Most Commonly Used Medications in Long Term Care

A 3-hour CEU NC approved class offered by ExpressCare Pharmacy
Most Commonly Used Medications in Long Term Care

When choosing medications for residents residing in LTC facilities, those that are most safe and effective are ideal.
General

Medication toxic effects and drug-related problems can have profound medical and safety consequences for older adults and those residing in long term care facilities.

Adverse drug events (ADE’s) have been linked to preventable problems in elderly patients:

- Depression
- Constipation
- Immobility
- Confusion
Beer’s List

* Widely used consensus criteria for medication use in older adults

* A helpful general guide regarding potentially inappropriate medication use of medications in older adults. It identifies meds with potential risks, that outweigh their potential benefits

* The Beer’s List should be used as general guide for assessing the potential inappropriateness of medications
Beer's Criteria

**TABLE 1: 2012 AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults**

<table>
<thead>
<tr>
<th>Organ System/Therapeutic Category/Drug(s)</th>
<th>Recommendation</th>
<th>Quality of Evidence (QOE) &amp; Strength of Recommendation (SR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticholinergics (exclusive TCA)</td>
<td>Avoid</td>
<td>Highly anticholinergic; clearance reduced with advanced age, and may cause adverse events such as confusion, difficulty with urination, and increased risk of fall, dry mouth, constipation, and other anticholinergic effects/toxicity.</td>
</tr>
<tr>
<td>Clonazepam</td>
<td>Avoid</td>
<td>Use of diphenylhydramine in special situations such as acute treatment of severe allergic reaction may be appropriate.</td>
</tr>
<tr>
<td>Diphenhydramine</td>
<td>Avoid</td>
<td>Highly anticholinergic; clearance reduced with advanced age, and may cause adverse events such as confusion, difficulty with urination, and increased risk of fall, dry mouth, constipation, and other anticholinergic effects/toxicity.</td>
</tr>
<tr>
<td>Diphenhydramine (oral)</td>
<td>Avoid</td>
<td>Use of diphenhydramine in special situations such as acute treatment of severe allergic reaction may be appropriate.</td>
</tr>
<tr>
<td>Droperidol</td>
<td>Avoid</td>
<td>Highly anticholinergic; clearance reduced with advanced age, and may cause adverse events such as confusion, difficulty with urination, and increased risk of fall, dry mouth, constipation, and other anticholinergic effects/toxicity.</td>
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<tr>
<td>droperidol (intravenous)</td>
<td>Avoid</td>
<td>Use of diphenhydramine in special situations such as acute treatment of severe allergic reaction may be appropriate.</td>
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<tr>
<td>Metoclopramide</td>
<td>Avoid</td>
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<td>Trihexyphenidyl</td>
<td>Avoid</td>
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<tr>
<td>Antiemetics</td>
<td>Avoid</td>
<td>Highly anticholinergic; clearance reduced with advanced age, and may cause adverse events such as confusion, difficulty with urination, and increased risk of fall, dry mouth, constipation, and other anticholinergic effects/toxicity.</td>
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<td>Cyclizine</td>
<td>Avoid</td>
<td>Use of diphenhydramine in special situations such as acute treatment of severe allergic reaction may be appropriate.</td>
</tr>
<tr>
<td>Phenoxybenzamine</td>
<td>Avoid</td>
<td>Highly anticholinergic; clearance reduced with advanced age, and may cause adverse events such as confusion, difficulty with urination, and increased risk of fall, dry mouth, constipation, and other anticholinergic effects/toxicity.</td>
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<tr>
<td>Prolonged-action antispyrithympathetic</td>
<td>Avoid</td>
<td>Use of diphenhydramine in special situations such as acute treatment of severe allergic reaction may be appropriate.</td>
</tr>
<tr>
<td>Antidepressants</td>
<td>Avoid</td>
<td>Highly anticholinergic; clearance reduced with advanced age, and may cause adverse events such as confusion, difficulty with urination, and increased risk of fall, dry mouth, constipation, and other anticholinergic effects/toxicity.</td>
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<td>Fluoxetine</td>
<td>Avoid</td>
<td>Use of diphenhydramine in special situations such as acute treatment of severe allergic reaction may be appropriate.</td>
</tr>
<tr>
<td>Tricyclic antidepressants</td>
<td>Avoid</td>
<td>Highly anticholinergic; clearance reduced with advanced age, and may cause adverse events such as confusion, difficulty with urination, and increased risk of fall, dry mouth, constipation, and other anticholinergic effects/toxicity.</td>
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**TABLE 2: 2012 AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults**

