MCQ – CHOLINERGIC DRUGS – Negatively marked

1. Processing at synapse

a) Hemicholinium blocks the Na/choline transporter into presynaptic terminal
b) Vesamicol inhibits ACh uptake into the vesicles by inhibiting a ACh/Na cotransporter
c) Botulinum toxins B,D,F,G inhibits exocytosis by cleaving synaptobrevin

2. Agonists/antagonists

a) Metacholine is an antagonist at muscarinic > nicotinic
b) Carbachol is an agonist acting preferentially at nicotinic receptors
c) Pilocarpine is a muscarinic agonist
d) Atropine is a selective M_1 antagonist
e) Hexamethonium is a competitive antagonist
f) Trimetaphan is a pore block antagonist
g) Suxamethonium is a depolarising nmj blocker
h) Tubocurarine is a non depolarising nmj blocker
i) α-bungarotoxin can be used to distinguish nmj and ganglionic nAChR by blocking only the nmj receptor

3.Anticholinesterases

a) neostigmine is a short acting drug binding to anionic site of enzyme
b) physostigmine is a medium acting drug forming carbamoyl esters that are unable to hydrolyse
c) ecothiopate phosphorylates AChE enzyme and is long acting
d) pralidoxime is able to reverse the effects of dyflos

MCQ – CHOLINERGIC DRUGS – Negatively marked

1. Processing at synapse

d) Hemicholinium blocks the Na/choline transporter into presynaptic terminal **T**
e) Vesamicol inhibits ACh uptake into the vesicles by inhibiting a ACh/Na cotransporter **F ACh/H^+ CHANNEL**
f) Botulinum toxins B,D,F,G inhibits exocytosis by cleaving synaptobrevin **T**

2. Agonists/antagonists

j) Metacholine is an antagonist at muscarinic > nicotinic **F AGONIST**
k) Carbachol is an agonist acting preferentially at nicotinic receptors **T**
l) Pilocarpine is a muscarinic agonist **T**
m) Atropine is a selective M_1 antagonist **F NON SELECTIVE**
n) Hexamethonium is a competitive antagonist **F PORE BLOCK**
o) Trimetaphan is a pore block antagonist **F COMPETITIVE**
p) Suxamethonium is a depolarising nmj blocker **T**
q) Tubocurarine is a non depolarising nmj blocker **T**
r) α-bungarotoxin can be used to distinguish nmj and ganglionic nAChR by blocking only the nmj receptor **T**

3.Anticholinesterases

e) neostigmine is a short acting drug binding to anionic site of enzyme **F (EDROPHONIUM)**
f) physostigmine is a medium acting drug forming carbamoyl esters that are unable to hydrolyse **F CAN BE HYDROLYSED IN 'MINUTES'**
g) ecothiopate phosphorylates AChE enzyme and is long acting **T**
h) pralidoxime is able to reverse the effects of dyflos **T**

MCQ – ADRENERGIC DRUGS – Negatively marked

1. agonists/antagonists

Receptor	Agonist	Antagonist
α_1		
α_2		
β_1		
β_2		

2. NA biosynthesis etc.

a) carbidopa inhibits tyrosine hydroxylase which catalyses the rate limiting enzymatic step in NA synthsis
b) methyldopa is processed to a 'false transmitter'
c) disulfirum inhibits dopamine β hydroxylase

3. Uptake and degradation

a) cocaine inhibits primarily uptake 2
b) selegiline is a MAO-B inhibitor used for depression
c) clorgyline is a MAO-A inhibitor used for Parkinsons
d) Entacapone is used to inhibit COMT
e) Amphetamine and MAO inhibitors can be used safely together
f) Amphetamine competes with NA for uptake via uptake 1
g) Uptake 2 primarily occurs in non-neuronal tissues

MCQ – ADRENERGIC DRUGS – Negatively marked

1. agonists/antagonists

Receptor	Agonist	Antagonist
α_1	**PHENYLEPHRINE**	**PRAZOSIN**
α_2	**CLONIDINE**	**YOHIMBINE**
β_1	**DOBUTAMINE**	**ATENOLOL**
β_2	**SALBUTAMOL**	**BUTOXAMINE**

