Cholnergic Drugs intro

Activity	at Cholinergic synapsis- that use Ach as neurotransmitter
Cholinergic Receptors	Previous cheat sheet
Cholnergic Stimulants	Increase activity at ACh line synapses.
Direct acting Cholinergic Stimulants	Bind directly with the Cholinergic receptor
Indirect acting Cholinergic stimulants	increase synaptic activity by inhibiting the ACh linesterase enzyme located at Cholinergic synapse

Direct Acting Cholinergic Stimulants

Cholinergic Agonists	Function: similar to Ach Molecule
Ach	Is DIRECT ACTING Cholinergic stimulant
Muscurininc Cholinegic Stimulants	More beneficial , primarily AFFECT the peripheral tissues while exerting a minimal effect on the cholinergic receptors located in the autonomic ganglia and the neuromuscular junction.
Clinical use	only few are useful
Follow The Table	Every durg

Indirect-acting Cholinergic Stimulants

Function	increase activity at cholinergic synapses by inhibiting the Achsterase enzyme that is responsible for destroying Ach after this neurotransmitter is released from the presynaptic terminal.So it allows more Ach to remain in the Synapse. FINALLY: It increases in cholinergic synaptic transmission.
Also known as	Cholinesterase inhibitors / antichlinesterase agents
What it does finally	Exert a stimulatory effect on the peripheral muscuranic cholinergic synapses and on the cholinergic synapses found at the autonomic ganglia, at the skeletal neuromuscular junction, and within certain aspects of the CNS.

Adverse effects

p. 293	Problems and adverse effects

Clinical Applications

Mainly: Both	decrease in smooth muscle tone tha toccur in GI trct and bladder following abdominal surgery or trauma.

Clinical Applications (cont)

Indirectly	glaucoma, myasthenia gravis, alzheimer disease and to reverse the effects from an overdose of other drugs such as neuromuscular blocking agents and anticholinestergics.
Alzheimer disease	p. 292
Glaucoma	
Myasthenia Gravis	
Reversal of Neuromuscular blockage	
Reversal of Ach-Induced CNS toxicity	

Antecholinergic Drugs

Function	Competitive antagonists of the postsynaptic Cholinergic receptors: So they bind reversibly to the cholinergic receptor but do NOT activate it.
Binding...	BLOCKS the receptor from teh efects of endogenously released Ach ---> diminishing the cellular response to Cholinergic stimulation.
Other names	Antinuscurinic/antinicotinic DRUGS
AntiNicotinic Nn-Antagonists	USED for Extreme High BP and Hypertensive emergencies
	To produce Surgery by blocking the Skeletal NMJ

Antimuscarinic AntiCholinergic Drugs	
Atropine	Prototype Drug
Obtained from:	Extract of plants such as belladonna and jimsonweed
Action	BLOCK Postsynaptic Cholinergic Muscarinic Receptor
Five subtypes M1-M5	Antagonize cholinergic receptors on number of tissues which leads to side effects (see above Cheat sheet)
Clinical Application	GI, Parkinson, and treat clinical disorder (table 19-2, p. 295)
Parkinsons	Deficiency of the dopamine in the basal ganglia. --> leads to overactivity of central cholinergic synapse
CVS	Atropine- primarirly use to block vagus nerve on myocardium. Slows heart rate, conduction of the cardiac action postential thorughout the myoardium.
Motion sickness	antimuscarinics - Scopolamine
poisoning	