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<tr>
<td>Antineoplastic</td>
<td>Avoid</td>
<td>Highly anticholinergic, uncertain effectiveness.</td>
</tr>
<tr>
<td>Boschasfamide</td>
<td>Avoid</td>
<td>May cause orthostatic hypotension; more effective alternatives available.</td>
</tr>
<tr>
<td>Docetaxel</td>
<td>Avoid</td>
<td>Highly anticholinergic; clearance reduced with advanced age, and may cause adverse events such as confusion, difficulty with urination, and increased risk of fall, dry mouth, constipation, and other anticholinergic effects/toxicity.</td>
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<td>Fludarabine</td>
<td>Avoid</td>
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<td>Ifosfamide</td>
<td>Avoid</td>
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<tr>
<td>Mitoxantrone</td>
<td>Avoid</td>
<td>May cause orthostatic hypotension; more effective alternatives available.</td>
</tr>
<tr>
<td>Paclitaxel</td>
<td>Avoid</td>
<td>Highly anticholinergic, uncertain effectiveness.</td>
</tr>
<tr>
<td>Prednisone</td>
<td>Avoid</td>
<td>May cause orthostatic hypotension; more effective alternatives available.</td>
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<td>Angiotensin blockers</td>
<td>Avoid</td>
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<tr>
<td>B-blockers</td>
<td>Avoid</td>
<td>May cause orthostatic hypotension; more effective alternatives available.</td>
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<tr>
<td>Diuretics</td>
<td>Avoid</td>
<td>Highly anticholinergic, uncertain effectiveness.</td>
</tr>
<tr>
<td>Nonsteroidal anti-inflammatory steroids</td>
<td>Avoid</td>
<td>May cause orthostatic hypotension; more effective alternatives available.</td>
</tr>
<tr>
<td>Statins</td>
<td>Avoid</td>
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<td>Antibacterials</td>
<td>Avoid</td>
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<tr>
<td>Antiepileptics</td>
<td>Avoid</td>
<td>May cause orthostatic hypotension; more effective alternatives available.</td>
</tr>
<tr>
<td>Antifibrinolytics</td>
<td>Avoid</td>
<td>Highly anticholinergic, uncertain effectiveness.</td>
</tr>
<tr>
<td>Antituberculosis</td>
<td>Avoid</td>
<td>May cause orthostatic hypotension; more effective alternatives available.</td>
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<tr>
<td>Antivirals</td>
<td>Avoid</td>
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</tr>
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<td>Antifungal</td>
<td>Avoid</td>
<td>May cause orthostatic hypotension; more effective alternatives available.</td>
</tr>
<tr>
<td>Antiviral</td>
<td>Avoid</td>
<td>Highly anticholinergic, uncertain effectiveness.</td>
</tr>
<tr>
<td>Antimicrobial antibiotics</td>
<td>Avoid</td>
<td>May cause orthostatic hypotension; more effective alternatives available.</td>
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<td>Antiinflammatorys</td>
<td>Avoid</td>
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Beer's Criteria cont'd
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Table 2 (continued from page 6)

