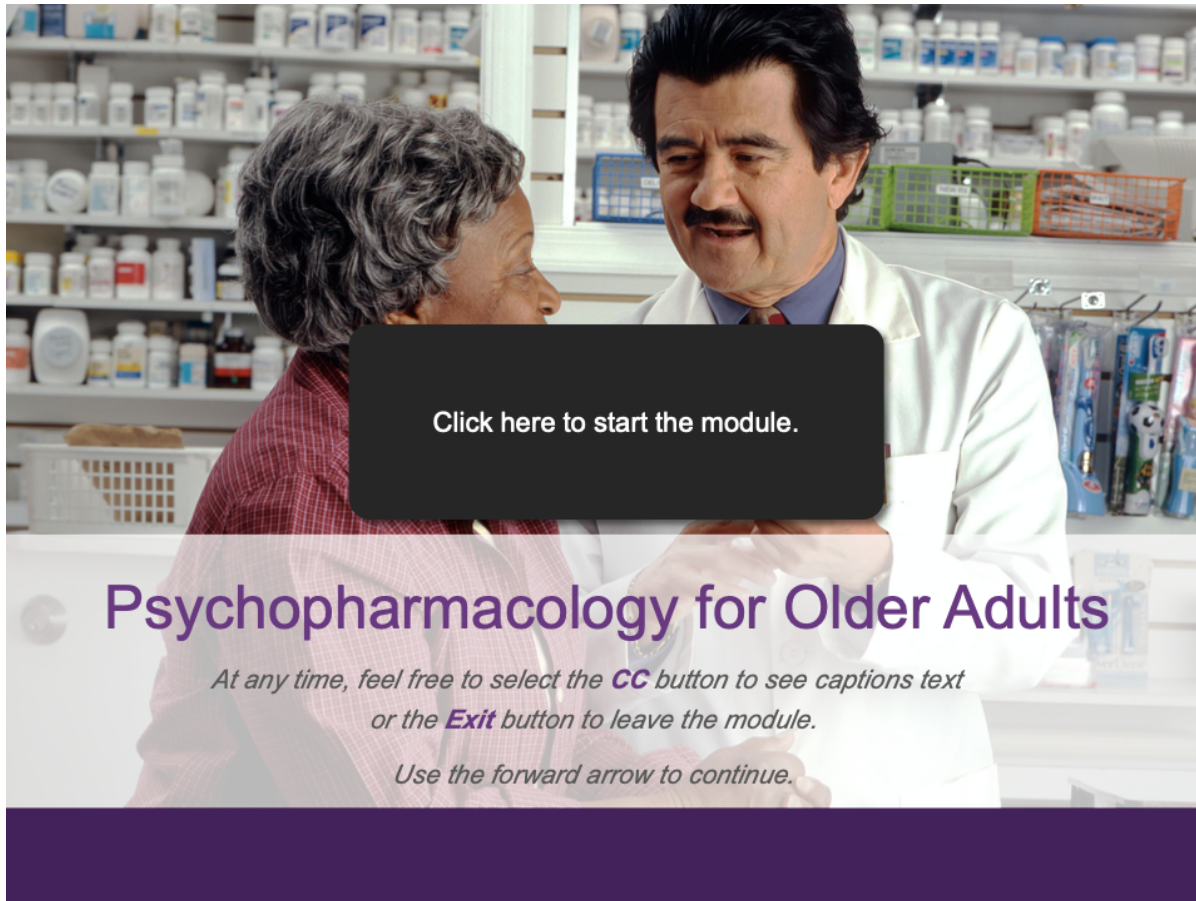


Slide 1



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Psychopharmacology for Older Adults

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or the **Exit** button to leave the module.*

Use the forward arrow to continue.



Psychopharmacology for Older Adults

*At any time, feel free to select the **CC** button to see captions text
or the **Exit** button to leave the module.
Use the forward arrow to continue.*




Take Note!

- The general principles in this guide are for educational purposes only
- They are not specific guidelines for prescribing clinicians
- Prescribing practice, medication monitoring decisions, and compliance with prescribing guidelines is the prescribing clinician responsibility
- The information presented in this module reflects knowledge pertaining to many, but not all, older adults
- Optimal pharmacological treatment is individually tailored

Use the forward arrow to continue.

