
Pharmacist

Six Things Pharmacists and Patients Should Question

by
Canadian Pharmacists Association
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1 **Don't use a medication to treat the side effects of another medication unless absolutely necessary.**

Side effects of drugs are often misdiagnosed as symptoms of another medical condition, and the result is that patients are prescribed more drugs to treat adverse drug reactions (ADRs). Prescribing cascades contribute to polypharmacy, which has several associated risks, such as drug interactions, increased frequency or severity of side effects and poor medication adherence. They can also exacerbate the harmful effects of unrecognized ADRs, impact a patient's quality of life and lead to avoidable hospital admissions and health system costs. Health practitioners should always investigate the possibility of an ADR presenting itself as a new symptom, especially in older adults, and avoid prescribing additional drug treatment until this possibility has been thoroughly investigated.

2 **Don't recommend the use of over-the-counter medications containing codeine for the management of acute or chronic pain. Counsel patients against their use and recommend safe alternatives.**

There is no evidence to support the use of low-dose codeine pain medication over non-opioid analgesics. Codeine is an addictive opioid with potential for abuse and dependence. Over-the-counter codeine products are often supplied in combination with non-opioid analgesics (i.e., NSAIDs and acetaminophen). In addition to concerns regarding codeine abuse and dependence, misuse of these codeine-containing combination analgesics may also result in serious adverse effects due to high doses of the simple analgesics (ibuprofen, acetaminophen or aspirin). Effects of high doses of simple analgesics may include liver toxicity, gastric perforation, haemorrhage and peptic ulcer, renal failure, chronic blood loss anaemia and low blood potassium (with potential fatal heart and neurological complications).

3 **Don't start or renew drug therapy unless there is an appropriate indication and reasonable expectation of benefit in the individual patient.**

Two-thirds of Canadians over 65 take five or more different medications and more than 40% of seniors 85 and older take 10 or more drugs. With each new drug, the risk of adverse drug reactions and subsequent hospitalization of the patient increases. In order to ensure the safety and appropriateness of therapy, all health care practitioners should have access to the therapeutic indication for a patient's drug therapy and start or renew medication only once they have determined that the benefits of therapy outweigh the risks to the patient.

4 **Don't renew long-term proton pump inhibitor (PPI) therapy for gastrointestinal symptoms without an attempt to stop or reduce (taper) therapy at least once per year for most patients.**

Proton pump inhibitors (PPIs) are among the most commonly prescribed drugs in Canada and many are becoming available as over-the-counter medications. While generally safe and well-tolerated for short-term use as needed in the treatment of gastro-esophageal reflux disease, PPIs can cause a number of adverse effects which may increase with a patient's age, long-term use or when the drug is inappropriately prescribed. Some adverse effects associated with long-term use of PPIs include increased risk of fracture, *Clostridium difficile* infection and diarrhea, community-acquired pneumonia (CAP), vitamin B12 deficiency, and hypomagnesemia. Guidelines indicate a preference for short-term use, H2-receptor antagonists or lifestyle changes over the chronic use of PPIs, and recommend discontinuing PPIs in adults who have completed a minimum of 4 weeks of treatment and whose symptoms have resolved. This does not apply to patients with Barrett esophagus, severe esophagitis grade C or D, or a documented history of bleeding gastrointestinal ulcers.

5**Question the use of antipsychotics as a first-line intervention to treat primary insomnia in any age group.**

Between 2005 and 2012, the sedating properties of certain atypical antipsychotics have led to a 300% increase in their off-label use for insomnia. Guidelines report a lack of evidence of benefit for atypical antipsychotics as first-line therapy and warn against their possible adverse effects, including weight gain and metabolic disorders. While antipsychotics may be appropriate in some patients with insomnia who have not benefited from other treatments, the use of these medications as first-line therapy for insomnia is discouraged due to the lack of evidence of benefit and potential for harmful adverse effects.

6**Don't prescribe or dispense benzodiazepines without building a discontinuation strategy into the patient's treatment plan (except for patients who have a valid indication for long-term use).**

Benzodiazepines are commonly prescribed drugs in Canada for anxiety disorders and insomnia. Strong evidence shows that long-term use of benzodiazepines in elderly patients is associated with tolerance, dependence and adverse effects, including sedation, impaired memory and cognition, falls, hip fractures, depression and increased hospital admissions. Prescribing guidelines recommend exploring alternative non-pharmacological and pharmacological options prior to prescribing benzodiazepines. If determined to be beneficial for the patient, benzodiazepines should not usually be prescribed for long-term use and discontinuation strategies should be built into the patient's treatment plan, such as gradual dose tapering, cognitive-behavioural therapy and alternative or tapering medications.

