

Bone loss and cancer

Losing bone tissue is part of our natural aging process. However, certain cancer treatments, particularly hormonal therapies and those leading to early menopause in women, can reduce the levels of hormones in the body and cause increased bone loss, or osteoporosis. Bones may consequently become more brittle and be prone to fractures.

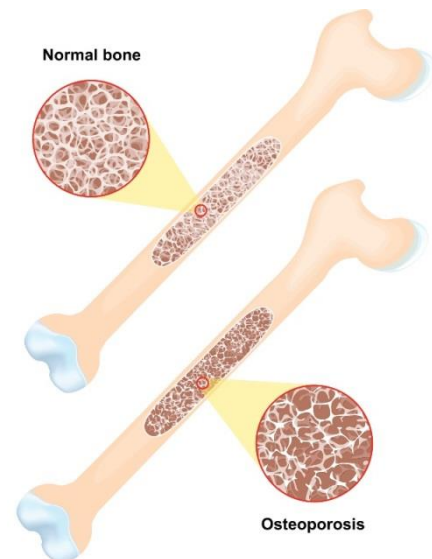
Causes of Bone Loss

Cancer treatment-related causes of bone loss include:

- Surgical removal of a man's testicles or a woman's ovaries
- Chemotherapy drugs that cause early menopause (e.g. cyclophosphamide)
- Hormonal therapies that cause reduced hormone levels (e.g. letrozole, exemestane)
- Radiotherapy to the ovaries, causing reduced oestrogen levels
- Being in the direct radiotherapy treatment area
- Long term steroid use

Other risk factors include:

- Family history of osteoporosis
- Insufficient calcium, vitamin D and other minerals intake
- Lack of exercise
- Menopause
- Use of certain medications (e.g. anti-seizure medicines, gastric protectants)
- Excessive smoking and alcohol intake



What you need to look out for

There are usually no symptoms in the early stages of bone loss. The first indication of bone loss in most people is a fracture. Some people may experience:

- Pain at the site of fracture
- Loss of height and stooped posture due to collapsed spinal bones

How it can be prevented or treated

Depending on your condition and treatment, your doctor may advise you on lifestyle changes such as smoking cessation or regular physical activity (refer to section on "***What you can do***" below). A bone mineral density test (BMD) may be ordered to check and monitor the amount of bone tissue you have. He or she may also prescribe one or more of the following:

- Calcium to build up your bones
- Vitamin D to help the body absorb calcium
- Medicines that improve the bone density (bisphosphonates or denosumab)



If you experience any bone or joint pain, seek medical attention immediately. Your doctor will conduct investigations to determine and treat the cause of pain, as well as prescribe you with medications to reduce the pain.

What you can do

The following are some of the lifestyle changes that can be done to prevent and manage bone loss:

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<ul style="list-style-type: none"> • Take a well-balanced diet that is rich in calcium (low fat dairy products, green leafy vegetables, calcium-rich foods like sardines, almonds, beans) and vitamin D (egg yolks, tuna, salmon, liver) • Aim for at least 30 minutes of physical activity, 5 days a week. Weight bearing exercises like climbing stairs, dancing and walking is useful to build muscle strength and bone mass, which in turn reduces the risk of falls and fractures • Take special caution to prevent falls and injuries. Wear non-skid footwear and fitting non-slip shoes • Clear clutter in your home to prevent tripping over them, keep floors dry and use anti-slip mats 	<ul style="list-style-type: none"> • Avoid smoking and reduce alcohol/caffeine (coffee, tea) consumption as they can affect calcium absorption and cause contribute to bone loss

When to call your cancer care team

Please inform your doctor or nurse if you experience any of the following:

- Persistent bone pain
- Difficulty moving around
- Frequent falls

If you have any questions regarding the above, please call the Cancer Helpline at **+65 6225 5655** or approach your doctor or nurse for further details.

The above contents are made available as part of TEMASEK FOUNDATION-ACCESS (Accessible Cancer Care to Enable Support for Survivors) PROGRAMME, a holistic care programme to support cancer patients during their care and recovery journey.

The contents have been approved by the Cancer Education Information Service, National Cancer Centre Singapore (NCCS), for people with cancer and their families and caregivers. However, this information serves only as a guide and should not be used as a substitute for medical diagnosis, treatment or advice. For specific medical conditions, please seek expert medical advice from your healthcare team.

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