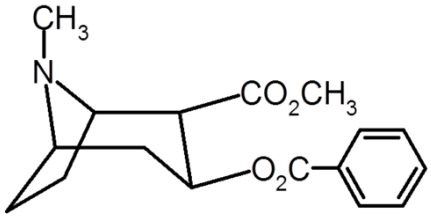
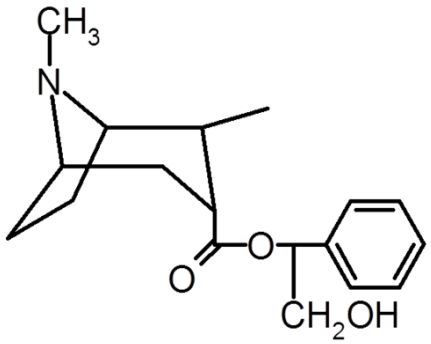
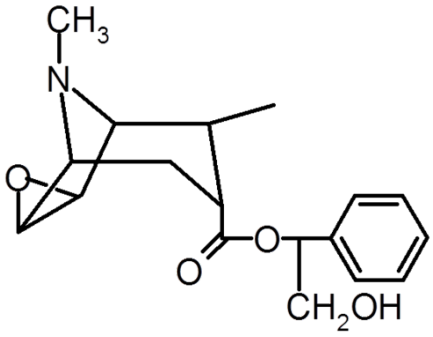
1. **norephinephrine (usd) is the same as what?**	noradrenalin (cnd)
2. **common antidepressants?**	Prozac, Zoloft, Wellbutrin, and Paxil
3. **What is a synapse?**	the space between neurons (100 billion)
4. **what are the two types of synapses?**	Sensory- information gathering, and Motor, involved in movement and muscle
5. **what happens at synapses?**	neurotransmitters released from one neuron into free space - they diffuse across and bind to receptor site
6. **what is 'lock and key'**	reference to binding
7. **What does a dendrite do?**	collect information
8. **what does the cell body do?**	process info
9. **what do axons do?**	conduct the impulse to the next cell (unidirectional)
10. **what are ganglions?**	collection of nerve cells and synapse concentrated in one location for easy interconnection
11. **what is catabolism?**	enzymatic breakdown of the transmitter molecule
12. **how do transmitter molecules deactiveate?**	catabolism (breakdown of molecule) or reuptake
13. **what are SSRI's (selective serotonin reuptake inhibitors)**	they inhibit the reuptake of molecules, used to treat depression and anziety,
14. **what is Acetylcholine?**	not in the blood stream, transmitter in nerves that slow heart, control voluntary muscle, constrict involuntary muscle, and keep CNS working, is a preganglionic
15. **what is Norepinephrine (NE)?**	weaker then epinephrine, has an extra etheinethrin group,
16. **what is Epinephrine?**	stronger then norepinephrine,
17. **What is Dopamine?**	behavioral stability, voluntary muscle coordination (brain neuro transmitter)
18. **What is Serotonin?**	mood, appetite, sensory perception, sleep, body tempature
19. **mono immune oxidate**	MIO
20. **GABA - Gamma-amoinobutyric acid**	(aminobutyric acid) - inhibitory/mood modulating effects, accounts for 33% of all cerebral neurotransmissions (release blocks arousal of higher brain centres
21. **(nor)Epinephrin (adrenaline) does what?**	stimulant, raises blood pressure and breathing rate
22. **if it has OSE on it, what is it?**	it's a sugar
23. **if it has ASE/ACE?, what is it?**	ensyme
24. **What is Sarin?**	nerve gas, found in Syrian victims
25. **why is Acetylcholine unique?**	it's not in the blood
26. **what happens with a lack of dopamine|?**	Parkinson disease.
27. **SARS (Structure - Activity relationships)**	a molecular structure (beta-phenethylamine) that is common for activity in neurotransmitters
28. **what is the PEA connection?**	in reference to Phenylethylamine - produces high simular to love)17.01 F3
29. **what is the difference between Norepinephrine (noradrenaline) and epinephrine(adrenaline)?**	Norepinephrine has a methyl group on the N atom, whereas epinephrine does not
30. **what are the two types of receptors for adrenaline and noradrenaline called?**	Alpha and beta
31. **what is an alpha receptor?**	for adrenaline and noradrenaline, causes relaxation of smooth muscles around bronchial tubes when stimulated-eases breathing
32. **what is a beta receptor**	for adrenaline and noradrenaline, when stimulated, cause an increase in heart activity
33. **What are Beta-Blockers?**	they were developed in reaction to beta receptors,does not interfere with breathing, and blocked stimulating effects
34. **what are beta blockers used for specifically?**	for treatment of hypertension, high blood pressure, chest pains and rapid heart beat