How the list was created

The Canadian Pharmacists Association (CPhA) established its Choosing Wisely Canada top six recommendations in two phases. The first phase comprised a call to pharmacists and pharmacy researchers from across Canada for recommendations in the fall of 2016. During the second phase, an expert committee was formed to review and finalize the recommendations submitted from the call to pharmacists. The committee was composed of CPhA member association representatives, pharmacy researchers, CPhA Board of Directors and staff who have broad knowledge and experience in pharmacy practice and quality improvement. Criteria used by the committee to finalize the list included relevance to practising pharmacists, impact and the available evidence to support each recommendation. The final list was approved by CPhA member associations and Board of Directors.

Sources

- 1 Avorn J, et al. Increased incidence of levodopa therapy following metoclopramide use. *JAMA*. 1995;274(22):1780-2. [PMID: 7500509](#).
Cadogan CA, et al. Appropriate Polypharmacy and Medicine Safety: When Many is not Too Many. *Drug Saf*. 2016 Feb;39(2):109-16. [PMID: 26692396](#).
Gill SS, et al. A prescribing cascade involving cholinesterase inhibitors and anticholinergic drugs. *Arch Intern Med*. 2005 Apr 11;165(7):808-13. [PMID: 15824303](#).
Gurwitz JH, et al. Initiation of antihypertensive treatment during nonsteroidal anti-inflammatory drug therapy. *JAMA*. 1994 Sep 14;272(10):781-6. [PMID: 8078142](#).
Kalisch LM, et al. The prescribing cascade. *Aust Prescr*. 2011;34:162-6.
Nguyen PV, et al. Prescribing cascade in an elderly woman. *Can Pharm J (Ott)*. 2016;149(3):122-4. [PMID: 27212961](#).
Rochon PA, et al. The prescribing cascade revisited. *Lancet*. 2017 May;389(10081):1778-80. [PMID: 28495154](#).
Rochon PA, et al. Optimising drug treatment for elderly people: the prescribing cascade. *BMJ*. 1997 Oct 25;315(7115):1096-9. [PMID: 9366745](#).
- 2 Canadian Pharmacists Association. [CPhA welcomes Health Canada's action plan on acetaminophen safety](#) [Internet]. 2016 Sept 15 [cited 2017 Jun 23].
Chetty R, et al. Severe hypokalaemia and weakness due to Nurofen misuse. *Ann Clin Biochem*. 2003 Jul;40(Pt4):422-3. [PMID: 12880547](#).
Cooper RJ. Over-the-counter medicine abuse – a review of the literature. *J Subst Use*. 2013 Apr;18(2):82-107. [PMID: 23525509](#).
de Craen AJ, et al. Analgesic efficacy and safety of paracetamol-codeine combinations versus paracetamol alone: a systematic review. *BMJ*. 1996 Aug 10;313(7053):321-5. [PMID: 8760737](#).
Frei MY, et al. Serious morbidity associated with misuse of over-the-counter codeine-ibuprofen analgesics: a series of 27 cases. *Med J Aust*. 2010 Sep 6;193(5):294-6. [PMID: 20819050](#).
McAvoy BR, et al. Over-the-counter codeine analgesic misuse and harm: characteristics of cases in Australia and New Zealand. *N Z Med J*. 2011 Nov 25;124(1346):29-33. [PMID: 22143850](#).
Robinson GM, et al. Misuse of over-the-counter codeine-containing analgesics: dependence and other adverse effects. *N Z Med J*. 2010 Jun 25;123(1317):59-64. [PMID: 20657632](#).
Van Hout MC, et al. Misuse of non-prescription codeine containing products: Recommendations for detection and reduction of risk in community pharmacies. *Int J Drug Policy*. 2016 Jan;27:17-22. [PMID: 26454626](#).
- 3 Alberta College of Pharmacists. [Check up on "checking"](#) [Internet]. 2015 [cited 2017 Jun 23].
Frank C, et al. Deprescribing for older patients. *CMAJ*. 2014 Dec 9;186(18):1369-76. [PMID: 25183716](#).
Hilmer SN, et al. Thinking through the medication list: appropriate prescribing and deprescribing in robust and frail older patients. *Aust Fam Physician*. 2012 Dec;41(12):924-8. [PMID: 23210113](#).
Holmes HM. Rational prescribing for patients with a reduced life expectancy. *Clin Pharmacol Ther*. 2009 Jan;85(1):103-7. [PMID: 19037198](#).
Nusair MB, et al. How pharmacists check the appropriateness of drug therapy? Observations in community pharmacy. *Res Social Adm Pharm*. 2017 Mar - Apr;13(2):349-357. [PMID: 27102265](#).
Picard A. [The Globe and Mail: Seniors are given so many drugs, it's madness](#) [Internet]. 2017 Mar 8 [cited 2017 Sep 11].
- 4 Choosing Wisely Canada. [Bye-bye PPI](#) [Internet]. 2017 July [cited 2017 Jun 26].
Farrell B, et al. Deprescribing proton pump inhibitors: Evidence-based clinical practice guideline. *Can Fam Physician*. 2017 May;63(5):354-64. [PMID: 28500192](#).
Rx Files. [PPI Deprescribing: Approaches for stopping or dose reduction of PPIs in those who may not need lifelong treatment](#) [Internet]. April 2015 [cited 2017 Jun 26].
Yu LY, et al. A review of the novel application and potential adverse effects of proton pump inhibitors. *Adv Ther*. 2017 May;34(5):1070-1086. [PMID: 28429247](#).
Zagaria, ME. PPIs: Considerations and resources for deprescribing in older adults. *US Pharm*. 2016;12(41):7-10.
- 5 Canadian Psychiatric Association. [First-line treatment for insomnia should not include routine use of antipsychotics, say Canadian psychiatrists](#) [Internet]. 2015 Jun [cited 2017 Jun 26].
Coe HV, et al. Safety of low doses of quetiapine when used for insomnia. *Ann Pharmacother*. 2012 May;46(5):718-22. [PMID: 22510671](#).
Maglione M, et al. Off-Label Use of Atypical Antipsychotics: An Update. Rockville (MD): Agency for Healthcare Research and Quality (US); 2011 Sep. Report No.: 11-EHC087-EF. [PMID: 22132426](#).
Park S. [Off-label use of atypical antipsychotics: Lack of evidence for their use in primary insomnia](#). *Formulary Journal* [Internet]. 2013 Nov [cited 2017 Jun 26].
Shah C, et al. Controversies in the use of second generation antipsychotics as sleep agent. *Pharmacol Res*. 2014 Jan;79:1-8. [PMID: 24184858](#).
Thompson W, et al. Atypical antipsychotics for insomnia: a systematic review. *Sleep Med*. 2016;12(6):13-17. [PMID: 27544830](#).
Tripathi A, et al. Antipsychotics for nonpsychotic illness. *Current Psychiatry*. 2013;12(2):22.