<table>
<thead>
<tr>
<th>Disease or Syndrome</th>
<th>Drug(s)</th>
<th>Recommendation</th>
<th>Rational, Quality of Evidence (QE) &amp; Strength of Recommendation (SR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glaucoma</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Chronic constipation</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Oral antimuscarinics</td>
<td>Avoid unless no other alternatives.</td>
<td>Can worsen constipation for urinary incontinence; antimuscarinics overall differ in incidence of constipation response; vestibular disorder alternative if constipation develops.</td>
<td>QE = High (for Urinary Incontinence), Moderate-Low (All Others); SR = Strong</td>
</tr>
<tr>
<td>Diuretics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Angina</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>First-generation antihistamines as single agent or part of combination products</td>
<td>Avoid unless no other alternatives.</td>
<td>Can worsen constipation for urinary incontinence; antimuscarinics overall differ in incidence of constipation response; vestibular disorder alternative if constipation develops.</td>
<td>QE = High (for Urinary Incontinence), Moderate-Low (All Others); SR = Strong</td>
</tr>
<tr>
<td>Buphenorphine (various)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Hydromorphone (various)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Propoxyphene</td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>Disproxoforine (various)</td>
<td></td>
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<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>Diethylstilbestrol</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydroxyadenin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trifluridine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anticholinergens/antispasmodics (see earlier for full list of drugs with strong anticholinergic properties)</td>
<td>Avoid unless no other alternatives.</td>
<td>Can worsen constipation for urinary incontinence; antimuscarinics overall differ in incidence of constipation response; vestibular disorder alternative if constipation develops.</td>
<td>QE = High (for Urinary Incontinence), Moderate-Low (All Others); SR = Strong</td>
</tr>
<tr>
<td>History of gastric (duodenal) ulcers</td>
<td>Avoid unless no other alternatives are not effective and an agent (proton-pump inhibitor or misoprostol).</td>
<td>May exacerbate existing ulcers or cause new/additional ulcers.</td>
<td>QE = Moderate; SR = Strong</td>
</tr>
</tbody>
</table>

Table 2 (continued from page 7)

<table>
<thead>
<tr>
<th>Disease or Syndrome</th>
<th>Drug(s)</th>
<th>Recommendation</th>
<th>Rational, Quality of Evidence (QE) &amp; Strength of Recommendation (SR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low glucose symptoms, glucose intolerance</td>
<td>Avoid unless no other alternatives.</td>
<td>Can worsen constipation for urinary incontinence; antimuscarinics overall differ in incidence of constipation response; vestibular disorder alternative if constipation develops.</td>
<td>QE = High (for Urinary Incontinence), Moderate-Low (All Others); SR = Strong</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Avoid in men.</td>
<td>May decrease urinary flow and cause urinary retention.</td>
<td>QE = Moderate; SR = Strong (indicated agents); Week (All Others)</td>
</tr>
<tr>
<td>Stress or intolerance to urinary incontinence</td>
<td>Avoid in women.</td>
<td>Aggravation of incontinence.</td>
<td>QE = Moderate; SR = Strong</td>
</tr>
</tbody>
</table>

Table 2 Abbreviations: CCBs, calcium channel blockers; AGS, anticholinesterase inhibitors; CFAS, central nervous system; COX: cyclooxygenase; NSAIDs, nonsteroidal anti-inflammatory drugs; SR, Strength of Recommendations; SRR, selective serotonin reuptake inhibitors; TCAs, tricyclic antidepressants; QE, Quality of Evidence

Table 3: 2012 AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults Due to Drug-Drug or Drug-Syndrome Interactions That May Exacerbate the Disease or Syndrome

<table>
<thead>
<tr>
<th>Drug(s)</th>
<th>Recommendation</th>
<th>Rational, Quality of Evidence (QE) &amp; Strength of Recommendation (SR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspirin for primary prevention of cardiac events</td>
<td>Use with caution in adults &gt;80 years old.</td>
<td>Lack of evidence of benefit versus risk in individuals 80 years old.</td>
</tr>
<tr>
<td>Olmesartan</td>
<td>Use with caution in adults &gt;75 years old or if CrCl &lt;30 mL/min.</td>
<td>Increased risk of bleeding compared with warfarin in adults 275 years old; lack of evidence for efficacy and safety in patients with CrCl &lt;30 mL/min.</td>
</tr>
<tr>
<td>Prasugrel</td>
<td>Use with caution in adults &gt;75 years old.</td>
<td>Greater risk of bleeding in older adults may be offset by benefit in highest-risk older patients (eg, those with prior myocardial infarction or diabetes).</td>
</tr>
<tr>
<td>Antipsychotics</td>
<td>Use with caution. May exacerbate or cause SADH or hyperprolactinemia; need to monitor sodium level closely when starting or changing dosages in older adults due to increased risk.</td>
<td>QE = Moderate; SR = Strong</td>
</tr>
<tr>
<td>Ticlopidine</td>
<td>Use with caution. May exacerbate episodes of syncope in individuals with history of syncope.</td>
<td>QE = Moderate; SR = Week</td>
</tr>
</tbody>
</table>

