GUIDE FOR THE USE OF

BENZODIAZEPINES

IN OLDER PEOPLE

There are more prescriptions per capita for benzodiazepines for people over 65 years old in Tasmania than in any other state of Australia. Of the 325 Australian Bureau of Statistics Statistical Areas 3 (SA3) regions in Australia, the 15 regions in Tasmania are all in the top 33% of PBS dispensing rates, with seven of the regions being in the top 10%.[i]

PHARMACOLOGY OF BENZODIAZEPINES

There are significant differences between the various benzodiazepines in terms of their duration of action, with many of the agents having active metabolites that prolong the effects (see Table 1). [ii,iii,iv,v,vi]

Despite very long half lives, the duration of the clinical effects of these agents is usually shorter than the half life as a result of significant distribution of the agents into fatty tissue. The obvious clinical effects can diminish after a few hours. Even those benzodiazepines with a very long half life have a rapid onset of action.

It is therefore relatively common to see "long acting" agents dosed at intervals that are more related to their peak effects than to their half lives. However, slow accumulation into fatty tissue can then lead to an increase in more subtle effects on gait and cognition over time.

Side effects are more prominent in older people, particularly the frail or those with cognitive impairment.

DRUG	DOSE EQUIVALENCE	TIME TO PEAK(H)	HALF LIFE (HOURS)*
Diazepam	5	0.5–1.5	20–80
Alprazolam	0.5	1–2	6–25
Clonazepam	0.25–0.5	1–4	22–54
Flunitrazepam	0.5	1–2	20–30
Lorazepam	1	2.5	12–16
Oxazepam	15	1–5	4–15
Temazepam	10	1	5–15
Zolpidem	10	1.5	2
Zopiclone	7.5	1.5	2–5

**Not including active metabolites*

TABLE 1 Pharmacology of benzodiazepines and related drugs

RECOMMENDATIONS

Insomnia

- The nature of the insomnia often lends itself to different non-pharmacological techniques (see Table 2).[vii]
- Consider the role of disease and medication as well as environmental factors. Many of these can be improved.
- If treatment is commenced with a benzodiazepine, ensure patient is aware of potential risk/benefit and of the decline in efficacy and risk of dependence that will ensue (see Figure 1).[viii,ix]
- With long term use the benefits reduce, while the side effects continue. Studies show benzodiazepine users have:
  - more difficulties falling asleep
  - more awakenings overnight
  - no difference in total sleep time
  - no difference in sleep latency (time to get to sleep). [x,xi]

Anxiety

- Encourage self-help strategies and consider cognitive behavioural therapy (CBT) if anxiety is mild to moderate.[xii]
- Multiple online therapies are available if face-to-face therapy is not an option (see RACGP http://www.racgp.org.au/your-practice/guidelines/handi/interventions/mental-health/internet-based-or-computerised-cbt-for-depression-and-anxiety/).[xiii]
- Only consider short term pharmacological therapy with benzodiazepines if:[xiv,xv,xvi]
  - Severe anxiety is present and person is not sufficiently stable to participate in psychological therapy.
  - Person is unable to or unwilling to trial non-pharmacological therapies.
  - Person has not benefitted from appropriate trial of psychological therapy.
  - Commencing antidepressant therapy and awaiting effect.
  - Avoid use of benzodiazepines long term (more than 4 weeks). They can reduce the efficacy of CBT.

Agitation in Advanced Dementia

- Benzodiazepines can be used for moderate to severe agitation in late stage dementia and may provide symptom relief and assist with delivery of appropriate care.[xvii,xviii]
- Morbidity and risks are especially high in this group and regular review (2 weekly) and tapering if adverse effects are detected is recommended. Cessation and Tapering Strategies.