- 6 Ashton H. The diagnosis and management of benzodiazepine dependence. *Curr Opin Psychiatry*. 2005 May;18(3):249-55. PMID: 16639148.
- Baillargeon L, et al. Discontinuation of benzodiazepines among older insomniac adults treated with cognitive-behavioural therapy combined with gradual tapering: a randomized trial. *CMAJ*. 2003;169(10):1015-20. PMID: 14609970.
- Chang F. Strategies for benzodiazepine withdrawal in seniors: Weaning patients off these medications is a challenge. *Can Pharm J*. 2005 Nov 1; 138(8):38-40.
- Chen L, et al. Discontinuing benzodiazepine therapy: An interdisciplinary approach at a geriatric day hospital. *Can Pharm J*. 2010 Nov 1;143(6):286-95.
- Gallagher HC. Addressing the issue of chronic, inappropriate benzodiazepine use: how can pharmacists play a role? *Pharmacy*. 2013;1(2):65-93.
- Glass J, et al. Sedative hypnotics in older people with insomnia: meta-analysis of risks and benefits. *BMJ*. 2005 Nov 19;331(7526):1169. PMID: 16284208.
- National Pain Centre. [The 2017 Canadian Guideline for Opioids for Chronic Non-Cancer Pain](#) [Internet]. 2017 [cited 2017 Aug 18].
- Pollmann A, et al. Deprescribing benzodiazepines and Z-drugs in community-dwelling adults: a scoping review. *BMC Pharmacol Toxicol*. 2015 Jul 4;16:19. PMID: 26141716.
- Pottie K, et al. [Evidence-based clinical practice guideline for deprescribing benzodiazepine receptor agonists](#). Unpublished manuscript [Internet]. 2016 Mar (cited 2017 Jun 26).

About the Canadian Pharmacists Association

Since 1907, CPhA, a national, non-profit organization, has charted the course through many developments in pharmacy, and continues to be the national voice of Canadian pharmacists.



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Choosing Wisely Canada is a campaign to help physicians and patients engage in conversations about unnecessary tests, treatments and procedures, and to help physicians and patients make smart and effective choices to ensure high-quality care.

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