35.	**What is Propanolol (inderal, Innopran)?**	1st drug designed to fit into a receptor site, a 'beta blocker' (used for hypertension, tremors, angina, arrythma, high blood pressure)
36.	**what drugs have professional golfers been found to use (and is now illegal)?**	beta-blockers (to calm their nerves)
37.	**How do you deactivate NE**	though a chemical change involving oxidation and loss of an N atom (deactivates neuro transmitter)
38.	**which drug do students use?**	Ritalin, because it acts like a stimulant, more alert around exam time (causes release of dopamine and norepinephrine) - not illegal
39.	**L-Dopa is for what?**	helps treat parkinson's disease, crosses blood-brain barrier
40.	**what's the L in L-Dopa mean?**	left handed. (levo)
41.	**what is dextro**	mirror image of molecule
42.	**what would happen if you gave a D-Dopa to a parkinson's patient?**	it would have no effect, since it's the mirror image of what you need
43.	**what does yoga affect?**	it boosts GABA levels in the brain
44.	**where is serotonin?**	human blood, brain and GI tract
45.	**Which drug prevents people from overracting to stimuli**	Serotonin
46.	**What kind of medication is Prozac/zoloft/paxil?**	SSRI
47.	**for people who don't react to SSRI's in a good way, what can they use?**	Amitifadine, which selectively inhibits reuptake of serotonin, NE and dopamine
48.	**what's the generic name of paxil?**	paroxetine
49.	**What is the generic name for prozac?**	fluoxetine
50.	**what is the generic name of wellbutrin?**	bupropion
51.	**what is the generic name of zoloft?**	sertraline
52.	**how does prozac work?**	it bindes to the monoamine oxidase (MAO) enzyme, inactivating it. Increases levels of serotonin in brain by preventing sertonin reuptake
53.	**what are some fluorine containing drugs?**	lipitor (cholesterol lowering crestor (cholesterol lowering) Seretide (anti-asthma)
54.	**where is Tryptophan found?**	Turkey and Milk
55.	**what does Tryptophan do?**	converts into serotonin, sleep inducer
56.	**Whats an example of a food that is converted into a drug?**	Tryptophan (turkey) - 2 step process
57.	**what are autonomic nerves?**	they regulate body processes that are not controlled voluntarily
58.	**ANS stands for what?**	Autonomic Nerves
59.	**What are the two types of autonomic nerves?**	Parasympathetic and sympathetic
60.	**what do parasympathetic nerves do**	Conserve and restore body energy and eliminate waste
61.	**what is the only transmitter is used in the parasympathetic nerves?**	Acetylcholine
62.	**Which nerve system deals with fight or flight?**	The sympathetic
63.	**What are sympathomimetics?**	Drugs that act like sympathetic nerve system
64.	**what is the most known illegal/illicit version of Sympathomimetic drugs?**	Amphetamines
65.	**what do Epi Pens contain?**	epinephrine (adrenaline)
66.	**What are alkaloids**	nitrogen-comtaining compounts (amines) that are found in plants (morphine and codeine
67.	**what is an opiate?**	any narcotic derived from opium (morphine, codeine, heroin
68.	**what is an opioid:**	any synthetic narcotic that has opiate-like pharmacology, but nis not derived directly from opium (naloxone, methadone
69.	**what is a narcotic**	a substance that produces a stupefying, dulling effect that induces sleep

