

Autonomic Nervous System

1. What does the autonomic nervous system NOT directly control?
 - a. Skeletal muscle
 - b. Cardiac muscle
 - c. Gland secretions
 - d. Smooth muscle
2. The parasympathetic nervous system is also known as:
 - a. Craniosacral division
 - b. Thoracolumbar division
 - c. Somatic division
 - d. Sympathetic division
3. Which neurotransmitter is released by postganglionic fibers of the sympathetic nervous system?
 - a. Acetylcholine
 - b. Norepinephrine
 - c. Dopamine
 - d. Serotonin
4. The sympathetic nervous system prepares the body for which kind of action?
 - a. Fight-or-flight
 - b. Rest-and-digest
 - c. Day-to-day activities
 - d. Somatic reflexes
5. Which one of the following is an effect of sympathetic activation?
 - a. Increased digestive activity
 - b. Constricted pupils
 - c. Increased heart rate

- d. Increased salivary gland secretion
6. Parasympathomimetic drugs mimic the action of which nervous system?
- a. Sympathetic
 - b. Parasympathetic
 - c. Somatic
 - d. Central
7. Which effect is NOT associated with parasympathomimetics?
- a. Miosis
 - b. Bradycardia
 - c. Tachycardia
 - d. Diarrhea
8. Atropine poisoning is treated with which of the following?
- a. Acetylcholine
 - b. Norepinephrine
 - c. Neostigmine
 - d. Epinephrine
9. Scopolamine is used to treat:
- a. Hypertension
 - b. Motion sickness
 - c. Diabetes mellitus
 - d. Hyperthyroidism
10. Which is NOT a contraindication for parasympatholytic agents?
- a. Asthma
 - b. Peptic ulcer
 - c. Glaucoma

- d. Prostate hypertrophy
11. Ephedrine acts by:
- a. Direct receptor binding
 - b. Blocking adrenergic receptors
 - c. Increasing neurotransmitter release
 - d. Inhibiting neurotransmitter reuptake
12. Beta-blockers are indicated for all EXCEPT:
- a. Angina pectoris
 - b. Myocardial infarction
 - c. Hyperthyroidism
 - d. Asthma
13. Adrenergic neuron blockers, such as reserpine, act by:
- a. Blocking adrenergic receptors
 - b. Increasing NE release
 - c. Decreasing NE secretion
 - d. Mimicking the action of NE
14. Which drug is a beta-blocker?
- a. Prazosin
 - b. Amphetamine
 - c. Propranolol
 - d. Scopolamine
15. Side effects of beta-blockers may include all the following EXCEPT:
- a. Bronchoconstriction
 - b. Tachycardia
 - c. Decreased glucose tolerance

- d. Sinus bradycardia
16. The main action of cholinergic drugs, like neostigmine, is to:
- a. Block the effects of acetylcholine
 - b. Stimulate the release of norepinephrine
 - c. Inhibit acetylcholinesterase
 - d. Activate adrenergic receptors
17. Parasympatholytic drugs are obtained from which plant?
- a. Digitalis purpurea
 - b. Papaver somniferum
 - c. Atropa belladonna
 - d. Erythroxylum coca
18. A drug that inhibits the reuptake of catecholamines is likely to:
- a. Reduce heart rate
 - b. Decrease blood pressure
 - c. Have sympathomimetic effects
 - d. Act as a parasympatholytic
19. Which condition is an absolute contraindication for the use of beta-blockers?
- a. High cholesterol
 - b. Congestive heart failure
 - c. Seasonal allergies
 - d. Cerebral palsy
20. The therapeutic use of alpha-blockers includes all the following EXCEPT:
- a. Hypertension
 - b. Congestive heart failure
 - c. Pheochromocytoma

d. Prostatic hypertrophy

21. Which is a direct-acting sympathomimetic?

a. Amphetamine

b. Cocaine

c. Adrenaline

d. Tyramine

22. The effect of parasympathomimetic drugs on the heart is to:

a. Increase contractility

b. Decrease heart rate

c. Increase heart rate

d. Have no effect on the heart

23. Which of the following is a symptom of atropine overdose?

a. Miosis

b. Diarrhea

c. Hot, dry skin

d. Excessive sweating

24. Pirenzepine acts by:

a. Blocking muscarinic receptors

b. Stimulating muscarinic receptors

c. Blocking adrenergic receptors

d. Stimulating adrenergic receptors

25. The primary action of beta-blockers on the heart is to:

a. Increase heart rate

b. Decrease heart rate

c. Increase the force of contraction

- d. Have no effect on heart rate
26. What is the primary neurotransmitter of the sympathetic nervous system's postganglionic axons?
- a. Acetylcholine
 - b. Dopamine
 - c. Norepinephrine
 - d. Serotonin
27. Which drug is used to create mydriasis during an eye examination?
- a. Epinephrine
 - b. Atropine
 - c. Neostigmine
 - d. Bethanechol
28. What is the primary action of parasympatholytic drugs on the digestive system?
- a. Increase mobility
 - b. Decrease secretions
 - c. Increase secretions
 - d. No effect
29. Reserpine is used to treat which of the following conditions?
- a. Asthma
 - b. Hypertension
 - c. Glaucoma
 - d. Myasthenia gravis
30. Which of the following is a therapeutic application for sympathomimetics?
- a. Decreasing blood pressure
 - b. Bronchodilation
 - c. Slowing heart rate

