

# SA Palliative Care Community Pharmacy Update

A joint initiative of the South Australian Palliative Care Services

Medicines with anticholinergic activity are commonly referred to in the medical literature as contributing to an increase in adverse drug reactions, with advancing age.

## Anticholinergic Agents

Reduced clearance of medicines and increased permeability of the blood brain barrier are expected with ageing. These changes translate into an increased likelihood of both drug interactions and adverse drug reactions (ADRs).

Medicines with anticholinergic activity (anticholinergics) are useful for the management of a diverse range of diseases, including: urinary incontinence, depression and abdominal colic. While most require a script, some are over-the-counter (OTC) items. Older individuals are particularly vulnerable to the effects of anticholinergics.

Anticholinergics vary in their potency and produce both peripheral and central effects. Central effects of anticholinergics include: altered memory, confusion, disorientation, agitation, hallucination, dizziness and delirium. Peripheral effects include: urinary retention, dry mouth, dry eyes and constipation. Importantly, these ADRs may be wrongly linked to the progression of underlying chronic illnesses.

In practical terms, the use of anticholinergics can give rise to minor effects (denture discomfort with dry mouth) through to life changing consequences (acute cognitive impairment with loss of independence). The effect of using two or more anticholinergics is cumulative and this is described as "anticholinergic load". Older individuals with dementia are especially vulnerable to the physical and cognitive effects associated with anticholinergics.

### Role of the Pharmacist

Because older individuals have increased vulnerability to the anticholinergic ADRs, monitoring of outcomes is important. Table 1 lists anticholinergics available on the Australian market (\*some are OTC).

**Table 1. Medicines with Anticholinergic Activity**

Amantadine	Homatropine
Amitriptyline	Hyoscine (butylbromide or hydrobromide)*
Atropine*	Hyoscyamine*
Belladonna alkaloids*	Imipramine
Benzhexol	Ipratropium
Benztropine	Mianserin
Biperiden	Nortriptyline
Brompheniramine*	Olanzapine
Chlorpheniramine	Orphenadrine
Chlorpromazine	Oxybutynin
Clomipramine	Pericyazine
Clozapine	Pheniramine*
Cyclizine	Pizotifen
Cyclopentolate	Prochlorperazine
Cyproheptadine*	Promethazine*
Darifenacin	Propantheline
Dexchlorpheniramine*	Solifenacin
Dimenhydrinate*	Tiotropium
Diphenhydramine*	Tolterodine
Disopyramide	Trimeprazine*
Dothiepin	Tripolidine*
Doxepin	Tropicamide
Glycopyrronium	

A medicines review may be an opportunity to consider the anticholinergic load in vulnerable patients.

Anticholinergics are appropriate in the last days of life in managing noisy breathing.

### Useful Resources

- > Australian Medicines Handbook, Aged Care Companion 2014 p234-5
- > Bell S. et al, Anticholinergic and Sedative Medicines. Aust Fam Physician 2012; 41(1/2):45-9

### For more information

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