

# Medications that Decrease Bone Health

# Starter Activity

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- Please, find the “Medications that Decrease Bone Health” Quiz on the first page of your **Medications that Decrease Bone Health - 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

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1. Corticosteroids
2. Anti-Seizure Medication
3. Proton Pump Inhibitors



# Learning Objectives

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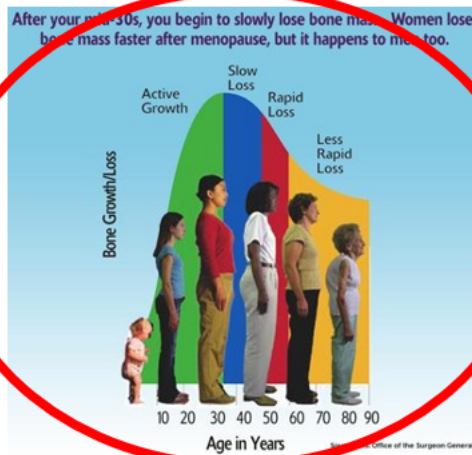
I will be able to...

- 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

## Bone Growth Cycle



bones are living tissue and are constantly changing

- This process is called "modelling"

I will be able to briefly describe the bone growth cycle

slide title

slide image

key information

learning objective



# Workshop Guide

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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.



# Corticosteroids

# What are Corticosteroids?

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- These are also called steroid medications, such as prednisone or cortisone
- Corticosteroids are usually taken orally or with an inhaler
  - are also available as solutions, creams, ointments and injections
- Used to treat many conditions and diseases, such as:
  - asthma
  - rheumatoid arthritis
  - lupus
  - inflammatory bowel disease

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





# What are Corticosteroids?

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- Your healthcare and pharmacist will give you exact instructions for taking a corticosteroid
  - Each disease and situation might be unique so the prescription is often tailored for each patient
- A short course is usually between 1 and 2 weeks
- A longer course (greater than 3 weeks) eventually requires a slow reduction in your dose under the supervision of your doctor

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?

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- Corticosteroids are prescribed when the benefits outweigh the side-effects
  - always read the information leaflet that comes with your medication and discuss your concerns with the pharmacist to ensure you understand the potential side-effects

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?

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- Some common side-effects include:
  - weight gain
  - increased chance of infection
  - increase in blood pressure
  - high blood sugar
  - muscle weakness
  - mood and behavioural changes
  - thinning of bones (osteoporosis)

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.



# How do Corticosteroids affect my bones?

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- Corticosteroids have an effect how our bones respond to calcium and vitamin D
  - this can lead to bone loss
  - when used in high doses, bone loss can happen rapidly
- Long-term use (3 or more months) of corticosteroids are more commonly associated with bone loss

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.



# Anti-Seizure Medication

# What are Anti-Seizure Medications?

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- Anti-seizure medications are used to prevent seizures and can be used to treat a range of different types of seizures
  - medications include carbamazepine or phenytoin
- To be effective, a constant level of the prescribed medication must be in the blood
  - dosage is dependent on the type of seizure, frequency and other factors (e.g. other medications you take, how old you are, how large you are)

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?

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- Common side effects include:
  - drowsiness
  - dizziness
  - lethargy
  - unsteadiness
  - confusion
  - alteration of behaviour
  - tremors
  - sleep disturbances

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.



# Do Anti-Seizure Medications affect my bones?

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- Some anti-seizure medications have been associated with a reduction in bone density
  - believed to be a result of how quickly these medications break down vitamin D
- There is more research with medications that have been available for a long time, but we are still learning more about newer anti-seizure medicines

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.





# Proton Pump Inhibitors

# Proton Pump Inhibitors (PPI)

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- PPI are used to suppress acid and treat symptoms of heartburn and protect your stomach from an ulcer
  - These medications are one of the most common classes of medicine used in Canada
- By lowering acid in the stomach the medication affects how calcium is absorbed
  - Over a long period of time this leads to weaker bones.



# Cool-down Activity

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- Review your “Medications that Decrease Bone Health” Quiz from the starter activity in your **Medications that Decrease Bone Health - 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

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Osteoporosis Canada

- [osteoporosis.ca](http://osteoporosis.ca)

Dr. David Hanley Osteoporosis Centre

- [osteoporosiscalgary.com](http://osteoporosiscalgary.com)

National Osteoporosis Foundation

- [nof.org](http://nof.org)



# Bibliography

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