



Clinical Practice Guidelines: Toxicology and toxinology/Anticholinergic

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Date	January, 2020
Purpose	To ensure a consistent approach to the management of anticholinergic toxidrome.
Scope	Applies to Queensland Ambulance Service (QAS) clinical staff.
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Population	Applies to all ages unless stated otherwise.
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Anticholinergic

January, 2020

The **anticholinergic toxidrome** refers to the classical syndrome which results from competitive antagonism at the muscarinic receptor.^[1] Multiple agents have anticholinergic properties including:^[2]

Belladonna alkaloids:

- Atropine
- Scopolamine
- Plants including Angel's Trumpet, Deadly Nightshade and Mandrake

Antispasmodics:

- Oxybutynin
- Hyoscine
- Orphenadrine
- Propantheline

Antihistamines:

- Chlorpheniramine
- Cyproheptadine
- Diphenhydramine
- Doxylamine
- Promethazine

Antipsychotics

- Chlorpromazine
- Haloperidol
- Olanzapine
- Quetiapine
- Clozapine

Tricyclic antidepressants:

- Amitriptyline
- Clomipramine
- Dothiepin
- Doxepin
- Imipramine
- Nortriptyline

Anti-Parkinson agents:

- Bzotropine
- Amantadine

Other:

- Carbamazepine
- Ipratropium bromide

The severity of toxicity can vary from mild to life-threatening, with symptoms persisting for many days. Good supportive care is the mainstay of therapy.

Clinical features



Central anticholinergic effects

- Agitated delirium
- Hallucinations
- Seizures
- Coma

Peripheral anticholinergic effects

- Mydriasis (dilated pupils)
- Tachycardia
- Dry, flushed skin
- Urinary retention
- Hyperthermia

Risk assessment



- Suspect anticholinergic toxicity in any patient with a deliberate ingestion of an agent with anti-muscarinic properties.
- Orphenadrine is highly toxic in overdose and can lead to myocardial depression, arrhythmia and death.^[3]
- A 12-Lead ECG should be performed on all patients with suspected anticholinergic toxicity.

