He has truncal ataxia and ophthalmoplegia. The most appropriate immediate course of action is to administer.**
- (a) Chlordiazepoxide (b) Disulfiram
(c) Folic acid (d) Lorazepam
(e) Thiamine
- 27. Which one of the following statements about the bio-disposition of ethanol is accurate?**
- (a) Ethanol is absorbed at all levels of the gastrointestinal tract
(b) Acetic acid is the initial product of ethanol metabolism
(c) After an intravenous dose, plasma levels of ethanol are lower in women than in men
(d) The elimination of ethanol follows first-order kinetics
(e) Alcohol dehydrogenase exhibits genetic variability
- 28. Following is GABA_A agonist**
- (a) Muscimol (b) Baclofen
(c) Bicuculline (d) None of the above
- 29. Chronic use of ethanol is reported to increase**
- (a) Alcohol dehydrogenase
(b) Aldehyde dehydrogenase
(c) Microsomal ethanol-oxidizing system activity
(d) Monoamine oxidase
(e) NADH dehydrogenase
- 30. The chronic abuse of alcohol predisposes to hepatic damage following overdose of acetaminophen because ethanol**
- (a) Blocks acetaminophen metabolism
(b) Causes thiamine deficiency
(c) Displaces acetaminophen from plasma proteins

- (d) Induces liver drug-metabolizing enzymes
- (e) Inhibits renal clearance of acetaminophen

31. The activity of this enzyme is specifically decreased in the Wernicke-Korsakoff syndrome

- (a) Alcohol dehydrogenase
- (b) Cytochrome P450
- (c) L-Aromatic amino acid decarboxylase
- (d) NADH dehydrogenase
- (e) Pyruvate dehydrogenase

32. Following is glycine antagonists

- (a) Quisqualate (b) Taurine
- (c) Strychnine (d) α -alanine

33. Which one of the following statements concerning the pharmacokinetics of antiseizure drugs is accurate?

- (a) At high doses, phenytoin elimination follows first-order kinetics
- (b) Valproic acid may increase the activity of hepatic ALA synthase and the synthesis of porphyrins
- (c) The administration of phenytoin to patients in methadone maintenance programs has led to symptoms of opioid overdose, including respiratory depression
- (d) Although ethosuximide has a half-life of approximately 40 hours, the drug is usually taken twice a day
- (e) Treatment with vigabatrin may reduce the effectiveness of oral contraceptives

34. With chronic use in seizure states, the adverse effects of this drug include coarsening of facial features, hirsutism, gingival hyperplasia, and osteomalacia.

- (a) Carbamazepine (b) Ethosuximide
- (c) Gabapentin (d) Phenytoin
- (e) Valproic acid

35. Which one of the following statements about vigabatrin is accurate?

- (a) Blocks neuronal reuptake of GABA
- (b) Drug of choice in absence seizures
- (c) Is established to be teratogenic in humans
- (d) Life-threatening skin disorders may occur
- (e) Visual field defects occur in up to one-third of patients

36. Withdrawal of antiseizure drugs can cause increased seizure frequency and severity. Withdrawal is least likely to be a problem with

- (a) Clonazepam (b) Diazepam
- (c) Ethosuximide (d) Phenobarbital
- (e) Phenytoin

37. A young female patient who suffers from bipolar affective disorder (BAD) has been managed with lithium. If she becomes pregnant, which one of the following drugs is likely to be effective in bipolar affective disorder with minimal risk of teratogenicity?