FINDING FROM HISTORY	POTENTIAL STRATEGY	
Unable to 'wind down' at night	Relaxation techniques	Progressive muscle relaxation, deep breathing, pleasant visualisation
Poor lifestyle habits	General sleep hygiene	Consider diet/caffeine/ alcohol intake, exercises patterns, sleep environment
Excessive time in bed awake/broken sleep	Sleep Restriction	Staged increase in sleep with set wake-up time
Association between bed and insomnia	Stimulus control	Restrict bed for sleep (go to bed only when tired, get up if not asleep within 20 minutes)
Unrealistic expectations of sleep	Cognitive Therapy	Reassurance and modification of beliefs. Often includes relaxation techniques, stimulus control and sleep restriction.

TABLE 2 Suitable non-drug strategies for different sleep problems

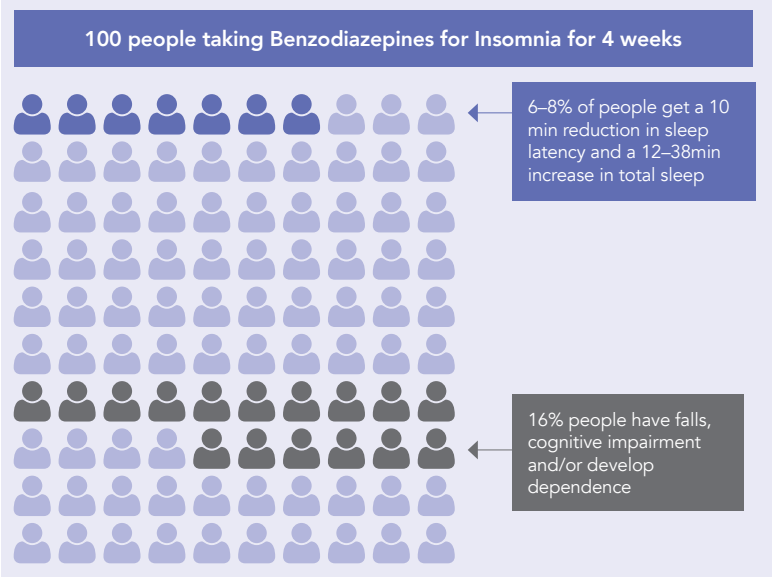

FIGURE 1 Risk/Benefits of Benzodiazepine for BPSD

Content for this Guide is based on information provided by Consultant Pharmacy Services (www.consultantpharmacyservices.com.au) and references can be accessed at: www.primaryhealthtas.com.au

CESSATION AND TAPERING STRATEGIES

Patient education is critical to potential cessation.[xix,xx] Some key points:

- Half of people that use benzodiazepines for more than 4 weeks become dependent on them
- The body becomes used to these agents rapidly and for many people, the medication becomes less effective.
- Reducing benzodiazepines is likely to improve memory, alertness and quality of life
- Reducing benzodiazepines may reduce the risk of falls, fractures, car accidents and other injuries
- Problems with stopping benzodiazepines can usually be avoided by slow tapering of the dose.

Insomnia

After cessation, insomnia can return in an exaggerated form and short term changes occur to sleep.[xxi]

- Sleep latency is increased, sleep is more disturbed and overall sleep is shorter in duration.
- These changes are of short duration (less than a week), and are minimised by slow tapering of the dose.

An appropriate support strategy with some monitoring and follow up is recommended. For example, utilising the NPS Fact Sheet "A reduction plan for your sleeping tablets" at www.nps.org.au.[xxii]

Anxiety

- Consider severity of anxiety with regard to degree of worry and avoidance behaviour and overall impact on function.
- Anxiety symptoms can recur if cessation of benzodiazepines is undertaken too quickly.
- The duration and dose of benzodiazepine will influence the type of dose reduction required (see Table 3).[iv,xxiii]

DURATION OF USE	TAPER LENGTH
Less than 2 months	May not be required- cease and monitor for rebound/ withdrawal
2-6 months	25% per week over 4 weeks
6 months or longer	"TTT" Ten percent reduction over Ten weeks with Terminal Taper (slower reduction for the last steps)
Dose can be considered over a week or two. For example, a 10% reduction may be implemented by asking the person to miss the agent one night in ten, then 2 nights in ten etc.	

TABLE 3 Taper length for Benzodiazepines according to duration use

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