d. Reducing pupil size

31. Adrenergic neuron blockers are known to:

a. Increase NE release

b. Block beta receptors

c. Decrease NE secretion

d. Mimic the effects of adrenaline

32. Which of the following statements is true about the parasympathetic nervous system?

a. It is responsible for the 'fight-or-flight' response.

b. It decreases gut motility.

c. It is involved in energy conservation and routine maintenance of bodily functions.

d. It dilates the pupils and inhibits salivation.

33. Which of the following effects is typical of a sympathomimetic drug?

a. Decreased heart rate

b. Increased digestion

c. Constricted airways

d. Increased blood flow to muscles

34. Atropine is an antagonist to which type of receptor?

a. Adrenergic

b. Dopaminergic

c. Muscarinic

d. Nicotinic

35. Indications for the use of beta-blockers include all of the following EXCEPT:

a. Heart failure

b. Angina pectoris

c. Performance anxiety

- d. Asthma
36. The drug ephedrine works by:
- a. Directly activating adrenergic receptors.
 - b. Blocking cholinergic receptors.
 - c. Indirectly increasing the release of norepinephrine.
 - d. Inhibiting acetylcholinesterase.
37. Which receptor type when stimulated by sympathomimetic drugs can cause bronchodilation?
- a. Muscarinic
 - b. Alpha-1 adrenergic
 - c. Beta-2 adrenergic
 - d. Dopamine-1
38. Choline esters and natural alkaloids are examples of:
- a. Beta-blockers
 - b. Parasympathomimetic agents
 - c. Sympatholytic agents
 - d. Parasympatholytic agents
39. Side effects of sympathomimetics can include all the following EXCEPT:
- a. Hypertension
 - b. Tachycardia
 - c. Miosis
 - d. Hyperglycemia
40. The major danger in the therapeutic use of beta-blockers is their effect on:
- a. Liver function
 - b. Kidney function
 - c. Pancreatic enzyme release

d. Asthmatic conditions

41. Pirenzepine is an antagonist at which receptor subtype?

a. Muscarinic M1

b. Muscarinic M2

c. Alpha-1 adrenergic

d. Beta-1 adrenergic

42. A patient with bradycardia should be cautious about taking which type of drug?

a. Parasympathomimetic

b. Sympathomimetic

c. Parasympatholytic

d. Sympatholytic

43. Which class of drugs is most suitable for treating a patient with an overdose of a cholinergic agent?

a. Acetylcholinesterase inhibitors

b. Muscarinic receptor antagonists

c. Beta-adrenergic receptor antagonists

d. Alpha-adrenergic receptor agonists

44. What is the expected effect of adrenergic neuron blockers on heart rate?

a. Increase

b. Decrease

c. No change

d. Variable, depending on dose

45. Which of the following is NOT an effect of parasympathetic stimulation?

a. Increased gastric secretion

b. Decreased heart rate

c. Increased bladder contraction

- d. Dilation of the pupils
46. Alpha-blockers are primarily used to treat:
- a. Pupil dilation
 - b. Urinary retention
 - c. Hypertension
 - d. Heart arrhythmias
47. Tyramine's sympathomimetic action is due to its ability to:
- a. Mimic acetylcholine at the neuromuscular junction
 - b. Inhibit monoamine oxidase
 - c. Induce the release of norepinephrine from nerve terminals
 - d. Block dopamine receptors
48. In the treatment of asthma, which class of drug is LEAST likely to be used due to its potential adverse effects on the airways?
- a. Beta-2 agonists
 - b. Muscarinic antagonists
 - c. Beta-blockers
 - d. Corticosteroids
49. The mechanism of action of neostigmine includes:
- a. Reversing the inhibition of acetylcholinesterase
 - b. Activating nicotinic receptors directly
 - c. Blocking the reuptake of choline
 - d. Preventing the breakdown of acetylcholine
50. Which drug is contraindicated in patients with uncontrolled hypertension due to its sympathomimetic effects?
- a. Bethanechol
 - b. Prazosin

c. Clonidine

d. Phenylephrine