

## Anticholinergics

Anticholinergic drugs act by decreasing cholinergic transmission, and are also known as muscarinic antagonists. Commonly used anticholinergic medications include benztropine, oxybutynin, atropine and scopolamine. These medications work to prevent transmission at muscarinic receptors and therefore prevent a parasympathetic nervous system response.



PLAY PICMONIC

### B.O.A.T.S Acronym

#### Boats

These drugs can be remembered with the B-O-AT-S acronym, which represents Benztropine, Oxybutynin, Atropine and Scopolamine.

### Benztropine

#### Benz-trooper

Benztropine is a muscarinic antagonist that acts on the CNS, and can be used together with levodopa therapy for Parkinson's patients. It is often used for parkinsonian symptoms which can accompany antipsychotic medications.

### Parkinson's Disease

#### Park-in-sun garage

Benztropine is often used as a second-line agent for Parkinson's disease, and works to antagonize the effects of acetylcholine. This reduces the imbalance between acetylcholine and dopamine, which helps Parkinson's and parkinsonian symptoms.

### Oxybutynin

#### Ox-beauty

Oxybutynin is an antispasmodic medication which inhibits the muscarinic action of acetylcholine on smooth muscle. By decreasing bladder spasms, this drug is indicated for frequent urination and urge incontinence.

### Decrease bladder spasms

#### Down-arrow Bladder spaceship

Oxybutynin works to control overactive bladder by reducing bladder spasms in patients. This reduces frequent urination and urge incontinence.

### Atropine

#### @-trooper

Atropine is a muscarinic antagonist that has numerous uses. It is often used as a cycloplegic and dilates the pupils. It is also used in cases of bradycardia, as it blocks the actions of the vagus nerve, to increase heart rate. It is used for reversal of organophosphate poisoning, and also helps decrease secretions and bronchoconstriction.

## **Mydriasis and Cycloplegia**

[Meter-eyes and Eye-paralyzed](#)

Atropine is used in ophthalmologic procedures to induce mydriasis, or pupil dilation, and can also be used to induce cycloplegia, or paralysis of the accommodation reflex.

## **Scopolamine**

[Scope-lamb](#)

Scopolamine is a muscarinic antagonist that can be administered orally, intravenously, or transdermally. In addition to the treatment of motion sickness, it has amnesic and sedative properties.

## **Motion Sickness**

[Sea sick](#)

Scopolamine is used to treat motion sickness and sea-sickness by blocking muscarinic receptors in the CNS and the vestibular system. It is used over atropine because it is longer acting and has greater action on the CNS.