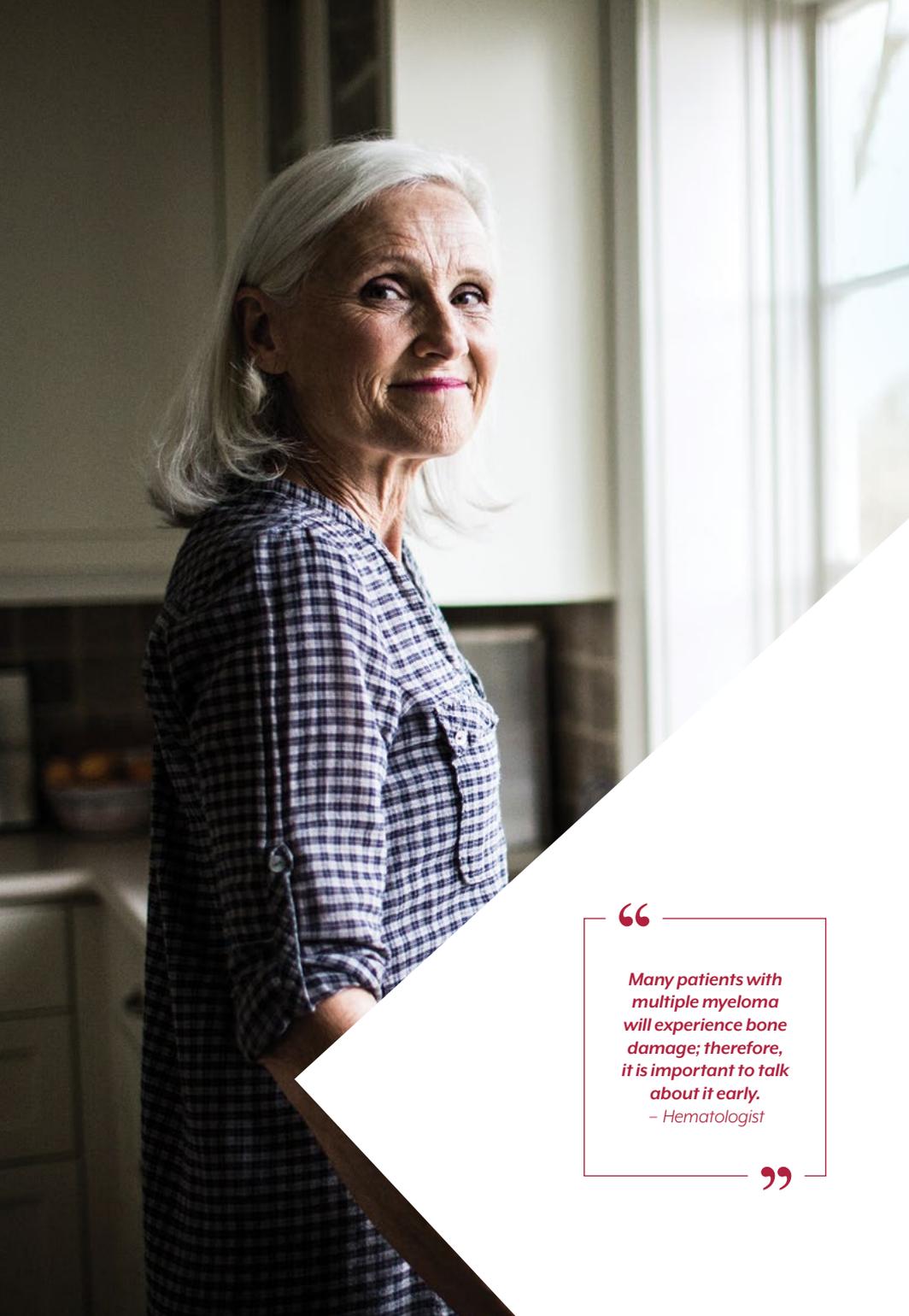


Multiple myeloma
and your bones

Multiple myeloma and your bones

**Why your bone health is important
and what you can do to help manage it**



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Many patients with multiple myeloma will experience bone damage; therefore, it is important to talk about it early.

– Hematologist

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Multiple myeloma is a **cancer of the plasma cells**, found in bone marrow. Because of this, it often affects the bones.

More than 70% of people with multiple myeloma experience **bone pain** when they are diagnosed. And almost all of them will experience **myeloma bone disease** at some point during their journey with this type of cancer.

Due to its effects on bone health, **people with multiple myeloma are at risk** of fractures, bone pain and the potential for interventions of the bone (such as surgery or radiation therapy). That's why **focusing on bone health is important** when you have multiple myeloma.

Inside, you'll find **lifestyle tips** that may help, as well as information about different **bone medications** that may be prescribed.