2






Learning Objectives

After this completing this module, learners will be able to:

- List general principles of prescribing psychotropic medications for older adults
- Describe the different types of psychotropic medications and identify common side effects
- Identify serious side effects warranting immediate evaluation by a health care provider

Use the forward arrow to continue.

3





Older Adults and Psychotropic Medications

Psychotropic medications are drugs that affect mental function, behavior, mood, thoughts, or perception

Use the forward arrow to continue.

4

▶

Role of Non-Prescribing Team Members

- All members of the interdisciplinary care team have a vital role to play in the management of polypharmacy in older adults
- Non-prescriber team members are encouraged to help older adults
 - Reconcile and evaluate medications
 - Assess adherence to medications
 - Identify drug therapy problems
 - Collaborate as a team to manage issues related to suspected inappropriate polypharmacy and high-risk medication use
 - Help prescribers assess whether medications fit with older adult's life circumstances
 - Facilitate discussions about whether the benefits of medications outweigh potential harm

Use the forward arrow to continue.

5



Normal Aging and Pharmacokinetics

- Pharmacokinetics
 - Process of how medications move through the body via absorption, distribution, metabolism, and elimination.
- Aging is associated with structural and functional changes affecting all organ systems
 - May result in medications having a longer half-life, taking longer to clear the body in older adults
 - Long-acting medication may build up in an older adult

Can result in unanticipated overdose and possibly ER visit

Use the forward arrow to continue.

6



Normal Aging and Pharmacokinetics

- Kidneys shrink with age resulting in reduced renal clearance
- Drug-drug interactions can also occur in the kidneys, which affects the clearance of drugs
- Slower metabolism and elimination = substances stay in the body longer
 - “Start low and go slow”



Use the forward arrow to continue.

7



Normal Aging and Pharmacodynamics

- Pharmacodynamics
 - What drugs do to the body
- Effects of normal aging
 - Decline in the number of synapses in the brain and changes in their function
- Older adults are more sensitive to certain medications and more likely to experience adverse effects



Use the forward arrow to continue.

8



Complexity of Prescribing to Older Adults

- Premarketing drug trials often exclude older adults
 - FDA-approved dosing may not be appropriate for older adults
- Older adults more likely to have multiple medical conditions and take multiple medications
 - Increases risk of drug-drug interactions
- Older adults are more likely to experience cognitive difficulties
 - Complicates assessment/treatment of mental health disorders and medication adherence issues
 - Challenging to determine whether cognitive changes are associated with medications or natural disease processes
- Older adults may have barriers limiting physical access to medications

Use the forward arrow to continue.

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Take Home Message


- Aging brings structural and functional changes to all organ systems
- These changes must be taken into consideration when prescribing to older adults
- Older adults are at increased risk for drug-drug interactions



Use the forward arrow to continue.

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**Older Adult
Psychopharmacologic
Treatment**

It is important that all mental health clinicians be aware of appropriate prescribing principles

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Conduct a Comprehensive Assessment

- Rule out physical conditions
- Assess issues that are often mistaken for/exacerbate mental health problems
 - Medication side effects, sleep disorders, dementia, delirium
- Conduct thorough a mental health assessment for depression, anxiety, sleep disorders, cognitive impairment, substance use disorders



Ask about What Matters and Set Goals

WHAT MATTERS?

Ask "What Matters?" to the older adult to help inform health care goals



SETTING TREATMENT GOALS



Prescribing psychotropic medications is optimized by setting treatment goals that align with what matters and are realistic given the expected effects of the medication and the older adult's history



Address Stigma and Fears

- Use language that reduces stigma
- Put mental health disorders in same context as medical conditions
- Emphasize that treating mental health disorders can help older adults feel and function better
- Discuss the timeline for expected changes or improvements
- Address fears about psychotropic medications



