## CNS Medication Oral Minimum Geriatric Effective Daily Dose (mg) *

### Atypical Antipsychotics
- Aripiprazole: 10
- Asenapine: 10
- Olanzapine: 5
- Quetiapine: 50
- Risperidone: 2
- Ziprasidone: 20

### Benzodiazepine Receptor Agonists
- Alprazolam: 0.25
- Clorazepate: 3.75
- Diazepam: 2
- Estazolam: 0.5
- Flurazepam: 15
- Lorazepam: 1
- Oxazepam: 10
- Quazepam: 7.5
- Temazepam: 7.5
- Triazolam: 0.125
- Zaleplon: 2.5
- Zolpidem: 2.5

*For additional agents/dosage forms, please consult Lexi-comp’s™ Geriatric Dosage Handbook or other suitable source.

## Converting Oral Opioid Receptor Agonist Daily Dose to Morphine Milligram Equivalents (MME)

<table>
<thead>
<tr>
<th>Oral Opioid</th>
<th>MME conversion factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Codeine</td>
<td>0.15</td>
</tr>
<tr>
<td>Fentanyl (Transdermal)</td>
<td>7.2</td>
</tr>
<tr>
<td>Hydrocodone</td>
<td>1.3</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>5.0</td>
</tr>
<tr>
<td>Methadone</td>
<td>4.0</td>
</tr>
<tr>
<td>Morphine</td>
<td>1.0</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>1.5</td>
</tr>
<tr>
<td>Tramadol</td>
<td>0.2</td>
</tr>
</tbody>
</table>

* Multiply oral opioid total daily dose times conversion factor and divide by min. effective geriatric dose of oral morphine (10mg/day) to calculate the standardized daily dose; Nielson S. Pharmacoepidemiol Drug Saf. 2016;25:733-7.
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### Antidepressants

<table>
<thead>
<tr>
<th>Tricyclic Antidepressants</th>
<th>Amitriptyline 10</th>
<th>Clomipramine 25</th>
<th>Desipramine 10</th>
<th>Doxepin 10</th>
<th>Nortriptyline 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selective Serotonin Reuptake Inhibitors</td>
<td>Citalopram 10</td>
<td>Escitalopram 5</td>
<td>Fluoxetine 10</td>
<td>Fluvoxamine 50</td>
<td>Paroxetine 10</td>
</tr>
</tbody>
</table>

### Antiepileptics

| Carbamazepine 600 | Gabapentin 900 | Lamotrigine 150 | Levetiracetam 1000 | Oxcarbazepine 900 | Phenytoin 300 | Pregabalin 150 | Primidone 750 | Topiramate 100 | Valproic acid 1000 | Zonisamide 100 |

### Antipsychotics

| Conventional | Chlorpromazine 10 | Fluphenazine 0.5 | Haloperidol 0.5 | Perphenazine 2 | Thioridazine 10 | Thiothixene 1 | Trifluoperazine 1 |

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**How to Calculate CNS Medication Burden**

1. Determine if patient taking any CNS medication from adjoining panels
2. Divide the daily dosage of that drug by the minimum effective geriatric daily dose
3. Do that for each CNS drug and sum the results; If 3+ then suggest discontinue or lower dosage

**EXAMPLE**

Patient takes 2 CNS drugs; Tramadol 50 mg twice daily & Amitriptyline 50 mg at bedtime

- Tramadol: 100 mg per day \( \times 0.2 = 20\text{MME} \)
- Amitriptyline: 50 mg/day \( \div 10 \text{mg/day} = 5.0 \)

\[ 20\text{MME} / 10\text{MME} = 2 \]

\[ + \]

\[ \text{Amitriptyline 50mg/day} \]

\[ 10\text{mg/day} \]

\[ \text{SDD} = 7.0 \text{-greater than 3 indicating a high fall risk} \]

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<table>
<thead>
<tr>
<th>Falls</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Falls are a major safety problem in older nursing home residents</td>
</tr>
<tr>
<td>2. Up to 50% of older nursing home residents fall and 10% are serious</td>
</tr>
<tr>
<td>3. High CNS medication burden significantly increases the risk of falls. High burden is defined as a summated standardized daily dose (SDD) score of 3 or greater. CNS medications include antidepressants, antiepileptics, antipsychotics, benzodiazepines, and opioids.</td>
</tr>
<tr>
<td>4. Goal is to reduce SDD to &lt;3 by reducing doses and/or stopping CNS medications</td>
</tr>
</tbody>
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