Table 3 Abbreviations: CrCl: creatinine clearance; SADH, syndrome of inappropriate antidiuretic hormone secretion; SRRs, selective serotonin reuptake inhibitors; NNR, nonsteroid-nonopiophene reuptake inhibitors; SR, Strength of Recommendation; TCAs, tricyclic antidepressants; QE, Quality of Evidence

The American Geriatrics Society gratefully acknowledges the support of the John A. Hartford Foundation, Retirement Research Foundation and Roberts Wood Johnson Foundation.
Antidepressants

- Zoloft (Sertraline)
- Paxil (Paroxetine)
- Luvox (Fluvoxamine)
- Serzone (Nefazadone)
- Pamelor (Nortriptyline)
- Wellbutrin (Bupropion)
- Celexa (Citalopram)
- Effexor (Venlafaxine)
- Sinequan (Doxepin)
- Prozac (Fluoxetine)
- Remeron (Mirtazapine)
- Elavil (Amitriptyline)
- Pristiq (Desvenlafaxine)
- Viibryd
Antidepressants - Common Uses

* Depression
* Insomnia
* Smoking Cessation
* Panic Disorder
* Drug Withdrawal
* Neuropathic pain
* Migraine Prophylaxis
* Obsessive-Compulsive Disorder
Antidepressants - Common Side Effects

- sedation
- anticholinergic
- orthostatic hypotension
- cardiac
- headache
- dizziness
- nervousness
- anxiety

- nausea
- vomiting
- constipation
- diarrhea
- confusion
- insomnia
- impaired cognitive function
- photosensitivity
Antidepressants - General Notes

DO NOT STOP THESE MEDS ABRUPTLY!
(a gradual taper is recommended)

Normal Antidepressant effects usually takes 2 weeks to show maximum effects

SSRI’s (Select Serotonin Reuptake Inhibitors)
- Less anticholinergic
  - Zoloft, Paxil, Prozac, Celexa

Nortriptyline - Blood levels need to be monitored

Trazodone - Sometimes used as a sleep aid

Wellbutrin (Bupropion) - Same ingredient in Zyban for smoking cessation
Antianxiety Medications

Ativan (Lorazepam)  Halcion (Triazolam)
Restoril (Temazepam)  Buspar (Buspirone)
Dalmane (Flurazepam)  Serax (Oxazepam)
Valium (Diazepam)  Klonopin (Clonazepam)
Xanax (Alprazolam)
Antianxiety - Common Uses

* Anxiety
* Insomnia
* Panic attacks
* Seizures
* In combination to treat depression
Antianxiety - Common Side Effects

*sedation
*nausea
*vomiting
*diarrhea
*constipation
*dizziness
*urinary incontinence
*addiction
*decreased respiratory rate
Antianxiety - General Notes

Diazepam:
  * long acting
  * “hang-over” effects

Lorazepam/Alprazolam
  * short acting
  * anxiety “drug of choice” for elderly (less sedation)

Temazepam
  * very sedative
  * used as a sleep aid
Anti-Psychotics

Haldol (Haloperidol)  Clozaril (Clozapine)
Zyprexa (Olanzapine)  Seroquel (Quetiapine)
Navane (Thiothixene)  Prolixin (Fluphenazine)
Stelazine (Trifluoperazine)  Lithium
Risperdal (Risperidone)  Abilify
Thorazine (Chlorpromazine)  Mellaril (Thioridazine)
Saphris  Geodon (Ziprasidone)
Anti-Psychotic Common Uses

* Psychotropic Disorders
* Schizophrenia
* Hallucinations
* Neuroleptic
* Antiemetic
* Hiccups
* Mania
* Mood Disorders
* Dementia
* Agitation
Anti-Psychotic Common Side Effects

*sedation
*extrapyramidal side effects (EPS)
*anticholinergic
*tardive dyskinesia
*orthostatic hypotension
*cardiac
*nausea
*vomiting
*visual changes
*confusion
Anti-Psychotic General Notes

*EPS Monitoring
  - AIMS (Abnormal Involuntary Movement Scale)
  - DISCUS (Dykinsesia Identification Scale)

*Anti-Psychotics should not be used “as needed” (PRN)
  - Only provides sedating/chemical restraint effects
  - Normal anti-psychotic effects takes 2-4 weeks of treatment
Anticonvulsants/Seizure Meds

