

Your name: Answer Key

Recreational Drugs and Neurotransmitters Quiz – ANSWER KEY

SP.236, 4.13.2009

I. Name at least one example from each drug class:

1. Benzodiazepine Valium (diazepam)
2. Barbiturate Phenobarbital, thiopental (sodium pentothal)
3. A different kind of sedative Ambien (zolpidem), alcohol
4. Stimulant Amphetamine (Adderall), Ritalin, Cocaine
5. A different kind of stimulant Caffeine
6. Opioid Heroin, morphine, Vicodin, OxyContin
7. Psychedelic LSD
8. A different kind of psychedelic Psilocybin
9. Dissociative anesthetic (NMDA antagonist) PCP, ketamine, DXM
10. Deliriant (muscarinic ACh antagonist) Benadryl, Dramamine
11. Inhalant Nitrous oxide
12. A different kind of inhalant Ether
13. A drug I called "other" Nicotine, caffeine, salvia, chloral hydrate

II. Name a drug that causes:

1. Insomnia Amphetamine, cocaine, caffeine
2. Reduced appetite Amphetamine, cocaine, Ritalin, heroin, morphine
3. Drowsiness Heroin, Valium, Ambien, Lunesta
4. Heart attack Cocaine
5. Brain damage MDMA, PCP
6. Psychosis LSD
7. Psychosis (via a different mechanism) Cocaine
8. Psychosis (via yet another mechanism) PCP
9. Withdrawal Heroin

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10. Addiction Cocaine, heroin
11. Vasoconstriction Cocaine
12. Vasodilation Viagra
13. Reduced anxiety Valium, alcohol, Phenobarbital
14. Dilated/Constricted pupils (circle one) Dilated: cocaine, atropine, scopolamine; Constricted: heroin, most nerve gases

III. Match the drug or class of drugs with its mechanism of action:

1. Salvia (salvinorin A) I
2. Caffeine J
3. Nicotine F
4. PCP, ketamine, dextromethorphan D
5. Cocaine H
6. Psychedelics (LSD, psilocybin) C
7. Heroin B
8. Alcohol A
9. Benzodiazepines E
10. Atropa belladonna, G atropine, scopolamine, Benadryl, jimson weed

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A 8	Opens BK potassium channels, closes SK channels in the reward pathway of the brain, GABA _A agonist, many other effects
B 7	Nonselective full agonist of opioid receptors, especially μ subtype receptor
C 6	5-HT _{2A} and 5-HT _{2C} partial agonist, plus other effects on receptors and transporters (mostly for DA, NE, and other 5-HT receptors)
D 4	NMDA (glutamate receptor) antagonist
E 9	Agonist at a special binding site on the GABA _A receptor
F 3	Nicotinic acetylcholine receptor agonist
G 10	Muscarinic acetylcholine receptor antagonist
H 5	DA, NE, and 5-HT reuptake inhibitor (Extra credit: what is the other, non-psychotropic mechanism?) Sodium channel blocker, (local anesthetic)
I 1	Selective κ -opioid agonist
J 2	Adenosine antagonist, PDE inhibitor.

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