- (a) Carbamazepine (b) Clonazepam
- (c) Phenytoin (d) Valproic acid
- (e) None of the above

38. The most likely mechanism involved in the antiseizure activity of carbamazepine is

- (a) Block of sodium ion channels
- (b) Block of calcium ion channels
- (c) Facilitation of GABA actions on chloride ion channels
- (d) Glutamate receptor antagonism
- (e) Inhibition of GABA transaminase

39. Which one of the following statements about phenytoin is accurate?

- (a) Displaces sulfonamides from plasma proteins
- (b) Drug of choice in myoclonic seizures
- (c) Half-life is increased if used with phenobarbital
- (d) Isoniazid (INH) decreases steady state blood levels of phenytoin
- (e) Toxicity may occur with only small increments in dose

40. Which one of the following statements concerning nitrous oxide is accurate?

- (a) It continues to be a useful component of anesthesia protocols because of its lack of cardiovascular depression
- (b) Megaloblastic anemia is a common adverse effect in patients exposed to nitrous oxide for periods longer than 2 hours
- (c) It is the most potent of the inhaled

anaesthetics

- (d) There is a direct association between the use of nitrous oxide and malignant hyperthermia
- (e) More than 30% of nitrous oxide is eliminated via hepatic metabolism

41. Following is GABA_B agonist

- (a) Muscimol (b) Baclofen
- (c) Picrotoxin (d) Bicuculline

42. Following is GABA_A antagonist

- (a) Muscimol (b) Bicuculline
- (c) Strychnine (d) Baclofen

43. The inhalation anesthetic with the fastest onset of action is

- (a) Enflurane (b) Isoflurane
- (c) Nitric oxide (d) Nitrogen dioxide
- (e) Nitrous oxide

44. An intravenous bolus dose of thiopental usually leads to loss of consciousness within 10–15 seconds. If no further drugs are administered, the patient will regain consciousness in just a few minutes. The reason for this, that thiopental is

- (a) A good substrate for renal tubular secretion
- (b) Exhaled rapidly
- (c) Rapidly metabolized by hepatic enzymes
- (d) Redistributed from brain to other body tissues
- (e) Secreted in the bile

45. Respiratory depression following use of this agent may be reversed by administration of flumazenil

- (a) Desflurane (b) Fentanyl
- (c) Ketamine (d) Midazolam
- (e) Propofol

46. Use of this agent is associated with a high incidence of disorientation, sensory and perceptual illusions, and vivid dreams during recovery from anesthesia

- (a) Diazepam (b) Fentanyl
- (c) Ketamine (d) Midazolam
- (e) Thiopental

47. Postoperative vomiting is uncommon with this intravenous agent; patients are able to ambulate sooner than those who

receive other anaesthetics

- (a) Enflurane (b) Ketamine
- (c) Morphine (d) Propofol
- (e) Remifentanyl

48. The pK_a of lidocaine is 7.9. In infected tissue at pH 6.9, the fraction in the ionized form will be

- (a) 1% (b) 10%
- (c) 50% (d) 90%
- (e) 99%

49. Which of the following statements about nerve blockade with local anaesthetics is most correct?

- (a) Block is faster in onset in infected tissues
- (b) Block is faster in onset in unmyelinated fibers
- (c) Block is slower in onset in hypocalcemia
- (d) Block is faster in onset in hyperkalemia
- (e) Block is slower in onset in the periphery of a nerve bundle than in the center of a bundle

50. Which of the following was the first compound to be identified Pharmacologically as a transmitter in the CNS ?

- (a) Glycine (b) Glutamate
- (c) Acetylcholine (d) Norepinephrine

51. You have a vial containing 4 mL of a 2% solution of lidocaine. How much lidocaine is present in 1 mL?

- (a) 2 mg (b) 8 mg
- (c) 20 mg (d) 80 mg
- (e) 200 mg

52. Which one of the following statements about the toxicity of local anaesthetics is most correct?

- (a) Serious cardiovascular reactions are more likely to occur with tetracaine than with bupivacaine
- (b) Cyanosis may occur following injection of large doses of lidocaine, especially in patients with pulmonary disease
- (c) Intravenous injection of local anaesthetics may stimulate ectopic cardiac pacemaker activity
- (d) In overdose, hyper ventilation (with oxygen) is helpful to correct acidosis and lower extracellular potassium
- (e) Most local anaesthetics cause vasoconstriction