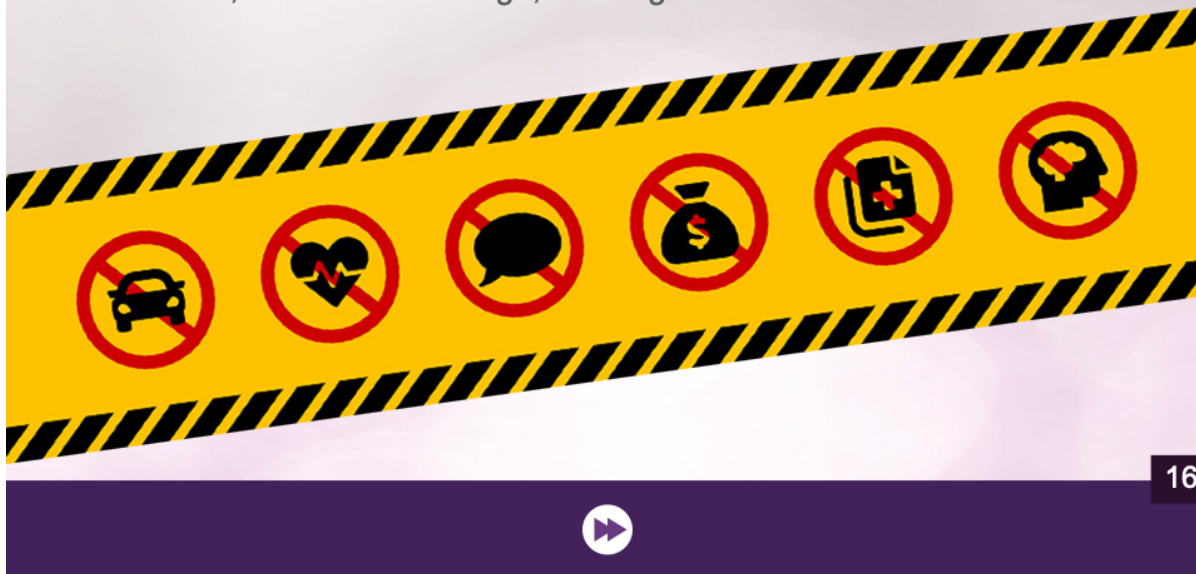
Review Instructions and Importance of Taking Medications as Prescribed

- Ensure that older adults understand instructions for proper use
- Discuss importance of treatment adherence, and keep regimen simple
- Encourage older adults to use medication reminders
- Ensure older adults understand prescription instructions
 - Teach-back method
 - Provide written instructions in plain language and 14-point (+) font
- Encourage older adults to contact their prescribing provider if they have questions or if they experience unwanted side effects
- Involve the caregiver or other support person if appropriate



Be Aware of Adherence Barriers

- Lack of transportation especially in rural and under-served urban areas
- Low health literacy, language barriers, or other communication barriers
- Finances, insurance coverage, and cognitive decline



Conservative Prescribing in Older Adults

- Start with behavioral or environmental interventions
 - Unless acute symptoms place the individual at significant risk
- Prescribe one psychotropic medication at a time
- Use the minimal possible dose
- Monotherapy is indicated whenever possible
- Consider older adult's history when selecting a drug
- Consider expected adverse events, likelihood of side effects, and special medication considerations or black box warnings
- Monitor for side effects



Cautious Prescribing in Older Adults

- Prescribing clinician should
 - Begin with the lowest available dose of the medication
 - Decrease the dose and reassess the older adult's response to the medication if negative side effect occur
 - Consider a dose change or alternative treatment if older adult has no response to medication in 4-6 weeks
 - Make one medication change at a time to determine which medication helps or causes undesirable side effects

**Start low, go slow,
and don't stop too soon**

18



Monitor Medications

- Monitor for adverse effects and interactions
- Adverse effects and interactions require an alteration of treatment
- Non-prescribing members of the treatment team can be very helpful in detecting and reporting adverse side effects