Dilantin (Phenytoin)  Lyrica
Tegretol (Carbamazepine)  Trileptal
Topamax (Topiramate)
Depakote (Valproic Acid)
Phenobarbital
Primidone
Lamictal (Lamotrigine)
Neurontin (Gabapentin)
Anticonvulsant/Seizure Meds - Common Uses

* Seizure Disorders
* Behavioral Disorders (Depakote)
* Hypnotic/Sedative
* Neuralgia/Diabetic Neuropathy
* Alcohol withdrawal
Anticonvulsant/Seizure Meds - Common Side Effects

*nausea
*vomiting
*constipation
*diarrhea
*confusion
*sedation
*toxicity
Anticonvulsant/Seizure Med - General Notes

*Blood levels need to be monitored with the following:
- Dilantin
- Tegretol
- Depakote
- Phenobarbital
- Primidone

*Depakote found to be effective in mood disorders
Gastrointestinal

Zantac (Ranitidine)  Pepcid (Famotidine)
Tagamet (Cimetidine)  Prevacid (Lansoprazole)
Antacids (Tums)  Protonix (Pantoprazole)
Senna  Fleets (Enema)
Senna-S  Ex-Lax
Dulcolax (Bisacodyl)  Carafate (Sucralfate)
Axid (Nizatidine)  Aciphex
Prilosec (Omeprazole)  Nexium (Omeprazole)
Reglan (Metoclopramide)  Milk of Magnesium
Colace (Docusate)  Amitiza
Gleevec  Zelnorm
Gastrointestinalls - Common Uses

* Peptic/Duodenal Ulcers
* Indigestion/Heartburn
* Sour stomach
* GI Bleed
* Constipation
* Diarrhea
* Stool softener
* Laxative
Gastrointestinal - Common Side Effects

* Nausea
* Vomiting
* Constipation
* Diarrhea
* Extra Pyramidal Side Effects (EPS) - Reglan
Gastrointestinal - General Notes

*Zantac, Axid, Tagamet, Pepcid
  -also available in OTC strengths
  -use 30 min before meals for best results
  -reduce the production of acid

*Prilosec, Prevacid, Protonix, Aciphex, Nexium:
  -also available in OTC strengths
  -use 30 min before meals for best results
  -prevent the production of acid

*Reglan - may cause EPS in the elderly
Gastrointestinals - General Notes

*Carafate - agent used to “coat” an ulcer to protect it from acid while it heals

*Fleets, Ex-Lax, Bisacodyl, & MOM:
  - stimulant laxatives
  - should not be used on a regular basis due to dependency

*Colace, Senna, Senna-S: all encourage to keep elderly regulated
Cholesterol Lowering Agents

Zocor (Simvastatin)
Lipitor (Atorvastatin)
Questran (Cholestyramine)
Tricor (Fenofibrate)
Pravachol (Pravastatin)

Niacin
Advicor (Niacin/Lovastatin)
Mevacor (Lovastatin)
Lopid (Gemfibrozil)
Lescol (Fluvastatin)
Cholesterol Lowering Agents - Common Uses

*Lower Cholesterol
*Reduce heart attacks
Cholesterol Lowering Agents - Common Side Effects

*Nausea/vomiting
*Constipation
*Diarrhea
*Elevated Liver enzymes
*Flatulence
*Rash
*Abdominal cramps
*Heartburn
*Blurred vision
*Dizziness
Cholesterol Lowering Agents - General Notes

*Liver function tests should be monitored with the use of these agents

*Treatment in the elderly with these agents should be reserved for those who are unable to obtain a desirable cholesterol by diet alone
## Urinary Incontinence

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Brand Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ditropan (Oxybutynin)</td>
<td>Enablex</td>
</tr>
<tr>
<td>Bentyl (Dicyclomine)</td>
<td>Oxytrol</td>
</tr>
<tr>
<td>Detrol (Tolterodine)</td>
<td>Myrbetrix</td>
</tr>
<tr>
<td>Urispas (Flavoxate)</td>
<td>Sanctura</td>
</tr>
<tr>
<td>Urecholine (Bethanechol)</td>
<td></td>
</tr>
<tr>
<td>Vesicare</td>
<td></td>
</tr>
<tr>
<td>Toviaz</td>
<td></td>
</tr>
</tbody>
</table>
Urinary Incontinence - Common Uses

