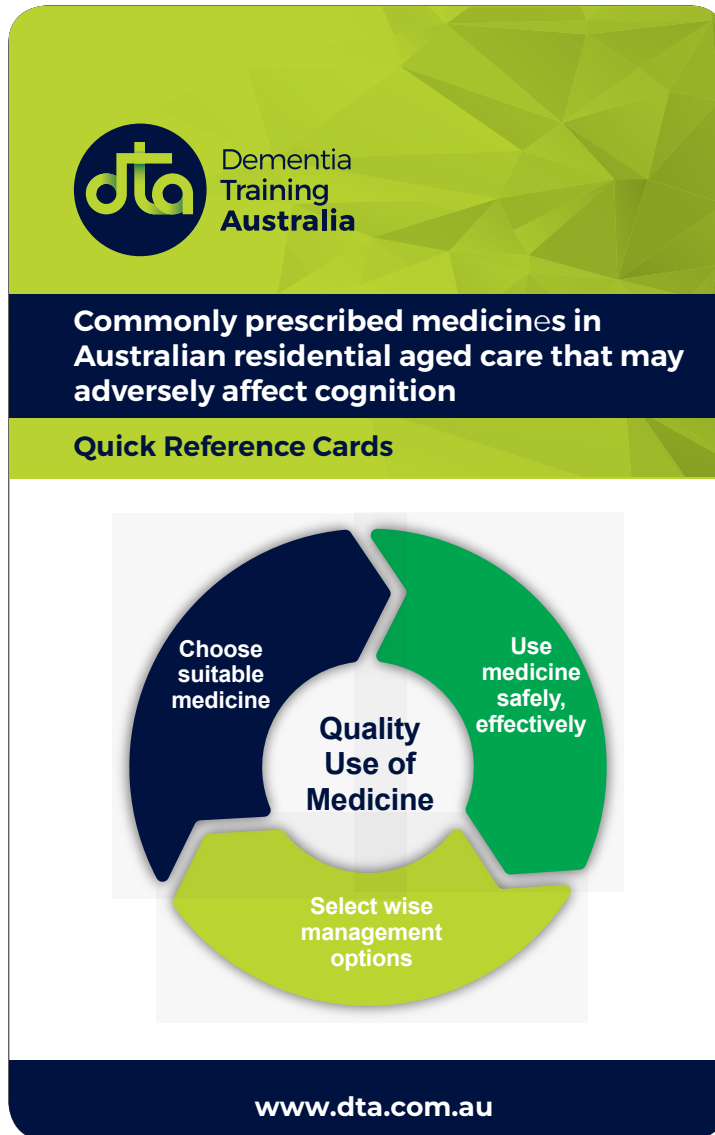


- Single-side print
- Fold page in half and crease along fold line
- Cut along outline
- Be sure to round the corners



**Commonly prescribed medicines in Australian residential aged care that may adversely affect cognition**

**Quick Reference Cards**

**Quality Use of Medicine**

- Choose suitable medicine
- Use medicine safely, effectively
- Select wise management options

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MEDICINE AND COGNITION

## MEDICINE AND COGNITION

### How these cards were developed

- 1) Medicines that may adversely affect cognition were identified from the literature and expert opinion.
- 2) Data on the prescribing frequency of all medicines in Australian residential aged care was sourced.
- 3) Commonly prescribed medicines that may adversely affect cognition were identified (Table 1).

### How to use these cards

The cards may be used as a reference to provide a **starting point** in identifying medicines that may be adversely affecting a person's cognition. They are **NOT** intended to be used to guide prescribing decisions.

Keep these cards close-to-hand, such as attached to the medication trolley or beside a dispensing computer.

### Medicine and cognition implications

Adverse cognitive effects may occur when any of the medicines in Table 1 are taken at any dose.