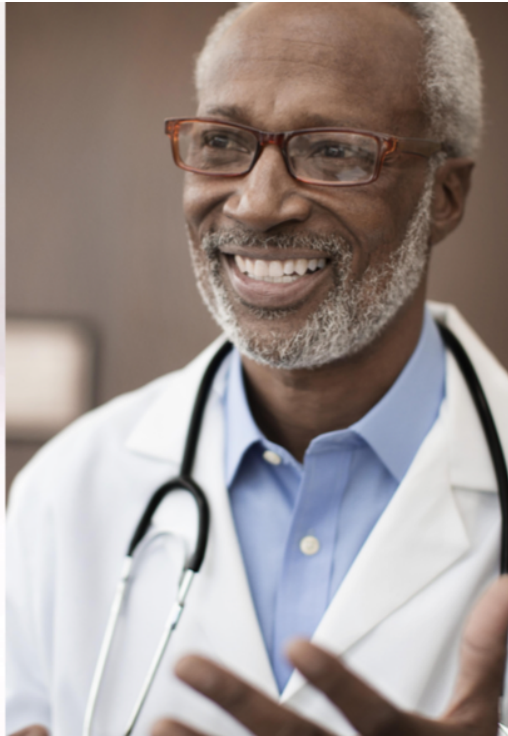
Common Adverse Effects

- Common adverse effects of psychotropic medications in older adults
 - Nausea, weight gain, sexual dysfunction, unstable gait, dizziness, postural hypotension, sedation, tremor, or confusion.
- Essential first steps
 - Obtaining a postural blood pressure
 - Assessing light-headedness or dizziness when going from sit to stand
 - Assessing gait and cognition are essential first steps.
- Additional potential tests
 - Serum blood level of mood stabilizing medications
 - Tricyclic antidepressant blood level.
 - SSRI antidepressants-an electrolyte panel
- Seek medical evaluation emergently if serotonin syndrome, or serotonin toxicity is suspected



Prescriber Resources

- The Beers Criteria®
 - Potentially inappropriate
 - Medications to avoid in older adults with certain conditions
 - Drugs to use with caution
 - Drug-drug interactions
 - Dose adjustment based on kidney function
- Located on American Geriatrics Society website and published in the Journal of the American Geriatrics Society



Take Home Message

- Start low, go slow, and don't stop too soon.
- If there's no sign of response to treatment in 4-6 weeks, the prescribing clinician may consider non-adherence, dose adjustment, a different treatment
- Monitoring for potential drug-drug interactions and adverse affects is important





**Anti-depressant
and Anti-anxiety
Medication**

Anti-depressant medications
are used to treat depression
and anxiety disorders

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Selective Serotonin Reuptake Inhibitors

Abbreviation	Features	Side effects	Common medications
SSRI	<p>Most commonly prescribed antidepressant and anti-anxiety medications</p> <p>Mechanism involves the inhibition of serotonin reuptake thus increasing levels of serotonin</p>	<p>Generally safe for older adults</p> <p>There can be rare, serious side effects for some</p>	<p>Sertraline (Zoloft)</p> <p>Fluoxetine (Prozac)</p> <p>Escitalopram (Lexapro)</p> <p>Citalopram (Celexa)</p>



Serotonin Norepinephrine Reuptake Inhibitors

Abbreviation	Features	Side effects	Common medications
SNRI	Inhibits reuptake of serotonin and norepinephrine	An alternative to SSRIs when side effects or lack of treatment response occurs	Duloxetine (Cymbalta) Venlafaxine (Effexor) Desvenlafaxine (Pristiq) Milnacipran (Savella) Levomilnacipran (Fetzima)



Atypical Antidepressants

Medication	Features	Side effects	Common medications
Mirtazapine	May be particularly beneficial if symptoms include sleep disturbance, weight loss, anxiety, or diminished appetite	Important to attending to potential side effects of cognitive impairment or dizziness	Also known as Remeron
Bupropion	Used to treat depression in older adults who may have experienced or are at increased risk of gastrointestinal or sexual adverse effects with other antidepressant medications	Can cause weight loss and is generally contraindicated for those with seizure disorder, history of stroke or brain trauma Should be used with caution in patients with cardiovascular disease or hypertension	Also known as Wellbutrin or Zyban



Safety Note about Antidepressants

- Increased risk for suicide
- Important to evaluate suicide risk
- Provide the older adult and/or family member with instructions for what to do if they feel suicidal