* Urge Incontinence
* Stress Incontinence
* Overflow Incontinence
<table>
<thead>
<tr>
<th>Urinary Incontinence - Common Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Nausea/vomiting</td>
</tr>
<tr>
<td>*Constipation/diarrhea</td>
</tr>
<tr>
<td>*Urinary retention</td>
</tr>
<tr>
<td>*Blurred vision</td>
</tr>
<tr>
<td>*Rash</td>
</tr>
<tr>
<td>*Hot flashes</td>
</tr>
<tr>
<td>*Confusion</td>
</tr>
<tr>
<td>*Drowsiness</td>
</tr>
<tr>
<td>*Dizziness</td>
</tr>
<tr>
<td>*Tachycardia</td>
</tr>
<tr>
<td>*Hallucinations</td>
</tr>
</tbody>
</table>
Urinary Incontinence - General Notes

*Caution should be used in the elderly because of the increased incidence of side effects like:
  -Confusion
  -Constipation
  -Blurred vision
  -Tachycardia

*Monitor episodes of incontinence to assess effectiveness of treatment
Thyroid Medications

Synthroid (Levothyroxine)
Amour Thyroid
Levoxyl
Ctomel
Thyroid Medications - Common Uses

*Hypothyroidism
Thyroid Medications - Common Side Effects

*Nausea/vomiting
*Headache
*Alopecia (hair loss)
*Weight loss
*Abdominal cramps
*Nervousness
*Cardiac dysrhythmias (lower pulse rate)
Thyroid Medications - General Notes

*Recommended to check pulse rate before each dose and do not administer if pulse is <60

*Monitor Thyroid levels on a regular basis
  - Increased TSH = Increased Thyroid dose
  - Decreased TSH = Decrease Thyroid dose
# Diabetes Medications

<table>
<thead>
<tr>
<th>Insulin Type</th>
<th>Medication Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPH Insulin</td>
<td>Glucotrol (XL) (Glipizide)</td>
</tr>
<tr>
<td>Regular Insulin</td>
<td>Amaryl (Glimepiride)</td>
</tr>
<tr>
<td>70/30 Insulin</td>
<td>Glyburide (Glipizide)</td>
</tr>
<tr>
<td>Lantus</td>
<td>Glucophage (Metformin)</td>
</tr>
<tr>
<td>Levemir</td>
<td>Precose (Acarbose)</td>
</tr>
<tr>
<td>Humalog</td>
<td>Actos (Pioglitazone)</td>
</tr>
<tr>
<td>Novolog</td>
<td>Byetta</td>
</tr>
<tr>
<td>Januvia</td>
<td>Janumet</td>
</tr>
<tr>
<td>Onglyza</td>
<td>Invokana</td>
</tr>
<tr>
<td>Glumetza</td>
<td>Actoplus</td>
</tr>
<tr>
<td>Tradjenta</td>
<td>Victoza</td>
</tr>
</tbody>
</table>
Diabetes Medications - Common Uses

*Insulin Dependent Diabetes (Type I)

*Non-Insulin Dependent Diabetes (Type II)
Diabetes Medications - Common Side Effects

*Nausea/vomiting
*Diarrhea
*Constipation
*Hypoglycemia
*Hyperglycemia
Diabetes Medications - General Notes

* NPH Insulin: Long acting
* Regular Insulin: Short acting (Sliding scale)
* 70/30 Insulin: Combo (70% Reg/30% NPH)
* Lantus & Levemir: used once daily
* Precose/Prandin:
  - Give with 1st bite of food
  - Prevents absorption of sugar in food
* Humalog/Novolog - very short acting (given w 1st bite of food)
* Always monitor for signs and symptoms of hypoglycemia
  - Drowsiness, dizziness
Ophthalmic Medications (Eye)

Alphagan (Brimonidine)  Artificial Tears
Timoptic (Timolol)      Systane Eye drops
Betoptic (Betaxolol)    
Diamox (Acetazolamide)  
Pilocarpine             
Ocupress (Carteolol)    
Xalatan (Latanoprost)   
Ocuflox (Ofloxacin)     

Ophthalmic Medications - Common Uses

*Glaucoma
*Ocular Hypertension
*Infections
*Dry Eyes (side effects from other meds)
Ophthalmic Medications - Common Side Effects

* Irritation
* Blurred Vision
* Pigmentation Changes
* Foreign body sensation
Ophthalmic Medications - General Notes