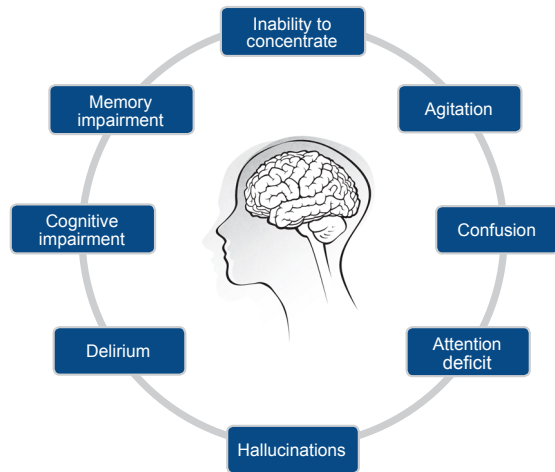
### Particularly high-risk circumstances include:

- When a medicine from Table 1 is taken at a high dose and/or in combination.
- When any new medicine is started, stopped, or the dose is changed.
- When there are interactions between medicines.
- During times of increased stress, e.g. illness, infection, pain.
- When a person has reduced 'cognitive reserve', e.g. cognitive impairment, frailty.

FOLD LINE

## MEDICINE AND COGNITION

Medicines may cause a number of unintentional effects on a person's cognition e.g. memory, thoughts and behaviour (see below). These effects may become apparent as soon as a new medicine is started or a dose is changed, or may occur gradually over a period of time.



**!** If you have **ANY** concerns regarding possible adverse effects of a resident's medicine, request a medication review

MEDICINE AND COGNITION

## MEDICINE AND COGNITION

Cognition may be adversely affected by the **anticholinergic** and/or **sedative** effects of many medicines.

In Table 1:

- HIGH RISK medicines have the strongest anticholinergic effects, and may be considered as the MOST LIKELY to affect cognition.
- LOWER RISK medicines have less anticholinergic effect, and are more likely to affect cognition when used in combination with other medicines in Table 1, or at high doses.

Many of the medicines listed in Table 1 have sedative effects which may also impair cognition.

Other potential adverse effects of these medicines include:

### Anticholinergic effects

- Dry mouth
- Urinary retention
- Constipation
- Irregular heart rate
- Blurred vision

### Sedative effects

- Feeling sleepier/increased lethargy
- Slurred speech
- Dizziness, unsteadiness

**!** Both anticholinergic and sedative medicines are strongly associated with an increased **risk of falls**.

FOLD LINE

## MEDICINE AND COGNITION

Table 1. Selected medicines that may adversely affect cognition and are commonly prescribed in Australian residential aged care.

|                 | Anticholinergic effects  |   |
|-----------------|--|---|
|                 | Higher   | Lower   |
| Antipsychotics  | <ul style="list-style-type: none"> <li>Chlorpromazine</li> <li>Clozapine</li> <li>Fluphenazine</li> <li>Olanzapine</li> <li>Pericyazine (<i>periciazine</i>)</li> <li>Trifluoperazine</li> </ul> | <ul style="list-style-type: none"> <li>Aripiprazole</li> <li>Asenapine</li> <li>Haloperidol</li> <li>Paliperidone</li> <li>Quetiapine</li> <li>Risperidone</li> <li>Ziprasidone</li> </ul>                                      |
| Antidepressants | <ul style="list-style-type: none"> <li>Amitriptyline</li> <li>Clomipramine</li> <li>Doxepin</li> <li>Dosulepin (<i>dothiepin</i>)</li> <li>Imipramine</li> <li>Nortriptyline</li> </ul>          | <ul style="list-style-type: none"> <li>Citalopram</li> <li>Fluoxetine</li> <li>Fluvoxamine</li> <li>Mirtazapine</li> <li>Paroxetine</li> <li>Phenelzine</li> <li>Selegiline</li> <li>Sertraline</li> <li>Venlafaxine</li> </ul> |
| Antihistamines  | <ul style="list-style-type: none"> <li>Cyproheptadine</li> <li>Dexchlorpheniramine</li> <li>Promethazine</li> </ul>  | <ul style="list-style-type: none"> <li>Alimemazine (<i>trimeprazine</i>)</li> <li>Cetirizine</li> <li>Loratadine</li> </ul>   |

**Note:** Many of these medicines may also have sedative effects.


MEDICINE AND COGNITION

## MEDICINE AND COGNITION

Table 1 (continued). Selected medicines that adversely affect cognition and are commonly prescribed in Australian residential aged care.

