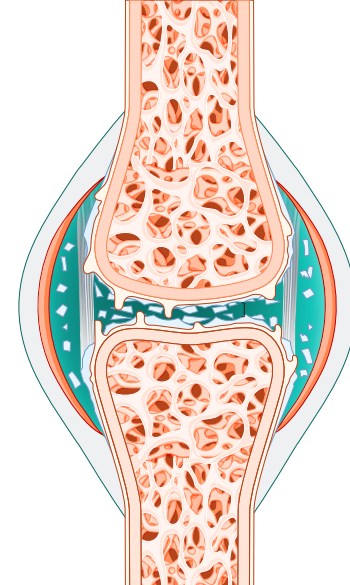


TOP 10 UPDATES

for Osteoporosis for Pharmacists

Update from the 2023 Osteoporosis Canada Clinical Practice Guidelines*



1 How should we screen for osteoporosis?*

Screening in postmenopausal females and males aged 50 and over

Changes in 2023 from 2010 guidelines:

- Baseline bone mineral density (BMD) measurement recommended at 70 years of age; changed from 65 years of age.

- Identify risk factors for osteoporosis, fractures, and falls
- BMD measurement recommended if:
 - ≥ 70 years of age
 - if < 70 years based on risk factors
 - Between 50–64 years of age with two or more risk factors OR if had a fracture
 - Between 65–69 years of age with one risk factor
- Use FRAX to determine fracture risk assessment and treatment options



Did you know

that fractures can lead to not only increased morbidity but also mortality?

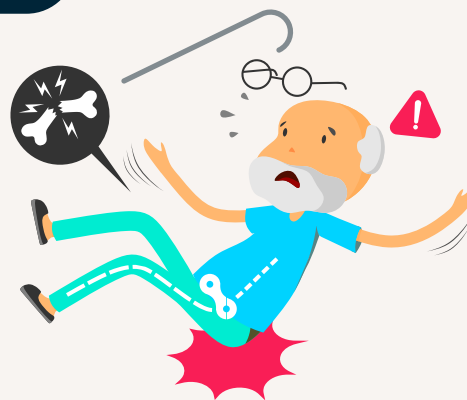


Did you know

that 1 in 3 fractures occur in males?

2 What are the risk factors?

- Previous fracture, after age 40
- Hip fracture in a parent
- Glucocorticoids if > 3 months in the last year, prednisone dose > 5 mg daily
- 2 or more falls in the past year
- Body mass index < 20 kg/m²
- Secondary osteoporosis
- Current smoking
- Alcohol (more than 2 drinks daily)



Causes of Secondary Osteoporosis

- Rheumatoid arthritis
- Hyperparathyroidism
- Diabetes
- Celiac
- Inflammatory bowel disease
- Chronic Kidney Disease
- Drugs: glucocorticoids, aromatase inhibitors, androgen deprivation therapy, GnRH agonists/antagonists, chemotherapy



Did you know

that the greatest risk for another fracture is a recent vertebral fracture, especially in the last 2 years?

3 What are the recommendations for exercise?

Helps with bone strength and prevents the risk of falls

- Balance, functional and progressive resistance training at least 2x a week for each type of exercise
- 150 minutes or more of moderate to vigorous physical activity (as per <https://csepguidelines.ca/>)



4 What are the recommendations for calcium and vitamin D?

CALCIUM:

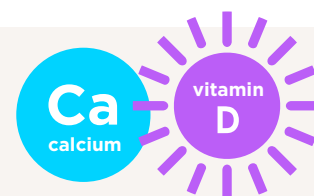
- Follow Health Canada recommendations (see table below)
- Assess calcium intake with diet before recommending supplementation
- No extra supplementation if meeting requirements through diet

Age	Recommended calcium intake (RDA)
Men 51-70 years	1000 mg
Women 50+ & Men 70+ years	1200 mg

VITAMIN D:

- Follow Health Canada recommendations (see table below)
- Suggest for individuals to take a 400 IU vitamin D supplement (plus food sources to achieve the RDA)

Ages: Men & Women	Recommended vitamin D intake (RDA)
51-70 years	600 IU
70+ years	800 IU



Changes in 2023 from 2010 guidelines:

- Calcium and vitamin D amounts aligned to match Health Canada

5 When should pharmacotherapy be initiated?

In postmenopausal females and males aged 50 and over

- Recommend* pharmacotherapy if 10-year fracture risk $\geq 20\%$ OR if 70 years or greater and T-scores < -2.5
- OR
- Suggest* if 10-year fracture risk is 15-19.9% OR if T-scores < -2.5 and age less than 70 years

*Recommend: Strong recommendation. Suggest: conditional recommendation.