- 53. Epinephrine added to a solution of lidocaine for a peripheral nerve block will**
- Increase the risk of convulsions
 - Increase the duration of anesthetic action of the local anesthetic
 - Both (A) and (B)
 - Neither (A) nor (B)
 - None of the above
- 54. A child requires multiple minor surgical procedures in the nasopharynx. Which of the following drugs has high surface activity and vasoconstrictor actions that reduce bleeding in mucous membrane?**
- Benzocaine
 - Bupivacaine
 - Cocaine
 - Lidocaine
 - Procaine
- 55. Characteristics of nondepolarizing neuromuscular blockade include which one of the following?**
- Block of posttetanic potentiation
 - Histamine blocking action
 - Poorly sustained tetanic tension
 - Significant muscle fasciculations during onset of block
 - Stimulation of autonomic ganglia
- 56. Which of the following does not cause skeletal muscle contractions or twitching?**
- Acetylcholine
 - Nicotine
 - Strychnine
 - Succinylcholine
 - Vecuronium
- 57. Which one of the following is most effective in the management of malignant hyperthermia?**
- Baclofen
 - Dantrolene
 - Haloperidol
 - Succinylcholine
 - Vecuronium
- 58. Following is a G-protein coupled receptor**
- AMPA
 - Kainate
 - NMDA
 - Metabotropic
- 59. Which one of the following drugs is most often associated with hypotension caused by histamine release?**
- Diazepam
 - Pancuronium
 - Tizanidine
 - Tubocurarine
 - Vecuronium
- 60. Which one of the following drugs has caused hyperkalemia leading to cardiac arrest in patients with neurologic disorders?**
- Baclofen
 - Dantrolene
 - Succinylcholine
 - Tubocurarine
 - Vecuronium
- 61. Following is an excitatory amino acid receptor antagonist?**
- Phencyclidine
 - Quisqualate
 - Homocysteate
 - Kainate
- 62. Which one of the following drugs has spasmolytic activity and could also be used in the management of seizures caused by overdose of a local anesthetic?**
- Baclofen
 - Cyclobenzaprine
 - Dantrolene
 - Diazepam
 - Tizanidine
- 63. Which one of the following drugs given preoperatively will prevent postoperative pain caused by succinylcholine?**
- Baclofen
 - Dantrolene
 - Diazepam
 - Lidocaine
 - Tubocurarine
- 64. As the physician, you could tell the patient (and close family members) all of the following things about levodopa except?**
- Taking the drug in divided doses will decrease nausea and vomiting
 - He should be careful when he stands up because he may get dizzy
 - Uncontrollable muscle jerks may occur
 - A net-like reddish to blue discoloration of the skin is a likely side effect of the medication
 - The drug will probably improve his symptoms for a period of time but not indefinitely
- 65. As the physician who is prescribing levodopa, you will note that the drug**
- Causes less severe behavioral side effects if given with carbidopa

- (b) Fluctuates in its effectiveness with increasing frequency as treatment continues
- (c) Prevents extrapyramidal adverse effects of antipsychotic drugs
- (d) Protects against cancer in patients with melanoma
- (e) Has toxic effects that include pulmonary infiltrates

66. The major reason why carbidopa is of value in parkinsonism is that the compound

- (a) Crosses the blood-brain barrier
- (b) Inhibits monoamine oxidase type A
- (c) Inhibits aromatic L-amino acid decarboxylase
- (d) Is converted to the false neurotransmitter carbidopamine
- (e) Inhibits monoamine oxidase type B

67. Which one of the following statements about bromocriptine is accurate?

- (a) It should not be administered to patients taking antimuscarinic drugs
- (b) Effectiveness in Parkinson's disease requires its metabolic conversion to an active metabolite
- (c) The drug is contraindicated in patients with a history of psychosis
- (d) The drug should not be administered to patients already taking levodopa
- (e) Mental disturbances occur more commonly with levodopa than with bromocriptine

68. A 72-year-old patient with parkinsonism presents with swollen feet. They are red, tender, and very painful. You could clear up these symptoms within a few days if you told the patient to stop taking

- (a) Amantadine (b) Benztropine
- (c) Bromocriptine (d) Levodopa
- (e) Selegiline

