Poisons and Toxic agents working at the Acetylcholine (ACH) synapse

Source	Name	Action	Therapeutics
Cobra venom	**α -bungarotoxin**	Postsynaptic antagonist at the nicoterniergic ACH receptor preventing action of ACH	
Bacteria (spoiled food)	**Botulinum Toxin**	Works to prevent release of Acetylcholine (ACH) from the neuromuscular junction by blocking the presynaptic exocytosis of ACH, resulting in paralysis and muscle weakness	Botox
Tree bark (South American poisoned darts)	**Curare**	Postsynaptic nicotinic ACH receptor antagonist, blocking the ACH receptor leads to paralysis	Anesthetic Muscle relaxant
Black widow spider	**Latrotoxin**	Causes massive release of ACH in at the neuromuscular junction, highly potent but rarely fatal due to small doses delivered to humans by a single bite	
Calabar beans	**Physostigmine**	Works postsynaptically to blocks the activity of acetycholine esterase thereby increasing the effects of ACH	Used to treat the neuromuscular disorder myasthenia gravis
Laboratory	**Sarin**	Highly potent irreversible inhibitor of the enzyme acetylcholine esterase which breaks down ACH. Effects include paralysis of muscles including the diaphragm which can lead to death	Weapon- Nerve gas
Deadly nightshade plant	**Tropane Alkaloids**: atropine, scopolamine	Has an agonist effect at the muscarinic ACH receptor.	Dilation of the eye Drying of the airway passages Pre-anesthetic