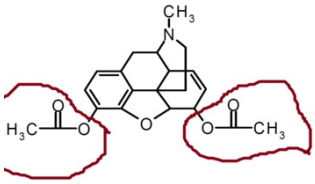
70.	**where does the name Morphine come from?**	Morpheus - the roman god of dreams
71.	**What does morphine do?**	powerful analgesic, cough suppresant, confusion, euphoria, lethargy, addictive
72.	**How does Morphine work?**	Binds to the opiate receptor sites in brain, doesn't interfere with transmission of pain, but changes reception of the signal
73.	**what is an antitussive?**	cough suppressant
74.	**what is an analgesic?**	pain killer
75.	**what does Codeine do?**	analgesic, in cough syrup (not addictive or sleep inducing)
76.	**what does Heroin do?**	analgesic, euphoria, stupor, addictive (diassafil derivative of morphine)
77.	**Common drug in the 19th century (victorian era)**	Laudanum
78.	**What is laudanum**	mixture of alcohol and opium - popular pain killer
79.	**When was Heroin made illegal?**	1924
80.	**why was the harrison narcotic act created?**	to deal with the uncontrolled use of opium and derivatives (heroin)
81.	**what prescription drug is similar to Heroin in it's skeleton?**	Oxycontin
82.	**How is Codeine different then Morphine?**	it has a CH3O added on it
83.	**How do you take morphine?**	invervenus (orally doesn't work well)
84.	**what are some drugs silimar to morphine?**	Methadone, Dextromethorphan, Fentanyl
85.	**Why is Fentanyl useful?**	for short term anesthetic surgery
86.	**what drug was given to a theatre full of people in Russia to save hostages?**	Fentanyl
87.	**how does Fentanyl work**	lasts 3-60 min, less nausea then morphine, 100x times potent then morphine
88.	**what kind of high do you get from Fentanyl?**	2 hours of numbing, then sleep, then need more.
89.	**What type of drug binds to a receptor site and is the 'biochemical key' that unlocks celular response? (causes effect**	the agonist
90.	**what type of drug binds to receptor site BUT DOES NOT unlock the cellular response?**	the antagonist
91.	**What is Naloxone used for?**	overdose of Heroin - it is an antagonist, and binds to the receptor site so that heroin stops working (can't be keyed in)
92.	**What has a greater affinity for the receptor site? the agonist or antagonist?**	the antagonist
93.	**how much Naloxone do you need to take to block 25 mg of heroin?**	1 mg dose
94.	**what radio active isotop is used in relation to morphine?**	Tritium
95.	**why do morphine and other opioids work?**	because they inhibit nerve functions, specifically inhibit neurotransmitter release in the thalmus
96.	**what are the 4 main types of Opioid receptors**	Mu, Delta, Kappa, and Orphan Receptor (ORL1)
97.	**Does Fentanyl work with all types of Opioid receptors?**	yes
98.	**what drug can be used to get of Heroin by switching addictions?**	Methadone
99.	**what do they mean by 'methadone maintenance' program?**	its when people are coming off heroin by beginning to use methadone
100.	**what is Demerol (Meperidine)**	the epideral used in pregnancy/childbirth
101.	**what are endorphins? (enkephalines (pentas)**	endogenous morphines - natural human narcotics
102.	**What is Vicodin**	a combination of hydrocodone and acetaminophen (analgesic), similar to Percocet, but uses hydrocodone, not oxycodone.
103.	**what is Percocet**	usually prescribed before Oxycontin (called the little brother) blocks signals to pain receptors in brain