69. Concerning the drugs used in parkinsonism, which of the following statements is accurate?

- (a) Levodopa causes mydriasis and can precipitate an attack of acute glaucoma
- (b) Useful therapeutic effects of amantadine continue for several years

- (c) The primary therapeutic benefit of antimuscarinic drugs in parkinsonism is their ability to relieve bradykinesia
- (d) Dopamine receptor antagonists should not be used in Parkinson's disease prior to a trial of levodopa
- (e) The concomitant use of selegiline may increase the peripheral adverse effects of levodopa

70. A previously healthy 50-year-old woman begins to suffer from slowed mentation and develops writhing movement of her tongue and hands. In addition, she has delusions of being persecuted. The woman has no past history of psychiatric or neurologic disorders. The most appropriate drug for treatment is

- (a) Amantadine (b) Bromocriptine
- (c) Haloperidol (d) Levodopa
- (e) Trihexyphenidyl

71. Great caution must be exercised in the use of this drug (or drugs from the same class) in parkinsonian patients who have prostatic hypertrophy or obstructive gastrointestinal disease

- (a) Benztropine (b) Carbidopa
- (c) Levodopa (d) Ropinirole
- (e) Selegiline

72. Which of the following statements about pramipexole is accurate?

- (a) Activates dopamine D₂ receptors
- (b) Commonly a first-line therapy for Parkinson's disease
- (c) May cause postural hypotension
- (d) Not an ergot derivative
- (e) All of the above

73. Tolcapone may be of value in patient being treated with levodopa-carbidopa because it

- (a) Activates catechol-O-methyltransferase
- (b) Decreases formation of 3-O-methyldopa
- (c) Inhibits monoamine oxidase type B
- (d) Inhibits dopamine reuptake
- (e) Releases dopamine from nerve endings

74. Concerning hypotheses for the patho-physiologic basis of schizophrenia, which one of the following statements is accurate?

- (a) Positron emission tomography has shown decreased dopamine receptors in the brains of both untreated and drug-treated schizophrenics
- (b) Drugs that block dopamine receptors are useful for alleviating psychotic symptoms in parkinsoniam patients
- (c) The clinical potency of many antipsychotic drugs correlates well with their beta adrenoceptor-blocking actions
- (d) Drug-induced psychosis can occur without activation of brain dopamine receptors
- (e) All effective antipsychotic drugs have high affinity for dopamine D₂ receptors

75. Choose the correct statement from the following?

- (a) Muscimol is GABA_B selective
- (b) Bicuculline is GABA_A agonist
- (c) Picrotoxin blocks chloride channels associated with GABA_A receptors
- (d) Baclofen is GABA_A agonist

76. A 30-year-old male patient is on drug therapy for a psychiatric problem. He complains that he feels "flat" and that he gets confused at times. He has been gaining weight and has lost his sex drive. As he moves his had, you notice a slight tremor. He tells you that since he has been on medication he is always thirsty and frequently has to urinate. The drug he is most likely to be taking is

- (a) Clonazepam
- (b) Clozapine
- (c) Haloperidol
- (d) Lithium
- (e) Trifluoperazine

77. A young male patient diagnosed as schizophrenic develops severe muscle cramps with torticollis a short time after drug therapy is initiated with haloperidol. The best course of action would be to

- (a) Add clozapine to the drug regimen
- (b) Discontinue haloperidol and observe the patient

- (c) Give oral diphenhydramine
- (d) Switch the patient to fluphenazine
- (e) Inject benztropine

78. Which one of the following statements about the action of phenothiazines is accurate?

- (a) They activate muscarinic receptors
- (b) They are antiemetic
- (c) They decrease serum prolactin levels
- (d) They elevate the seizure threshold
- (e) They raise blood pressure

79. Within days of starting haloperidol treatment for a psychiatric disorder, a young male patient developed severe generalized muscle rigidity and a high fever. In the emergency room he was incoherent, with increased heart rate, hypotension, and diaphoresis, Laboratory studies indicated acidosis, leukocytosis, and increased creatine kinase. The most likely reason for these symptoms is that the patient was suffering from

- (a) Agranulocytosis
- (b) A severe bacterial infection
- (c) Neuroleptic malignant syndrome
- (d) Spastic retrocollis
- (e) Tardive dyskinesia

80. Following is the main inhibitor y transmitter in the brain

- (a) Dopamine
- (b) Norepinephrine
- (c) Glycine
- (d) GABA

81. Concerning the proposed mechanisms of action of antidepressant drugs, which one of the following statements is accurate?