|                        | Anticholinergic effects   |  |
|------------------------|---|--|
|                        | Higher  | Lower  |
| Opioids                | <ul style="list-style-type: none"> <li>Tapentadol</li> </ul>  | <ul style="list-style-type: none"> <li>Codeine</li> <li>Fentanyl</li> <li>Morphine</li> <li>Oxycodone</li> <li>Tramadol</li> </ul>   |
| Bladder antispasmodics | <ul style="list-style-type: none"> <li>Darifenacin</li> <li>Oxybutynin</li> <li>Propantheline</li> <li>Solifenacin</li> <li>Tolterodine</li> </ul>                    |  |
| Other medicines        | <ul style="list-style-type: none"> <li>Atropine</li> <li>Benztropine (<i>benztrapine</i>)</li> <li>Hyoscyamine</li> <li>Trihexyphenidyl (<i>benzhexol</i>)</li> </ul> | <ul style="list-style-type: none"> <li>Benzodiazepines</li> <li>Amantadine</li> <li>Baclofen</li> <li>Carbamazepine</li> <li>Colchicine</li> <li>Entacapone</li> <li>Loperamide</li> <li>Metoclopramide</li> <li>Pramipexole</li> <li>Prochlorperazine</li> <li>Ranitidine</li> <li>Valproate</li> </ul> |

**Note:** Many of these medicines may also have sedative effects.



Remember, many other less-commonly prescribed medicines may also cause similar adverse effects on cognitive function.

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## REFERENCES

### These cards are based on:

Anticholinergic cognitive burden scale. (2012 update). Indianapolis: Regenstrief Institute, Inc. Retrieved from: [http://www.idhca.org/wp-content/uploads/2018/02/DESAI\\_ACB\\_scale\\_-\\_Legal\\_size\\_paper.pdf](http://www.idhca.org/wp-content/uploads/2018/02/DESAI_ACB_scale_-_Legal_size_paper.pdf)

Australian Government, Department of Health and Ageing. (2012). *Guiding principles for medication management in residential aged care facilities*. Commonwealth of Australia: Canberra, ACT.

Australian Government, Department of Health, Therapeutic Goods Administration. (2016). *Poisons Standard July 2016: Appendix K* (pp. 334-341). Retrieved from <https://www.legislation.gov.au/Details/F2016L01071>

Australian Government, Department of Veterans' Affairs, Veterans' MATES. (2014). *Topic 39: Thinking clearly about the anticholinergic burden*. Retrieved from <https://www.veteransmates.net.au/topic-39>

Durán C.E., Azermai M., Vander Stichele R.H. (2013). Systematic review of anticholinergic risk scales in older adults. *Eur J Clin Pharmacol*, 69, 1485-1496. doi: 10.1007/s00228-013-1499-3

Rossi. S. (Ed). (2022). *Anticholinergics*. Adelaide: Australian Medicines Handbook Pty Ltd.

Rudolph, J.L., Salow, M.J., Angelini, M.C., & McGlinchey, R.E. (2008). The anticholinergic risk scale and anticholinergic adverse effects in older persons. *Arch Intern Med*, 168(5), 508-513. doi:10.1001/archinternmed.2007.106

This resource may be used by all staff involved with medication management in community and residential aged care settings.

This set of cards accompany the DTA Minimising antipsychotic medicines for changed behaviours - Quick Reference Cards.

The information focuses on commonly prescribed medicines in Australian residential aged care and their associated degree of adverse cognitive effects, primarily medicines with anticholinergic and sedative actions.

The medicine list is not exhaustive, and should not be used as the sole reference when supporting a person with a suspected cognitive adverse effect. They are not intended to be used to guide prescribing decisions.

These cards provide general information only and do not claim to reflect all considerations. As with all guidelines, these cards must be used in consideration of each individual patients' circumstances and goals of care.

This resource was originally produced by the Western Australian Dementia Training Study Centre, School of Pharmacy, Curtin University, with expert advice from Louis Anastasas, Dr Nicholas Bretland, Danijela Gnjjidic, Alison Ilijovski and Ann Toh. It is now distributed by Dementia Training Australia, funded by the Australian Government.

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