*Xalatan - expires 30 days after removed from refrigerator (date bottle when open)

*Separate multiple drops by 5 minutes

*Use gloves to administer
# Analgesics (Pain/Arthritis)

<table>
<thead>
<tr>
<th>Analgesics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motrin (Ibuprofen)</td>
</tr>
<tr>
<td>Percocet (Oxycodone/APAP)</td>
</tr>
<tr>
<td>Demerol (Meperidine)</td>
</tr>
<tr>
<td>Naproxen (Naprosyn)</td>
</tr>
<tr>
<td>Morphine</td>
</tr>
<tr>
<td>Relafen (Nabumetone)</td>
</tr>
<tr>
<td>Ultram (Tramadol)</td>
</tr>
<tr>
<td>Duragesic (Fentanyl)</td>
</tr>
<tr>
<td>Tylenol (Acetaminophen or APAP)</td>
</tr>
<tr>
<td>Celebrex</td>
</tr>
<tr>
<td>Indocin (Indomethacin)</td>
</tr>
<tr>
<td>Aspirin</td>
</tr>
<tr>
<td>Norco (Hydrocodone/APAP)</td>
</tr>
<tr>
<td>Vicodin (Hydrocodone/APAP)</td>
</tr>
<tr>
<td>Voltaren (Diclofenac)</td>
</tr>
<tr>
<td>Toradol (Ketorolac)</td>
</tr>
<tr>
<td>Mobic (Meloxicam)</td>
</tr>
<tr>
<td>Daypro (Oxaprozin)</td>
</tr>
<tr>
<td>Clinoril (Sulindac)</td>
</tr>
<tr>
<td>Lodine (Etodolac)</td>
</tr>
</tbody>
</table>
Analgesics - Common Uses

* Pain management/treatment
  * Arthritis
  * Gout
Analgesics - Common Uses

Nausea/vomiting
Diarrhea/constipation
Ulceration
Depression
Confusion
Addiction

Drowsinessness
Sedation
Elevated liver enzymes
Analgesics - General Notes

*Non-steroidal anti-inflammatory drugs (NSAID’s)(Motrin, Naproxen, Relafen, etc.) - have an increased incidence for causing GI side effects.
*Cytotec is used in combo with NSAID’s to prevent GI ulcers if NSAID is absolutely necessary
*Acetaminophen max dose in 24hrs = 3200mg
*Ibuprofen max dose in 24hrs = 3200mg
Parkinson’s Medications

Sinemet (Carbidopa/Levodopa)
Cogentin (Benztropine)
Eldepryl (Selegiline)
Parlodel
Stalevo
Requip (Ropinirole)
Mirapex (Pramipexole)
Neupro
Symmetrel (Amantadine)
Parkinson’s Medications - Common Uses

* Parkinson’s Disease
* Tardive Dyskinesia
* Drug Induced EPS
* Restless leg syndrome
Parkinson’s Medications - Common Side Effects

*Nausea/vomiting
*Constipation/diarrhea
*Anticholinergic
*Dry mouth
*Sedation
*Dizziness
*Hypotension
*Drowsiness
*Arrhythmias
Parkinson’s Medications - General Notes

*Cogentin is used very often in conjunction with anti-psychotics for EPS treatment/prevention
*Elderly are very susceptible to anticholinergic side effects caused by these medications
*Avoid giving Sinemet with meal high in protein (decreases absorption)
Anticoagulants/Antiplatelets

Coumadin (Warfarin)
Xarelto
Aspirin
Ticlid (Ticlodipine)
Lovenox (Enoxaparin)
Heparin
Urokinase
Anticoagulants/Antiplatelets - Common Uses

* Prevent and treat blood clots

* Prevent strokes

* Reduce risk of heart attack
Anticoagulants/Antiplatelets - Common Side Effects

*Nausea/vomiting
*Diarrhea
*Constipation
*Bruising
*Blood in stool
*other bleeding
Anticoagulants/Antiplatelets - General Notes

*Blood monitoring is vital to effective treatment (Protime/INR)