- (a) Bupropion is an effective inhibitor of NE and 5-HT transporters
- (b) Chronic treatment with an antidepressant often leads to the up-regulation of adrenoceptors
- (c) Elevation in amine metabolites in cerebrospinal fluid is characteristic of most depressed patients prior to drug therapy
- (d) MAO inhibitors used as antidepressants selectively decrease the metabolism of norepinephrine

- (e) The acute effect of most tricyclics is to block the neuronal reuptake of both norepinephrine and serotonin in the CNS

82. Which one of the following effects is unlikely to occur during treatment with amitriptyline?

- (a) Alpha adrenoceptor blockade
(b) Elevation of the seizure threshold
(c) Mydriasis
(d) Sedation
(e) Urinary retention

83. A 54-year-old male patient was using fluoxetine for depression but decided to stop taking the drug. When questioned, he said that it affected his sexual performance and that "he wasn't getting any younger." You notice that he is a user of tobacco products. If you decide to reinstitute drug therapy in this patient, the best choice would be

- (a) Amoxapine (b) Bupropion
(c) Imipramine (d) Sertraline
(e) Venlafaxine

84. Regarding maprotiline, which one of the following statements is accurate?

- (a) Blocks serotonin reuptake selectively
(b) Cause hypertension
(c) Raises the seizure threshold
(d) Sedation occurs commonly
(e) Has a tricyclic structure

85. Which one of the following drugs is most likely to be of value in obsessive compulsive disorders (OCD)?

- (a) Amitriptyline (b) Bupropion
(c) Clomipramine (d) Desipramine
(e) Mirtazapine

86. Compared with other antidepressant drugs, mirtazapine has the distinctive ability to act as an antagonist of

- (a) Alpha₂ adrenoceptors
(b) Beta adrenoceptors
(c) D₂ receptors
(d) NE transporters
(e) 5-HT transporters

87. Established clinical uses of this drug include enuresis and chronic pain

- (a) Bupropion (b) Fluvoxamine
(c) Imipramine (d) Phenelzine
(e) Selegiline

88. Which one of the following drugs is most likely to increase plasma levels of alprazolam, theophylline, and warfarin

- (a) Desipramine (b) Fluvoxamine
(c) Imipramine (d) Nefazodone
(e) Venlafaxine

89. Which one of the following actions of opioid analgesics is mediated via activation of kappa receptors?

- (a) Cerebral Vascular dilation
(b) Decreased uterine tone
(c) Euphoria
(d) Sedation
(e) Psychologic dependence

90. _____ antagonists are known to attenuate some of the actions of alcohol.

- (a) GABA_A (b) GABA_B
(c) NMDA (d) Glycine

91. Which one of the following statements about propoxyphene is accurate?

- (a) Analgesia equivalent to oxycodone
(b) Antagonist at mu receptors
(c) Causes dose-limiting diarrhea
(d) Highly effective cough suppressant
(e) Seizures have occurred in overdose

92. A young male patient is brought to the emergency room of a hospital suffering from an overdose of cocaine following intravenous administration. His symptoms are unlikely to include

- (a) Agitation (b) Bradycardia
(c) Hyperthermia (d) Myocardial infarct
(e) Seizures

93. Which one of the following statements about hallucinogens is accurate?

- (a) Mescaline and related hallucinogens are thought to exert their CNS actions through dopaminergic systems in the brain