Changes in 2023 from 2010 guidelines:

- Changes in cut-off thresholds for treatment

6 What are the types of osteoporosis medications?

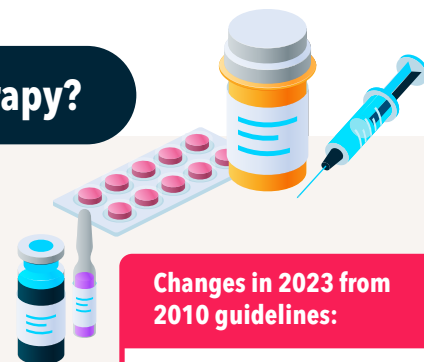
Antiresorptives	Anabolics
Oral bisphosphonates: <i>alendronate</i> , <i>risedronate</i>	Parathyroid hormone: <i>teriparatide</i>
IV bisphosphonate: <i>zoledronic acid</i>	Sclerostin inhibitor: <i>romosozumab</i>
RANK Ligand inhibitor: <i>denosumab</i>	
Menopausal hormone therapy	
Selective estrogen receptor modulators (SERM): <i>Raloxifene</i>	

Changes in 2023 from 2010 guidelines:

- More options on the Canadian market since 2010

7 What are the recommendations for initiating pharmacotherapy?

- **Bisphosphonates:** recommend first line for individuals who need pharmacotherapy (oral or IV).
- **Denosumab:** for individuals with contraindications, intolerance or difficulty accessing bisphosphonates.
- **Anabolic therapy:** for individuals with severe recent vertebral fracture (<2 years) OR more than 1 vertebral fracture and T-score <-2.5. Seek advice from osteoporosis expert.
- **Menopausal hormone therapy:** alternative to bisphosphonates for postmenopausal females with menopausal symptoms and who are less than 60 years of age OR within 10 years of menopause.
- **Raloxifene:** for postmenopausal females who have contraindications, side effects or choose not to take other therapy options.



Changes in 2023 from 2010 guidelines:

- Bisphosphonates recommended for first line therapy

8 What are the recommendations for duration of therapy?

BISPHOSPHONATES (IV or oral):

- Duration for 3-6 years then consider drug holiday
- Reassess need to restart therapy after 3 years of drug holiday (or earlier if higher risk)

DENOSUMAB:

- Long term therapy
- Doses given every 6 months and no delay for more than one month
- When stopping denosumab switch to a bisphosphonate

ANABOLICS:

- Duration dependent on anabolic e.g., teriparatide - 2 years; romosozumab - 1 year
- Start antiresorptive therapy after a course of anabolic therapy



Did you know

that there is rapid bone loss and risk of fracture when denosumab is discontinued?

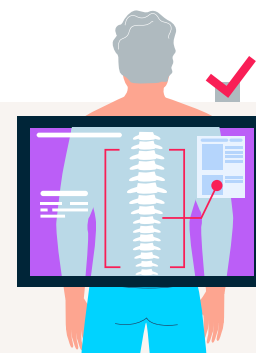
Changes in 2023 from 2010 guidelines:

- Defining length of time of bisphosphonates before drug holiday

9 What are the recommendations for BMD monitoring?

Repeat BMD measurement depending on 10 year fracture risk as follows:

- <10% – 5-10 years
- 10-15% – 5 years
- >15% – 3 years
- After starting osteoporosis medication – 3 years



10 What are the important points for adherence with osteoporosis medications?

- Counsel on how to take, side effects, long term risks of osteonecrosis of the jaw and atypical femoral fracture, as well as the importance of adherence.
- Check for adherence to osteoporosis medications with each refill and reinforce proper adherence.
- Consider that taking oral bisphosphonates incorrectly is the same as not taking them at all.



Did you know

that adherence to osteoporosis medications is poor?

*Notes: The 2023 Osteoporosis Canada clinical practice guidelines focus is on primary osteoporosis screening and management in community dwelling postmenopausal females and males over the age of 50 years.

Reference: Morin SN, Feldman S, Funnell L, et al. Clinical practice guideline for management of osteoporosis and fracture prevention in Canada: 2023 update. CMAJ Oct 10 2023;195(39):E1333-E1348.

This infographic was developed by Nese Yuksel, BScPharm, PharmD and the Canadian Pharmacists Association.

Acknowledgment: The development team would like to acknowledge Dr. Teri Charrois, Dr. Natasha Gakhal and all the reviewers of this tool.