



IIHO

**INSTITUTE FOR IMPROVED
HEALTH OUTCOMES**

Data-Driven. People-Led. Outcome-Focused.

BONE HEALTH

Medications that Increase Fall Risk

STARTER ACTIVITY

- Please, find the “Medications that Increase Fall Risk” Quiz on the first page of your **Medications that Increase Fall Risk - Workshop Guide**
- Complete the LEFT SIDE of the chart indicating how familiar you are with the topics that will be discussed today
- We will return to this quiz at the end of the workshop

Agenda

1. Sleeping Aids
2. Antidepressants
3. Antipsychotic Medication
4. Opioid Pain Medication
5. Cardiac Medication

LEARNING OBJECTIVES

I will be able to...

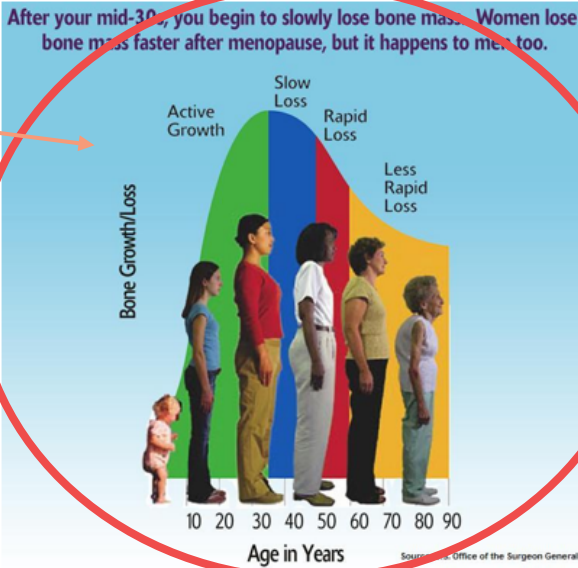
- Briefly describe how each medication or therapy works
- Describe how these medications are taken
- Identify common side effects for each medication or therapy
- Identify medications that increase my risk of having a fracture

HOW TO NAVIGATE THE SLIDES

slide title

BONE GROWTH CYCLE

slide image



- bones are living tissue and are constantly changing
- This process is called “modelling”

key information

learning objective

I will be able to briefly describe the bone growth cycle.

WORKSHOP GUIDE

As we progress through this workshop, please ensure to complete the appropriate sections of the **Workshop Guide** provided for you.

This will be your quick reference following this workshop to aid you on your bone health journey.

DID YOU KNOW?

Certain medications can make you more likely to fall, which can cause injuries that sometimes require hospitalization.