- (b) Teratogenic effects are known to occur with the use of LSD during pregnancy
- (c) Scopolamine is unique among hallucinogens in that animals will self-administer it
- (d) Dilated pupils, tachycardia, tremor and increased alertness are characteristic effects of psilocybin
- (e) Phencyclidine can be anticipated to cause dry mouth and urinary retention

94. Which one of the following signs or symptoms is likely to occur with marijuana?

- (a) Bradycardia
- (b) Conjunctival reddening
- (c) Hypertension
- (d) Increased psychomotor performance
- (e) Mydriasis

95. This agent has sedative and amnesic properties. Small doses added to alcoholic beverages are not readily detected by taste and have been used in "date rape" attacks. The drug is chemically related to a brain inhibitory neurotransmitter. Which one of the following most closely resembles the description given?

- (a) Amyl nitrite
- (b) Flunitrazepam
- (c) Gamma-hydroxybutyrate
- (d) Hashish
- (e) Metcathinone

96. The patient is started on gemfibrozil. The major mechanism of action of gemfibrozil is

- (a) Increased excretion of bile acid salts
- (b) Increased expression of high-affinity LDL receptors
- (c) Increased lipid hydrolysis by lipoprotein lipase
- (d) Inhibition of secretion of VLDL by the liver
- (e) Reduction of secretion of HDL by the liver

97. When used as monotherapy, a major toxicity of gemfibrozil is increased risk of

- (a) Bloating and constipation
- (b) Cholelithiasis

- (c) Hyperuricemia
- (d) Liver damage
- (e) Severe cardiac arrhythmia

98. Alcohol drinking is associated with which of the following changes in serum lipid concentrations?

- (a) Decreased HDL cholesterol
- (b) Decreased IDL cholesterol
- (c) Decreased VLDL cholesterol
- (d) Increased LDL cholesterol
- (e) Increased triglyceride

99. A patient suffering from a depressive disorder is being treated with imipramine. If he uses diphenhydramine for allergic rhinitis, a drug interaction is likely to occur because

- (a) Diphenhydramine inhibits imipramine metabolism
- (b) Both drugs block reuptake of norepinephrine released from sympathetic nerve endings
- (c) Imipramine inhibits the metabolism of diphenhydramine
- (d) Both drugs block muscarinic receptors
- (e) The drugs compete with each other for renal elimination

100. If phenelzine is administered to a patient taking fluoxetine, the most likely result is

- (a) Antagonism of the antidepressant action of fluoxetine
- (b) A decrease in the plasma levels of fluoxetine
- (c) Hypertensive crisis
- (d) Priapism
- (e) Agitation, muscle rigidity, hyperthermia, seizures

ANSWERS

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|-------|-------|-------|--------|-------|-------|
| 1. d | 2. a | 3. a | 4. e | 5. a | 6. c |
| 7. e | 8. b | 9. b | 10. d | 11. a | 12. b |
| 13. a | 14. e | 15. d | 16. a | 17. d | 18. d |
| 19. a | 20. c | 21. b | 22. c | 23. c | 24. e |
| 25. a | 26. e | 27. a | 28. a | 29. c | 30. d |
| 31. e | 32. c | 33. d | 34. d | 35. e | 36. c |
| 37. b | 38. a | 39. e | 40. a | 41. b | 42. b |
| 43. e | 44. d | 45. d | 46. c | 47. d | 48. d |
| 49. d | 50. c | 51. c | 52. d | 53. b | 54. c |
| 55. c | 56. e | 57. b | 58. d | 59. d | 60. c |
| 61. a | 62. d | 63. e | 64. d | 65. b | 66. c |
| 67. c | 68. c | 69. a | 70. c | 71. a | 72. e |
| 73. b | 74. d | 75. c | 76. d | 77. e | 78. b |
| 79. c | 80. d | 81. e | 82. b | 83. b | 84. d |
| 85. c | 86. a | 87. c | 88. b | 89. d | 90. a |
| 91. e | 92. b | 93. d | 94. b | 95. c | 96. c |
| 97. b | 98. e | 99. d | 100. e | | |