*Heparin/Lovenox - SQ/IV Injectable

*Coumadin - lots of drug interactions

*Coumadin - available in many strengths

*Xarelto - newer agent with less blood work required
Asthma Medications

Theo-Dur (Theophylline)  Singulair (Montelukast)
Volmax (Albuterol) Accolate (Zacirlukast)
Proventil (Albuterol) Ventolin (Albuterol)
ProAir (Albuterol) ProAir (Albuterol)
Azmacort (Triamcinolone) Azmacort (Triamcinolone)
Atrovent (Ipratropium) Atrovent (Ipratropium)
Flovent (Fluticasone) Flovent (Fluticasone)
Asthma Medications - Common Uses

* Asthma

* Chronic Obstructive Pulmonary Disease (COPD)
Asthma Medications - Common Side Effects

*Nausea
*Vomiting
*Oral candidiasis (with steroid inhalers)
*Constipation
*Diarrhea
Asthma Medications - General Notes

* Theophylline levels need to be monitored on a routine basis
* Albuterol inhaler is used as a rescue agent
* Proper administration technique for inhalers is vital for effectiveness
* Separate inhalers by at least 5 minutes
* Rinse mouth after each use (esp with steroids) - can lead to oral infections (Oral Candidiasis- aka “oral yeast”)
Hypertension/Heart Disease

Diuretics ("fluid medications")
- Lasix (Furosemide)
- Hydrodiuril (Hydrochlorothiazide)(HCTZ)
- Bumex (Bumetanide)
- Zaroxolyn (Metolazone)
- Lozol (Indapamide)
- Demadex (Torsemide)
Hypertension/Heart Disease

ACE I-Inhibitors

Accupril (Quinapril)  Altace (Ramipril)
Prinivil (Lisinopril)  Mavik (Trandolapril)
Zestril (Lisinopril)  Lotensin (Benazepril)
Vasotec (Enalapril)  Univasc (Moexipril)
Capoten (Captopril)  Monopril (Fosinopril)
Hypertension/Heart Disease

Ace II - Inhibitors

Cozaar (Losartan)  Atacand (Candesartan)
Hyzaar (Losartan/HCTZ)  Teveten (Eprosartan)
Avapro (Irbesartan)  Micardis (Telmisartan)
Diovan (Valsartan)  Benicar (Olmesartan)
Hypertension/Heart Disease

Calcium Channel Blockers

Norvasc (Amlodipine)
Procardia (Nifedipine)
Adalat (Nifedipine)
Cardizem (Diltiazem)
Calan, Verelan (Verapamil)
Plendil (Felodipine)
Sular (Nisoldipine)
Hypertension/Heart Disease

Beta- Blockers

- Lopressor/Toprol (Metoprolol)
- Normodyne (Labetolol)
- Tenormin (Atenolol)
- Inderal (Propranolol)
- Corgard (Nadolol)
- Zebeta (Bisoprolol)
- Septra (Acebutolol)
Hypertension/Heart Disease

Alpha-agonist
  Catapres (Clonidine)
  Tenex (Guanfacine)
  Aldomet (Methyldopa)
Hypertension/Heart Disease

Alpha-Antagonist

Hytrin (Terazosin)
Minipress (Prazosin)
Sinequan (Doxepine)
Cardura (Doxazosin)
Hypertension/Heart Disease

Vasodilators

Apresoline (Hydralazine)
Isordil (Isosorbide)
Persantine (Dipyridamole)
Cordarone (Amiodarone)
Minoxidil
Minipress (Prazosin)
Nitroglycerin
Hypertension/Heart Disease

Anti-arrhythmics

- Lanoxin (Digoxin)
- Norpace (Disopyramide)
- Procanbid (Procainamide)
- Quinidine
- Lidocaine
Hypertension/Heart Disease Common Uses

*Hypertension

*Cardiovascular Disease

*Arrhythmias
Hypertension/Heart Disease Common Side Effects

*Nausea
*Vomiting
*Diarrhea
*Constipation
*Hypotension
*Increased/Decreased Heart rate
*Cough (Ace Inhibitors)
*Edema
Hypertension/Heart Disease - General Notes

* Diuretics should be administered no later than 4pm
* When giving Digoxin, the pulse should be monitored. If <60, dose should be held
* Monitor Digoxin levels
* Calcium channel blockers can cause edema
Hypertension/Heart Disease - General Notes

*Monitor Blood Pressure routinely

*Monitor Heart Rate routinely

*Beta blockers can hide the signs and symptoms of high and low blood sugar