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Take Home Message

- SSRIs are the most commonly prescribed antidepressant and anti-anxiety medication
- SNRIs and atypical anti-depressants are alternatives to SSRIs
- When an older adult is starting an antidepressant, it is important for treatment team members to evaluate suicide risk






**High Risk
Medication Classes
for Older Adults**

There are medications which are not recommended for use in older adults due to significant risk factors

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Tricyclic Antidepressants

Side effects	Who should avoid	Medication name
Sedation, cardiac rhythm abnormalities, orthostatic hypotension (which can increase risk for falls), hypertension, tremor, decreased seizure threshold, agitation, and insomnia, and anticholinergic effects (including constipation, confusion/delirium, dry mouth, urinary retention, blurred vision and precipitation of angle closure in glaucoma)	Should be avoided in older adults who have cardiovascular disease or a history of seizures	Clomipramine (Anafranil) Amoxapine (Asendin) Amitriptyline (Elavil) Desipramine (Norpramin) Nortriptyline (Pamelor)



Monoamine Oxidase Inhibitors (MAOIs)

Side effects	Who should avoid	Medication name
<p>Carry high risks, but can be used in some cases with older adults</p> <p>Significant dietary and medication restrictions must be in place when prescribing MAOIs due to the risk for serotonin syndrome and hypertensive crises</p>	<p>Generally used only when the older adult has a history of treatment response and is intolerant to side effects of other medications</p>	<p>Isocarboxazid (Marplan)</p> <p>Phenelzine (Nardil)</p> <p>Selegiline (Emsam)</p> <p>Tranylcypromine (Parnate)</p>



Benzodiazepines

Side effects	Who should avoid	Medication name
<p>High-risk for older adults</p> <p>Frequently and often inappropriately prescribed</p> <p>Chronic use is associated with cognitive decline and increased fall risk in older adults</p> <p>Significant risk of harm when prescribed with opioids (risk of sedation, falls, trauma, delirium)</p> <p>Dependence occurs within days and withdrawal symptoms make it difficult to discontinue</p>	<p>Medical oversight required for discontinuing benzodiazepines, which involves a taper program</p> <p>May be fatal in overdose</p> <p>If must be prescribed to address an acute issue, they generally should be prescribed for no longer than one to two weeks</p>	<p>Alprazolam (Xanax)</p> <p>Chlordiazepoxide (Librium)</p> <p>Clorazepate (Tranxene)</p> <p>Diazepam (Valium)</p> <p>Halazepam (Paxipam)</p> <p>Lorazepam (Ativan)</p> <p>Oxazepam (Serax)</p> <p>Prazepam (Centrax)</p> <p>Quazepam (Doral)</p>



Stopping Benzodiazepines

-
- Stop benzodiazepines with a gradual taper under physician supervision
- Abrupt discontinuation of a long-term prescription of a benzodiazepine can be life-threatening
- Cognitive-behavioral therapy can be helpful with taper process



Antipsychotics

- Indicated for older adults with schizophrenia or to augment mood stabilizers for older adults with bipolar disorder
- Should not be prescribed for behavioral symptoms associated with dementia
- First line treatment for behavioral symptoms associated with dementia is environmental and behavioral intervention



Mood Stabilizers

Features	Side effects	Common medications
<p>Prescribed as primary medications for bipolar disorder</p> <p>Sometimes added to antidepressants to augment treatment for refractory depression</p>	<p>Confusion and gait disturbance, neurological, hematologic, and metabolic changes</p> <p>They should be monitored by the prescribing clinician on a regular basis</p>	<p>Lithium</p> <p>Carbamazepine (Arbatrol)</p> <p>Epitol</p> <p>Equetro</p> <p>Tegretol</p> <p>Valproic acid (Depakote)</p> <p>Lamotrigine (Lamictal)</p>