Lifestyle tips to take charge of your bone health

Watch your diet

Making smart food choices can help you **get more bone-boosting calcium and vitamin D**:

- > Calcium is essential to helping bones stay strong despite everyday wear and tear; however, it is absorbed less effectively as we age. Studies have shown that proper calcium intake can reduce the risk of fracture.
- > Vitamin D helps to increase the absorption of calcium, ultimately building stronger bones. It also improves the function of muscles, improving your balance and decreasing the likelihood of falls, which can lead to fractures.

Good sources of calcium include:

- > Milk
- > Yogurt
- > Cottage cheese
- > Broccoli

Good sources of vitamin D include:

- > Milk
- > Canned or cooked salmon
- > Egg yolks

Get (and stay) active

Regular weight-bearing and strength training (resistance) exercises are very good for your bones because they increase bone strength. But the reality is that anything you do **on your feet** helps to **strengthen your bones**.

Try to do 30 minutes of weight-bearing exercises three to four times a week.

Activities you might consider include:

- > Walking
- > Tai chi
- > Weight lifting
- > Dancing
- > Climbing stairs
- > Yoga

Remember: If your doctor has told you your risk for fracture is high, talk to him or her before doing high-impact activities such as running, skipping or jumping.

Practise good oral hygiene and get routine dental care

Good oral health is important at all times, but even more so when you are undergoing myeloma treatment. Dental infections are an important and preventable source of problems for people with multiple myeloma.

Ask your dentist to consult with your oncologist to discuss any special instructions for your oral care—especially when receiving treatment. Check to see if your cancer centre has a dental clinic and have a complete dental examination before starting any treatment.





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***Patients should ask
what they can do
to be as healthy as
they can during their
treatment.***

– Registered nurse

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Bone medications for people with multiple myeloma

In addition to your cancer treatment, a bone medication may sometimes be given to people with multiple myeloma. These medicines may be prescribed as soon as the cancer is confirmed, whether pain or other symptoms are present or not.

Specific drug treatments include:

> **Bisphosphonates**

Bisphosphonates are a family of drugs that strongly bind to the bone and slow down the rate of bone change. They may be used to prevent or delay skeletal (bone-related) complications. In people with multiple myeloma, bisphosphonates are usually given by intravenous infusion once every three or four weeks. Bisphosphonates include **zoledronic acid** and **pamidronate**.

> **RANKL inhibitors**

RANKL inhibitors stop the breakdown of bone by blocking a specific protein that promotes the breakdown of bone (called “RANK Ligand”). They may be used to reduce the risk of developing cancer-related bone complications in people with multiple myeloma. RANKL inhibitors are usually given by an injection just under the skin (a “subcutaneous injection”) once every 4 weeks. RANKL inhibitors include **denosumab**.

Considerations *before starting therapy*

Your doctor may request that you see your dentist for an oral exam (if you haven’t had one recently) before starting on a bisphosphonate or RANKL inhibitor. This is due to a possible side effect of these medicines known as “osteonecrosis of the jaw” (or “ONJ”). To help prevent ONJ, any tooth or jaw problems should be addressed before starting treatment.

Calcium and vitamin D supplementation *during* therapy

Both bisphosphonates and RANKL inhibitors may cause a condition called “hypocalcemia” (low levels of calcium in the blood). For this reason, these medicines are commonly prescribed with daily supplements of calcium and vitamin D. Doses may vary, but generally 600 mg of calcium and 400 IU of vitamin D per day is suggested. Follow your doctor’s advice, as individual needs will vary and vitamin supplements are not recommended for everyone.

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Be prepared to have a discussion with your physician with regards to your diet and lifestyle, partly because, if you have [a] sufficient calcium-containing diet, we may adjust the [recommended supplemental] calcium and vitamin D level.

– Hematologist

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Additional resources

The websites listed below can provide you with more information about multiple myeloma and its management. If you can't find the answers you are looking for, be sure to ask your doctor.

- > **The National Comprehensive Cancer Network (NCCN)** has published a number of guides for people with multiple myeloma. You can access the information at www.nccn.org/patients/guidelines/myeloma/index.html.
- > **Myeloma Canada** has published a comprehensive handbook for patients with multiple myeloma. It is available at www.myelomacanada.ca/pixms/uploads/serve/ckeditor/myeloma_canada_patient_handbook_10_2017-2.pdf.

Other websites that can offer helpful information on bone health and multiple myeloma include:

- > **Canadian Cancer Society:**
www.cancer.ca
- > **American Cancer Society:**
www.cancer.org
- > **Myeloma Canada:**
www.myelomacanada.ca
- > **Leukemia and Lymphoma Society of Canada:**
www.llscanada.org

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*Taking an active role in
your treatment is the best
thing you can do.*

– Multiple myeloma patient

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