2. NA biosynthesis etc.

d) carbidopa inhibits tyrosine hydroxylase which catalyses the rate limiting enzymatic step in NA synthsis **F INHIBITS DOPA DECARBOXYLASE**
e) methyldopa is processed to a 'false transmitter' **T**
f) disulfirum inhibits dopamine β hydroxylase **T**

3. Uptake and degradation

h) cocaine inhibits primarily uptake 2 **F UPTAKE 1**
i) selegiline is a MAO-B inhibitor used for depression **F MAO-A**
j) clorgyline is a MAO-A inhibitor used for Parkinsons **F MAO-A**
k) Entacapone is used to inhibit COMT **T**
l) Amphetamine and MAO inhibitors can be used safely together **F**
m) Amphetamine competes with NA for uptake via uptake 1 **T**
n) Uptake 2 primarily occurs in non-neuronal tissues **T**

MCQ – CARDIOVASCULAR DRUGS – Negatively marked

1. Antidysrhythmics

a) Lignocaine is used as an antidysrhythmic drug
b) Dobutamine could be used to treat dysrhythmias
c) Verapamil is a useful antidysrhythmic
d) Beta blockers are widely used antidysrhythmic drugs

2. congestive heart failure

a) Digoxin blocks the Na/K ATPase
b) Propranolol can be used to treat CHF
c) Type V phosphodiesterase inhibitors are used to treat CHF
d) Methylxanthines such as caffeine are used to treat CHF
e) Endothelin receptor antagonists may have potential to treat CHF
f) ACE inhibitors such as captopril, and diuretics, have therapeutic use

3. angina pectoris

a) Nitrovasodilators function by acting as agonists at β_2 receptors
b) Glyceryl trinitrate is commonly given as an oral preparation
c) Dipyridamole is not very useful because it cases the 'cheese effect'
d) β_1 antagonists are more useful than beta non-selective
e) the calcium channel blocker verapamil is usually used to treat angina
f) angiogenesis is a possible future treatment

4. clot lysis

a) streptokinase can be used chronically over long period of time
b) aspirin is used as prophylaxis against thrombosis

5. hyperlipidaemic treatment

a) statins inhibit the HMG CoA-reductase enzyme
b) cholestyramine acts to promote the reuptake of bile acids in the intestine.

MCQ – CARDIOVASCULAR DRUGS – Negatively marked

1. Antidysrhythmics

e) Lignocaine is used as an antidysrhythmic drug **T**
f) Dobutamine could be used to treat dysrhythmias **F CAN CAUSE!**
g) Verapamil is a useful antidysrhythmic **T**
h) Beta blockers are widely used antidysrhythmic drugs **T**

2. congestive heart failure

g) Digoxin blocks the Na/K ATPase **T**
h) Propranolol can be used to treat CHF **F BETA AGONISTS**
i) Type V phosphodiesterase inhibitors are used to treat CHF **F TYPE III**
j) Methylxanthines such as caffeine are used to treat CHF **T**
k) Endothelin receptor antagonists may have potential to treat CHF **T**
l) ACE inhibitors such as captopril, and diuretics, have therapeutic use **T**

3. angina pectoris

g) Nitrovasodilators function by acting as agonists at β_2 receptors **F NO**
h) Glyceryl trinitrate is commonly given as an oral preparation **F SUBLINGUAL**
i) Dipyridamole is not very useful because it cases the 'cheese effect' **F CORONARY STEAL**
j) β_1 antagonists are more useful than beta non-selective **T**
k) the calcium channel blocker verapamil is usually used to treat angina **F NIFEDIPINE**
l) angiogenesis is a possible future treatment **T**

4. clot lysis

c) streptokinase can be used chronically over long period of time **F ANTIGENIC**
d) aspirin is used as prophylaxis against thrombosis **T**

5. hyperlipidaemic treatment

c) statins inhibit the HMG CoA-reductase enzyme **T**
d) cholestyramine acts to promote the reuptake of bile acids in the intestine. **F INHIBIT**