Sleep Medications

- Require thorough sleep disorder assessment
- Should be used only if behavioral interventions fail or are unavailable
- Do not provide sustained relief
- Significant risk for physical/psychological dependency, memory impairment, confusion, disinhibition, paradoxical agitation, falls
- Over-the-counter sleep aides often have potentially dangerous anticholinergic effects
- Melatonin supplementation may be a safer alternative
 - May only provide a small benefit for sleep onset
 - Potential side effects: vivid dreams/nightmares, drowsiness, dizziness, irritability, stomach cramps



Anticholinergic Medications

- Psychotropic medications with anticholinergic properties include:
Benzodiazepines, SSRIs, antipsychotics, tricyclic antidepressants
- Anticholinergic side effects
 - Constipation, dry mouth, dried out gums, blurred vision, dry eyes, dizziness due to postural hypotension, hallucinations, confusion, urinary retention, falls, delirium
- Encourage older adult to talk to prescribing provider or PCP
- Side effects usually dissipate when medication is stopped

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Take Home Message

- All members of the health care team should be aware of risks so that they can monitor older adults for signs of adverse effects
- When prescribing clinicians are considering use of these medications, they should consult with a geriatrician or geriatric psychiatrist





Potential Serious Adverse Effects

There are potential serious adverse effects of psychotropic medications that warrant monitoring and immediate attention

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Psychotropic Medications and Increased Risk of Falls

- Approximately 30% to 40% of people aged 65 years and older living in the community fall each year.
- Roughly half of all falls result in an injury, including 10% resulting in significant long-term disability or death.

