

Thyroid disease and osteoporosis

Consumer Factsheet



Osteoporosis is a condition in which the bones become fragile, leading to a higher risk of breaks or fractures. A minor bump or fall can be enough to cause a break in someone with osteoporosis. Osteoporosis is more common in people with thyroid conditions than in the general population. This factsheet explains how thyroid disease can affect your bones, how to find out if you are at risk of osteoporosis, and what you can do to help protect your bone health

The link between thyroid disease and osteoporosis

Bone is continually being broken down and replaced, a process known as bone turnover. Well balanced bone turnover is essential for keeping bones healthy and in good repair. Bone turnover is controlled by many factors in the body. One of these is the hormone thyroxine, produced by the thyroid gland. Disorders of the thyroid gland can affect the amount of thyroxine circulating in body, and this can have an impact on the rate of bone turnover. Over a long period, this may affect bone strength and increase the risk of osteoporosis and breaks.

Over-active thyroid (hyperthyroidism)

Hyperthyroidism is a condition where the thyroid gland produces too much thyroxine. Graves' disease is the most common form of hyperthyroidism, affecting more women than men. Too much thyroxine can speed up bone turnover. If the amount of new bone produced can't keep pace with the amount broken down, the bones can gradually become weaker. If the cause of the hyperthyroidism is not treated and thyroxine levels stay high for a long time, the risk of developing osteoporosis increases.

Under-active thyroid (hypothyroidism)

People with hypothyroidism are unable to produce enough thyroid hormone. Once again, women are more often affected than men. The most common cause of hypothyroidism is Hashimoto's disease. Iodine treatment or thyroid surgery, often used to treat hyperthyroidism, can also lead to hypothyroidism. On its own, hypothyroidism does not cause bone weakness. However, people with hypothyroidism often need to take medication (levothyroxine) to replace the thyroid hormones they are unable to produce themselves. If the dose of the medication is too high over a long period, thyroxine levels in your body will increase and bone loss can occur.

This is why it's important to have your thyroxine levels checked regularly to make sure your medication is at the right dose for you.

Could I be at risk of osteoporosis?

Working closely with your doctor to keep your thyroid condition under control is the best way to reduce your risk of developing osteoporosis. This is especially important if your treatment involves taking medication over a long period. There are other factors, unrelated to thyroid disease that may affect your overall risk of developing osteoporosis. Osteoporosis is more common in women who have been through the menopause, so women at this stage of life who also have thyroid disease are at particular risk. Other medical problems or medications, as well as any family history of osteoporosis will have an impact on your risk of developing osteoporosis. Nutrition, exercise and lifestyle are also crucial to the health of your bones. It is important to discuss your osteoporosis risk factors with your doctor as soon as possible so action can be taken to protect your bone health.

Your doctor may refer you for a bone density test. This simple scan measures the density of the bones in the hip and spine. The results will indicate if your bone density is normal, mildly reduced (*osteopenia*) or if you have osteoporosis.

Most people don't know they have osteoporosis until they have a fracture. That's why it's vital to discuss your bone health with your doctor so you can take action to help prevent fractures before they occur.



Osteoporosis medications

If your thyroid condition was diagnosed early and is well controlled, some or all of the bone loss may be recovered. People with very low bone strength, especially older people, may need special osteoporosis medications to prevent fractures. There are several safe and effective medications available - your doctor will determine the best treatment for you. Osteoporosis medications have been shown to reduce the risk of breaking a bone by up to 70% but to work effectively they usually need to be taken over several years. If you have been prescribed osteoporosis medication, it is important to keep taking it. If you are concerned about any aspect of your osteoporosis treatment, you should discuss this with your doctor as soon as possible.

What can I do to look after my bones?

There are some other simple but very important things you can do to help protect your bone health if you are living with a thyroid condition. You should ensure you have adequate:

[Calcium](#) – 3 serves of dairy foods daily, or increase your intake of other calcium rich foods

[Vitamin D](#) – get out in the sun for short periods on most days.

[Exercise](#) – weight-bearing and resistance exercises at least 3 times a week.



Healthy lifestyle habits are also important for keeping bones strong. Don't smoke, keep your alcohol intake low and try to stay active in your daily life. More information about lifestyle choices for healthy bones can be found on the Osteoporosis Australia website.