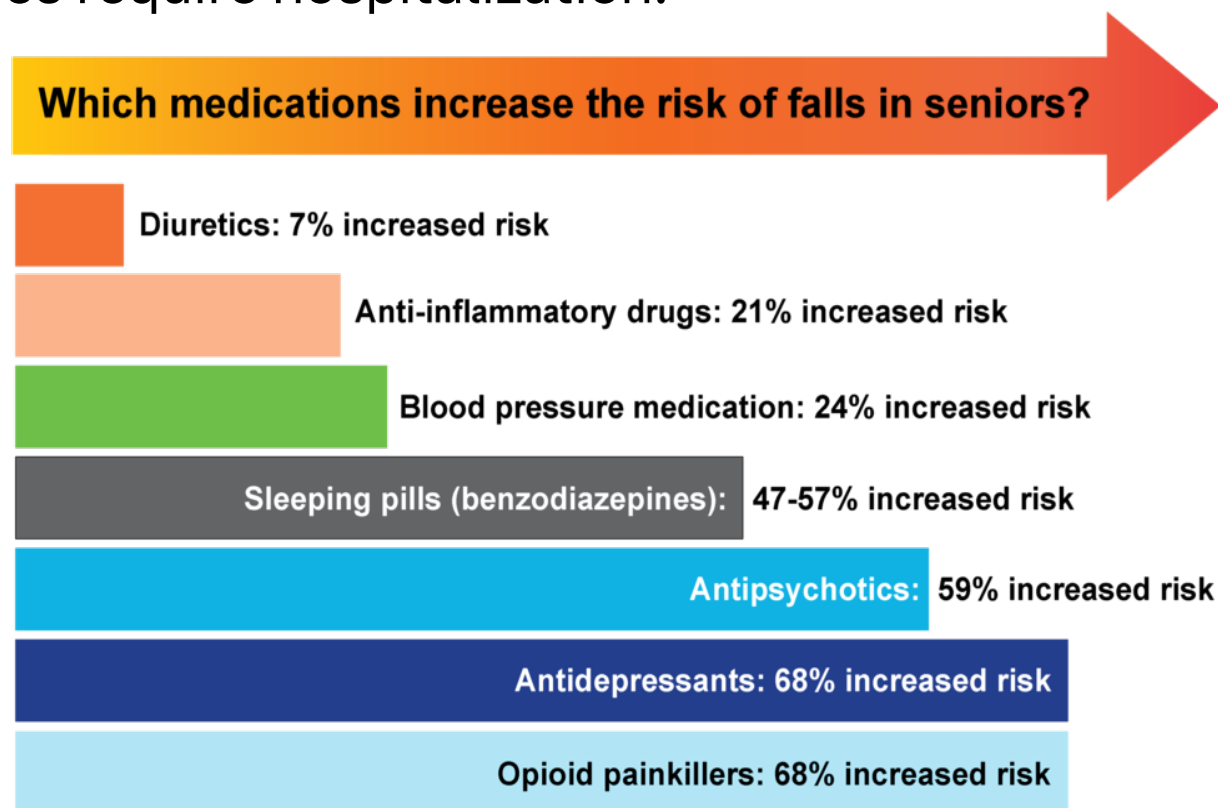


Figure:
Canadian Deprescribing Network - Medications and Falls. Retrieved from <https://www.deprescribingnetwork.ca/medications-and-falls>

SECTION 1

Sleeping Aids

WHAT ARE SLEEPING AIDS?

- Sleeping aids are used to help the sedate the body and fall asleep by reducing anxiety
 - this medication is used in individuals who have a variety of sleep issues
- There are a variety of sleeping aids available, both prescription and over the counter options

I will be able to briefly describe how each medication or therapy works.
I will be able to describe how these medications are taken.

SIDE-EFFECTS OF SLEEPING AIDS

- Sleeping aids have some common side-effects to be aware of:
 - drowsiness
 - dizziness
 - upset stomach
 - blurred vision
- Serious side-effects include:
 - mental/mood changes (confusion, memory problems)

I will be able to identify common side effects for each medication or therapy.
I will be able to identify medications that increase my risk of having a fracture.

WHAT DOES THIS MEAN FOR ME?

- Sleeping aids have been associated with an increased risk of hip fractures during the first few weeks of starting these drugs
- Side-effects like drowsiness, dizziness and blurred vision can all affect your balance and increase your risk of a fall
 - Additionally, more serious side-effects, like confusion or memory problems, can also lead to an increased risk of a fall

I will be able to identify common side effects for each medication or therapy.
I will be able to identify medications that increase my risk of having a fracture.

SECTION 2

Antidepressants

WHAT ARE ANTIDEPRESSANTS?

- Antidepressants medications are most commonly used to help relieve the distress of depression or anxiety
- They can take up to several weeks to be fully effective

I will be able to briefly describe how each medication or therapy works.
I will be able to describe how these medications are taken.

SIDE-EFFECTS OF ANTIDEPRESSANTS

- The side-effects of antidepressants depend on the type of medication taken
- Some common side-effects include:
 - anxiety (e.g. jitteriness)
 - dizziness
 - drowsiness
 - blurred vision

I will be able to identify common side effects for each medication or therapy.
I will be able to identify medications that increase my risk of having a fracture.

WHAT DOES THIS MEAN FOR ME?

- Side-effects like drowsiness, dizziness and blurred vision can all affect your balance and increase your risk of a fall and a potential fracture

I will be able to identify common side effects for each medication or therapy.
I will be able to identify medications that increase my risk of having a fracture.

SECTION 3

Antipsychotics

WHAT ARE ANTIPSYCHOTIC MEDICATIONS?

- Antipsychotic medications can reduce symptoms of psychosis, such as delusions and hallucinations, within hours or days
- They can help clear confusion in a person with short-term or acute psychosis, or delirium within hours or days
- Antipsychotics can also be used for sleep, depression, or bipolar disorder

I will be able to briefly describe how each medication or therapy works.
I will be able to describe how these medications are taken.

ARE THERE ANY SIDE-EFFECTS?

- The side-effects of antipsychotics depend on the type of medication being taken
- There are two categories:
 - atypical antipsychotics
 - typical antipsychotics

I will be able to identify common side effects for each medication or therapy.
I will be able to identify medications that increase my risk of having a fracture.

ARE THERE ANY SIDE-EFFECTS?

- Possible side-effects of antipsychotics include:
 - drowsiness
 - agitation
 - dry mouth
 - blurred vision
 - dizziness
 - weight gain
 - muscle stiffness or spasms at high doses

I will be able to identify common side effects for each medication or therapy.
I will be able to identify medications that increase my risk of having a fracture.

WHAT DOES THIS MEAN FOR ME?