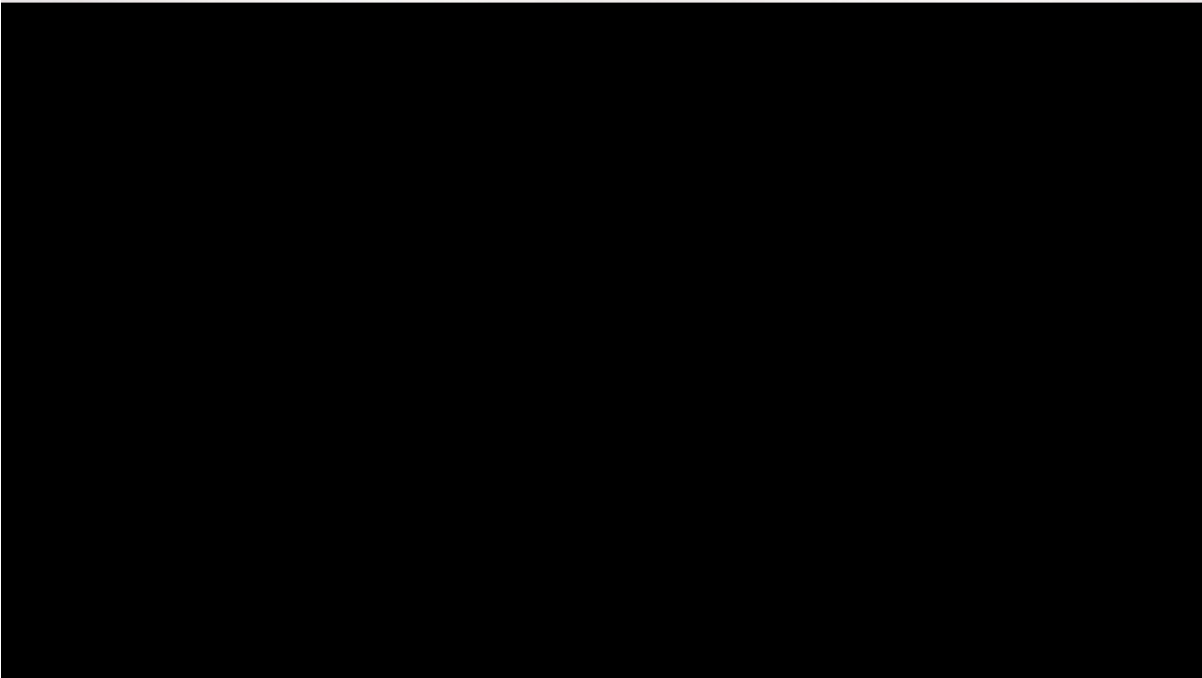


Assessing Fall Risk

- Informal fall risk questions
 - Have there have been any falls in the last year?
 - If so, how many times?
 - Have any of these falls resulted in injury?
 - If so, has it required medical attention?
 - Does the older adult feel unsteady when standing or walking?
 - Does the older adult worry about falling?
 - Have these incidents or worries begun or increased with a new prescription or increased dose of a psychotropic medication?
- A positive response to any of these questions warrants a referral of the older adult to their health care provider for a formal fall risk assessment
 - Stopping Elderly Accidents, Deaths and Injuries (STEADI) Tool kit
 - Timed Up-and-Go, TUG test, or the 30 Second Chair Stand Test



Alexis Freedberg, MD



Postural Hypotension

- Drop in systolic blood pressure of 20mm Hg or diastolic of 10mm Hg
- Increase in heart rate of 20 beats/minute within 3 minutes of standing
- Major risk factor for falls in older adults on psychotropic medications
- Psychotropic medications including antipsychotics and tricyclic antidepressants are associated with postural hypotension





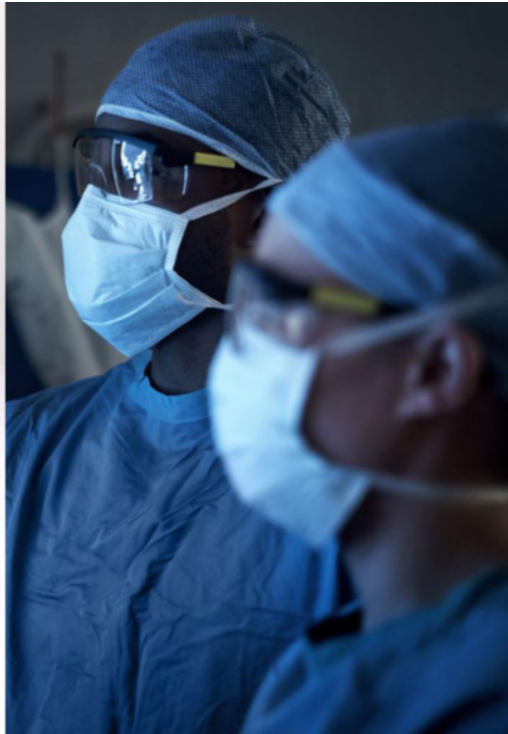
Hyponatremia

- Hyponatremia=low blood sodium levels
- Affects approximately 10% of older adults taking antidepressants
- Symptoms: dizziness, fatigue, confusion or mental status change, nausea, increased thirst
- If untreated can lead to falls, seizures, coma, death
- Fluoxetine is the SSRI most commonly reported to produce hyponatremia, other SSRIs have also been associated
- Medications that enhance serotonin are capable of producing hyponatremia



Serotonin Syndrome

- Medical emergency caused by an excess of serotonin
- Symptoms: high fever, rapid heart rate, major change in blood pressure, sweating, confusion, agitation, anxiety, tremor, restlessness
- Can occur with overdose of SSRI or if an SSRI is combined with other serotonergic medications
- Can also occur as a result of drug-drug interactions with MAOIs



SSRI Discontinuation Syndrome

- SSRIs are not addictive
- Caused by stopping antidepressant therapy abruptly or missing doses
- Flu-like symptoms, insomnia, nausea, imbalance, sensory disturbances, hyper arousal
 - Usually mild, lasting one to two weeks
 - Slowly taper SSRIs



Take Home Message

- Serious adverse effects of psychotropic medications warrant monitoring and immediate attention
- Being aware of these potential side effects may help in early detection requiring attention by the prescribing clinician or primary care provider



In Summary

In this module, we learned about:

- ✓ The normal aging process affects the pharmacokinetics of medications
- ✓ General principles of appropriate psychotropic medication prescribing for older adults
- ✓ Different types of psychotropic medications and common side effects that may warrant a change in medication dose or switch to an alternative
- ✓ Serious side effects that could warrant immediate medical evaluation



Next Steps

- Please see the reference list for more information about psychopharmacology and older adults

[Click here to end presentation](#)

Then click the close button to proceed to the post test

