# Anticholinergic drugs

This project reviews appropriate treatment with anticholinergic drugs. An increasing number of systematic reviews and meta-analyses report that drugs with anticholinergic effects are associated with an increased risk of cognitive impairment and all cause mortality in older people.[1]

## Recommendations

- Prescribe anticholinergic drugs with caution in older or frail people or people with complex multi-morbidities.[1] Older and frail patients are more likely to experience adverse effects with anticholinergics such as constipation, urinary retention, dry mouth/eyes, sedation, confusion, delirium, photophobia, falls and reduced cognition.
- Research suggests a link to increased mortality with the number and potency of anticholinergic agents prescribed.[1-3] Use toolkits to review anticholinergic burden (ACB), e.g. attachments 1 and 2.
- Minimise the use of anticholinergic drugs where possible.[1,2]
- Review at regular intervals. Discontinue medication if there is no absolute need or switch to medication with a lower ACB score or from a different class.[2]
- Review medication in older people that have had a fall or are at increased risk of falling as part of a multifactorial risk assessment.[4]

### Specific recommendations for patients with dementia

- Perform a medication review to identify and minimize use of drugs that may adversely affect cognitive function.
- Avoid prescribing anticholinergics with acetylcholinesterase inhibitors.
- If there is suspicion of anticholinergic induced impaired cognition, carry out a mini mental state examination (or equivalent) and consider switching or stopping the anticholinergic medicine if confirmed and clinically appropriate.[5]

## Background

Anticholinergics should be prescribed with caution as elderly patients are more likely to experience adverse effects such as constipation, urinary retention, dry mouth/eyes, sedation, confusion, delirium, photophobia, falls and reduced cognition (may lead to wrong diagnosis of dementia). Systematic reviews and meta-analysis show that there appears to be some association between anticholinergic drugs and cognitive impairment, falls and mortality.[1-3]

The Anticholinergic Burden (ACB) score is useful to raise awareness of the anticholinergic effects of different medicines. A number of studies have been published which aim to assign drugs with one, two or three points; the higher the number, the stronger the anticholinergic effect.[6]

Examples of full lists are given in attachments 1 and 2. An abbreviated list is in the table to the right:[3]

| 1 point | 2 points | 3 points |
|---|---|---|
| Haloperidol | Clozapine | Chlorpromazine |
| Quetiapine | Nortriptyline | Amitriptyline |
| Mirtazapine | Baclofen | Imipramine |
| Paroxetine | Cetirizine | Chlorpheniramine |
| Trazodone | Loratidine | Hydroxyzine |
| Ranitidine | Cimetidine | Oxybutynin |
| | Loperamide | |
| | Prochlorperazine | |

The National Institute for Health and Care Excellence (NICE) guidance (CG161) on falls in older people recommends that people who have had a fall or are at increased risk of falling should have their medication reviewed as part of a multifactorial risk assessment; psychotropic medications (including neuroleptics, sedatives, hypnotics and antidepressants) should be reviewed and if possible discontinued to reduce their risk of falling.[4]

In addition, NICE guidance on dementia (CG42) recommends that a diagnosis of dementia should be made only after a comprehensive assessment, including a medication review to identify and minimise use of drugs that may adversely affect cognitive functioning.[5] An NHS England dementia diagnosis and management resource for GPs recommends that drugs with strong anticholinergic activity such as tricyclic antidepressants (e.g. amitriptyline), older drugs for bladder problems (e.g. oxybutynin) and first generation antihistamines (e.g. promethazine, chlorpheniramine) should be stopped if possible or substituted for a drug with less anticholinergic activity.[7]

Specific recommendations are tabulated in table 1 in PrescQIPP bulletin 140 on anticholinergics along with resources to support decision making.

## References


1. National Institute for Health and Care Excellence (NICE). Drugs with anticholinergic effects and risk of cognitive impairment. Eyes on Evidence. October 2015. Accessed 16/10/15 via www.evidence.nhs.uk
2. All Wales Medicines Strategy Group. Polypharmacy: Guidance for Prescribing. July 2014. Accessed 28/11/15 via http://www.awmsg.org/docs/awmsg/medman/Polypharmacy%20-%20Guidance%20for%20Prescribing.pdf
3. SIGN. Polypharmacy guidance. March 2015. Accessed 15/10/15 via http://www.sign.ac.uk/pdf/polypharmacy_guidance.pdf
4. National Institute for Health and Care Excellence. Clinical Guideline 161. Falls in older people: assessing risk and prevention. June 2013. Accessed 26/10/15 via www.nice.org.uk
5. National Institute for Health and Care Excellence. Clinical Guideline 42. Dementia: supporting people with dementia and their carers in health and social care. November 2006. Accessed 26.10.15 via www.nice.org.uk
6. Fox C, Richardson K, Maidment ID, et al. Anticholinergic medication use and cognitive impairment in the older population: the Medical Research Council cognitive function and ageing study. Journal of the American Geriatric Society 2011; 59: 1477–1483. Accessed 16/10/15 via http://dx.doi.org/10.1111/j.1532-5415.2011.03491.x
7. NHS England. Dementia diagnosis and management. A brief pragmatic resource for general practitioners. January 2015. https://www.england.nhs.uk/wp-content/uploads/2015/01/dementia-diag-mng-ab-pt.pdf


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Additional resources available: https://www.prescqipp.info/resources/category/294-anticholinergic-drugs  Bulletin  Data pack

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