

Strategies for benzodiazepine withdrawal in seniors

Weaning patients off these medications is a challenge

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BENZODIAZEPINES ARE AMONG THE MOST COMMONLY prescribed medications for anxiety disorders and insomnia in Canada.¹⁻² Their use is associated with significant adverse effects such as sedation, impaired memory and cognition, impaired psychomotor function, and depression.³

Seniors who are using these drugs may be at higher risk for falls and accidents, so benzodiazepines are on the Beers list as drugs that seniors should generally avoid.⁴ Weaning patients off these medications is not easy. Long-term use of benzodiazepines can lead to substance dependence and distressing symptoms of withdrawal, often resulting in a return to their use.³

Withdrawal symptoms can occur after four weeks of daily use and typically last six to eight weeks. Symptoms tend to be more severe with higher doses, longer duration of use (> 1 year), and in benzodiazepines with short to intermediate half-life.⁵ Common withdrawal symptoms to watch for include sweating, increased heart rate, tremor, insomnia, agitation, hallucinations, rebound anxiety, and gastrointestinal symptoms such as nausea or vomiting. Tonic-clonic seizures are possible in cases of abrupt discontinuation from high doses.

Even though some of these symptoms can seem similar to a recurrence of the anxiety or insomnia disorder being previously treated, symptoms due to withdrawal tend to have a more immediate onset (8–24 hours after stopping the drug), and usually resolve with time.⁵⁻⁶

TABLE 1 Diazepam dose equivalent of benzodiazepines^{12*}

Benzodiazepine	Usual daily dose range (mg)	Half-life	Diazepam dose equivalent conversion factor
Triazolam (Halcion)	0.125–0.5	Short	20
Alprazolam (Xanax)	0.5–4	Intermediate	10
Bromazepam (Lectopam)	3–30	Intermediate	0.83
Clonazepam (Rivotril)	1.5–20	Intermediate	5
Lorazepam (Ativan)	1–4	Intermediate	5
Nitrazepam (Mogadon)	5–10	Intermediate	1
Oxazepam (Serax)	15–120	Intermediate	0.33
Temazepam (Restoril)	7.5–30	Intermediate	0.33
Chlordiazepoxide (Librium)	15–100	Long	0.5
Clorazepate (Tranxene)	7.5–60	Long	0.66
Diazepam (Valium)	2–40	Long	1
Flurazepam (Dalmane)	15–60	Long	0.33

*To convert: multiply dose with the diazepam conversion factor for the equivalent dose of diazepam.

Dose tapering

The recommended clinical management of benzodiazepine withdrawal is gradual dose tapering. For patients on short-term therapy, the dose can be reduced over one to two weeks. For patients who have been on high doses for over four weeks or regular doses for longer than 12 weeks, switching from a short-acting to a long-acting benzodiazepine such as diazepam is advisable, because the slow elimination of diazepam creates a smoother fall in blood level. (See Table 1 for diazepam equivalent dose.) There are various ways to design this long half-life strategy (see Table 2). The exact weaning rate depends on individual response. Elderly patients, patients on high doses (> 60 mg diazepam equivalent dose), or patients with personality disorders will require a slower rate of taper.⁵

Administration times should also be designed

to fit patient needs. For example, if the patient experiences difficulty sleeping, the diazepam should be taken at bedtime and education should include sleep hygiene. If the patient instead feels anxious during the day, a dose in the morning would be preferred. For patients taking multiple daily doses, switch one daily dose at a time to diazepam, at intervals of several days, starting with the bedtime or evening dose.

Throughout the tapering period, the patient needs to be monitored for withdrawal symptoms, as well as symptoms of the disorder being treated. If the patient reaches a difficult point, keep the same dose for a few extra weeks. Returning to a higher dose or adding “as needed” doses is not recommended and should only be used as a last resort.⁵

When used alone, simple “switch and taper” is effective in less than half of patients in achieving long-term discontinuation. Gradual tapering combined with cognitive-behavioural therapy can be more effective. In a study of 65 older adults on benzodiazepines for chronic insomnia, this combination approach was found to be superior to tapering alone⁷ (70% vs 38% achieved complete withdrawal). The beneficial effects were sustained for up to one year. In patients who are anxious, counselling can also be effective in dealing with the fear of withdrawal.⁸

Certain medications can be used as alternatives to benzodiazepines. Chloral hydrate, chlorpromazine, antidepressants, anticonvulsants (carbamazepine, valproate), propranolol, or non-benzodiazepine anxiolytics such as buspirone have been tried in instances where the patient still needed treatment for the underlying disorder or needed some extra support during the weaning period.^{5,9-10} These agents have less dependence potential and are associated with less pronounced discontinuation symptoms than the benzodiazepines, but they are not free from concerns of their own. For example, SSRIs can lead to hyponatremia and imipramine can have negative central nervous system or cardiac effects in the elderly. Efficacy is also highly variable. These medications should be initiated at the lowest possible doses, usually one-third to one-half of the normal adult dose, and gradually increased with monitoring.

Captodiamine is another medication showing promise in benzodiazepine withdrawal. It is an anxiolytic with sedative properties, but fewer risks of dependence and cognitive impairment. One recent study compared captodiamine 150 mg daily taken at the start of the benzodiazepine tapering process with placebo in patients suffering from anxiety disorder.¹¹ Approximately one month after the benzo-

TABLE 2 Examples of tapering strategies^{5-6,12}

Low-dose benzodiazepine use: 20% weekly dosage reduction over four-week period

Direct taper: 25% dose reduction weekly until 50% of the dose remains, followed by one-eighth dose reduction every four to seven days

Switch to an equivalent dose of diazepam: Then reduce by one-quarter of the dose in the first week, one-quarter during the second week and one-eighth in each of the following four weeks, for a total of six weeks. The last two dose levels can be drawn out longer if needed.

Switch to 50% of the daily equivalent dose of diazepam: Reduce by 10%–20% daily until total discontinuation. Use 5%–10% daily reduction in high doses (> 60 mg diazepam).

Slower tapering: Reduce the daily equivalent diazepam dose by 2 mg every week or two until half the original dose is reached, then reduce by 1 mg every week or two until completely stopped.

diazepine was weaned off, patients treated with captodiamine had less severe withdrawal symptoms. There was no rebound anxiety or evidence of withdrawal symptoms after captodiamine was discontinued.

Besides implementing and monitoring these strategies, pharmacists need to provide ongoing support for patients and their families. Help them keep track of the tapering schedule, inform them of what to expect, and provide them with non-pharmacological ways to manage symptoms. Encourage them to share their progress so you can offer them the best possible support in their efforts to withdraw successfully from benzodiazepine use.

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