

Geriatric Optimization

Benzodiazepines

Oxazepam (Serax[®])
Alprazolam (Xanax[®])
Diazepam (Valium[®])
Lorazepam (Ativan[®])
Clonazepam (Klonopin[®])
Flurazepam (Dalmane[®])

Triazolam (Halcion[®])
Temazepam (Restoril[®])
Estazolam (Prosom[®])
Chlordiazepoxide (Librium[®])
Clorazepate (Tranxene[®])
Quazepam (Doral[®])

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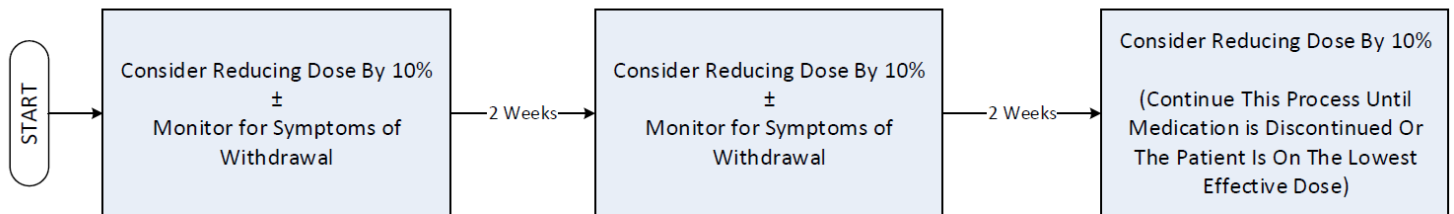
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WHY ARE THESE MEDICATIONS INAPPROPRIATE?

- Older adults have increased sensitivity to benzodiazepines. Use of these medications by adults over the age of 65 is associated with:¹
 - Adverse events; including delirium, falls, and fractures
 - Increased risk of cognitive impairment
 - Increased emergency room visits/hospitalizations
 - Motor vehicle crashes
 - Physical/psychological dependence
- Evidence suggests that use of benzodiazepines by older adults increases their risk of hip fracture due to falls by at least 50%.²
- In a study utilizing a set of standardized neuropsychological tests to measure cognitive function in older adults, it was found that chronic benzodiazepine users had **poorer cognitive performance** relative to controls.³
- Case-control studies suggest that the use of benzodiazepines **approximately doubles the risk of motor vehicle accidents**.⁴ Two meta-analyses also showed that benzodiazepines are associated with a 60 to 80% increase in the risk of traffic accidents.⁵

APPROACH TO OPTIMIZATION



- Consider available tablet sizes when decreasing doses for ease of patient administration.
- Consider reducing dose by 5% closer to end of taper.
- Symptoms of benzodiazepine withdrawal:⁶ sleep disturbance/insomnia, irritability, increased tension and anxiety, tremor, difficulty concentrating, palpitations, headache

GOAL: Full discontinuation OR adjusting regimen to lowest effective dose

ADDITIONAL BEST PRACTICES

1. Ensure alternative therapies are optimized before considering benzodiazepines:

Anxiety⁷

- Selective serotonin reuptake inhibitors (SSRIs): Fluoxetine, sertraline, etc. OR
- Serotonin-norepinephrine reuptake inhibitors (SNRIs): venlafaxine, duloxetine, etc. OR
- Buspirone (Buspar)

Insomnia

- Sleep hygiene education
- Cognitive behavioral therapy
- Melatonin (0.3-2 mg orally 1 hour before bedtime)⁸

2. If a benzodiazepine is necessary, there are 3 preferred benzodiazepines that can be used with caution at the lowest effective dose for older adults: **lorazepam, oxazepam, temazepam**
3. Benzodiazepines may be appropriate for seizure disorders, rapid eye movement sleep behavior disorder, benzodiazepine withdrawal, ethanol withdrawal, and severe generalized anxiety disorder in older adults

REFERENCES

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