104.	**what is diacetyl morphine?**	Heroin
105.	**What is similar to Percocet, but uses hydrocodone, not oxycodone.**	Vicodin
106.	**what is OxyNeo?**	a chemically identical drug to oxycontin, but tamper resistant (can't be crushed)
107.	**tylenol 3 (acetaminophne with codeine) use leads to the use of ?**	Vicodin
108.	**between alcohol, tobacco, marijuana and heroin, which is the least physically damaging?**	heroin
109.	**between alcohol, tobacco, marijuana and heroin, which is the MOST physically damaging?**	tobacco and alcohol (lungs and liver)
110.	**do people on methadone maintenance live longer then those using medically prescribed heroin 'diacetylmorphine"?**	no
111.	**what are two examples of CNS stimulants?**	Cocaine and Amphetamines - called uppers on the streets
112.	**Cocaine**	addictive, pain reliever, stimulant, used by peruvian indians to survive (walking hours in snow with heavy loads and little food) - deaths from overdoses
113.	**most unsatisfying drug?**	cocaine - esctasy, but not satisfaction
114.	**only drug lab animals prefer over sex, food and water?**	cocaine
115.	**what is used to extract cocaine?**	kerosene or gasoline, then h2s04
116.	**For cocaine, what is the difference between 'free' base, and 'ionic'?**	Ionic is when it's crystalized (salt) for snorting, whereas 'free' base is smoked, and quick to reach brain
117.	**what does scopolamine do?**	it's a 'truth drug', preoperative sedative (from cocaine)
118.	**what's atropine**	heart stimulant - popular poison in middle ages also used for allergies
119.	**what drug comes from nightshade?**	atropine
120.	**where is novocaine used**	dentistry (topical anesthetic) - from cocaine or cocaine like substance
121.	**when was coca soda free of cocaine?**	1929
122.	**is cocaine a narcotic (make you sleep?)**	No, it was incorrectly called that in 1914 with narcotic act
123.	**how does cocaine work**	it stimulates the release of dopamine and norepinephrine (catecholamines) in the CNS, and blocks brains reuptake of nerepinephrine
124.	**what does high concentrations of catecholamines (norepinephrine) cause?**	euphoria
125.	**which drug causes \perfect illusion" where users have more confidence, ego food**	cocaine
126.	**how long does cocaine last?**	15-30 min for max effect, 90 min halflife
127.	**cocaine**	
128.	**atropine**	

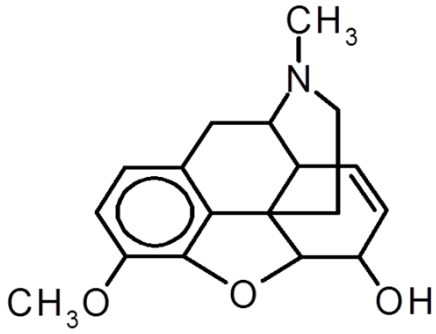
129. **scopolamine**



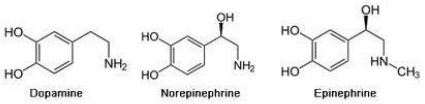
130. **add to morphine to make heroin**



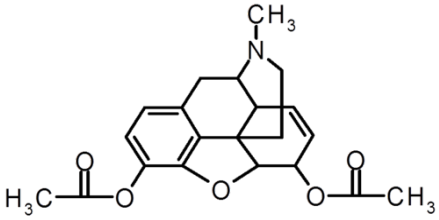
131. **codeine**



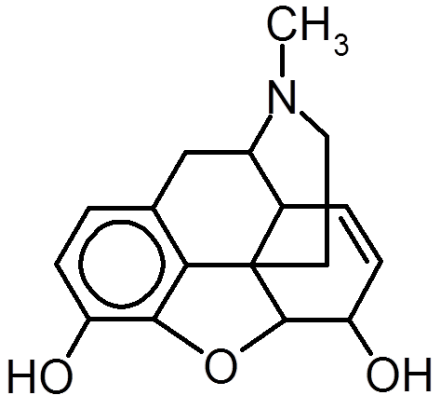
132. **dopamine - oh group different**



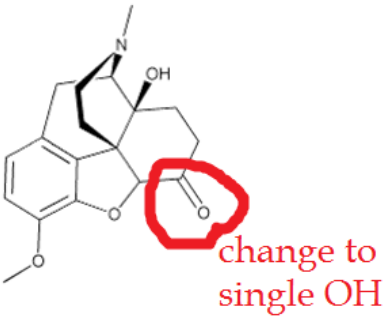
133. **heroin**



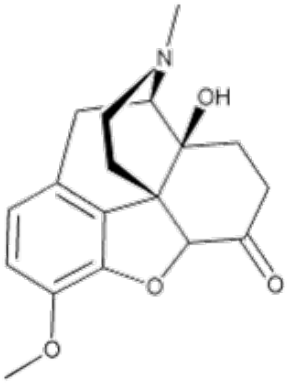
134. **morphine**



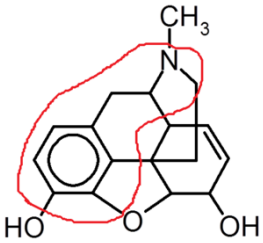
135. **oxycodone,but if this was OH, morphine**



136. **oxycodone**



137. **Pheanyl, beta carbon, nitrogin in morphine**



138. **vicodin**