- Side-effects like muscle stiffness, spasms, blurred vision, drowsiness and dizziness can all affect your balance and increase your risk of a fall and a potential fracture

I will be able to identify common side effects for each medication or therapy.
I will be able to identify medications that increase my risk of having a fracture.

SECTION 4

Opioid Pain Medication

WHAT ARE OPIOID PAIN MEDICATIONS?

- Opioid pain medications are used to primarily treat pain
- At high doses, or if misused, they can create a sense of euphoria
- They are commonly used to treat short-term and chronic pain
- Prescribed medications include:
 - codeine (e.g. in Tylenol No. 3)
 - hydromorphone
 - fentanyl
 - morphine
 - oxycodone

I will be able to briefly describe how each medication or therapy works.
I will be able to describe how these medications are taken.

ARE THERE ANY SIDE-EFFECTS?

- Possible short-term side-effects of opioid pain medications include:
 - drowsiness
 - constipation
 - nausea and vomiting
 - euphoria
 - difficulty breathing, which can lead to or worsen sleep apnea
 - dizziness and confusion

I will be able to identify common side effects for each medication or therapy.
I will be able to identify medications that increase my risk of having a fracture.

WHAT DOES THIS MEAN FOR ME?

- Side-effects like confusion, drowsiness and dizziness can all affect your balance and increase your risk of a fall and a potential fracture

I will be able to identify common side effects for each medication or therapy.
I will be able to identify medications that increase my risk of having a fracture.

SECTION 4

Cardiac Medication

BETA-BLOCKERS

- Beta-blockers lower your heart rate and blood pressure
 - used to treat heart attacks, angina, high blood pressure, heart failure and arrhythmia
- Some common side-effects include:
 - dizziness, lightheadedness, feeling faint
 - drowsiness or fatigue
 - wheezing, trouble breathing
 - depression

I will be able to identify common side effects for each medication or therapy.
I will be able to identify medications that increase my risk of having a fracture.

DIURETICS

- Diuretics are used to treat high blood pressure and heart failure
 - increase the amount of urine produced which excretes salt and water, which makes it easier for your heart to pump
- Some common side-effects include:
 - dehydration
 - dizziness, feeling faint
 - upset stomach
 - urinary frequency

I will be able to identify common side effects for each medication or therapy.
I will be able to identify medications that increase my risk of having a fracture.

ACE-INHIBITORS/ARB

- ACE-Inhibitors/ARB block your body's response to a chemical that increases your blood pressure
- Side effects:
 - cough
 - dizziness

CALCIUM CHANNEL BLOCKERS

- Calcium Channel Blockers open up your blood vessels (vasodilator) and lowers your blood pressure
- Side effects:
 - fluid retention in your legs or ankles
 - dizziness
 - headaches

NITRATES (NITROGLYCERIN)

- Nitrates can be used to prevent chest pain (angina), limit the number of angina attacks, relieve the pain of a current attack, treat the symptoms of heart failure
 - works by widening your blood vessels (vasodilator), making it easier for blood to flow and reducing the workload of your heart
- Some common side-effects include:
 - headaches
 - dizziness
 - fainting
 - low blood pressure (hypotension)
 - irregular heart rhythms (arrhythmia)

I will be able to identify common side effects for each medication or therapy.

I will be able to identify medications that increase my risk of having a fracture.

ANTIARRHYTHMICS

- Antiarrhythmics medications prevent and treat abnormal heartbeats (arrhythmias)
- Some common side-effects include:
 - dizziness
 - blurry vision
 - seizures
 - sun sensitivity

I will be able to identify common side effects for each medication or therapy.
I will be able to identify medications that increase my risk of having a fracture.

WHAT DOES THIS MEAN FOR ME?

- Side-effects like feeling faint, blurred vision, drowsiness and dizziness can all affect your balance and increase your risk of a fall and a potential fracture

I will be able to identify common side effects for each medication or therapy.
I will be able to identify medications that increase my risk of having a fracture.

COOL-DOWN ACTIVITY

- Review your “Medications that Increase Fall Risk” Quiz from the starter activity in your **Medications that Increase Fall Risk - Workshop Guide**
- Complete the RIGHT SIDE of the chart to identify what you have learned during the workshop
- With the person next to you, discuss:
 - what you learned in the workshop
 - what you found surprising in the workshop
 - what do you want to learn more about
 - what you will do next with this new knowledge

ADDITIONAL RESOURCES

Osteoporosis Canada

- osteoporosis.ca

Dr. David Hanley Osteoporosis Centre

- osteoporosiscalgary.com

National Osteoporosis Foundation

- nof.org

SPONSORS



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