

Hyperparathyroidism and osteoporosis

Consumer Factsheet



Hyperparathyroidism and osteoporosis

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. People with hyperparathyroidism are at increased risk of developing osteoporosis. This fact-sheet explains how hyperparathyroidism 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 hyperparathyroidism and osteoporosis

The four parathyroid glands are located in the neck behind the thyroid gland. They produce parathyroid hormone, which controls the amount of calcium and phosphorous in the body. When calcium levels drop too low, the parathyroid gland produces more parathyroid hormone. This increases the amount of calcium absorbed from food and reduces the amount of calcium leaving the body in the urine. Once calcium levels are restored to normal, parathyroid hormone production declines.

People with hyperparathyroidism produce too much parathyroid hormone for too long. This can cause calcium to be dissolved from the bones. Over time, especially if the hyperparathyroidism is not treated, loss of calcium from the bones can lead to decreased bone density and weakening of the bones. Eventually, osteoporosis may develop.

Could I be at risk of osteoporosis?

Your risk of developing osteoporosis depends on the type of hyperparathyroidism you have and how it is treated or controlled. Other factors related to your health and life-style is also important.

Primary hyperparathyroidism

Primary hyperparathyroidism is usually caused by enlargement of the parathyroid gland, or by a growth (benign tumour) in the gland that produces too much parathyroid hormone. It is more common in women who have been through menopause than in men. If your blood calcium levels are not too high and both your general health and bone health are unaffected, you may not need treatment. Regular blood tests and other health checks will be needed. You may also need to have your bone strength checked regularly. If your condition is severe and your bones have become weaker as a result, surgery may be needed to remove the parathyroid tumour. Surgery quickly reduces the body's calcium levels to normal. Over time, a gradual improvement in bone strength may be seen and the risk of osteoporosis is reduced.

Secondary hyperparathyroidism

Secondary hyperparathyroidism is caused by other diseases or problems in the body. Kidney disease, coeliac disease (or other conditions that affect the absorption of food) and vitamin D deficiency are the most common causes. For most people, treatment of the underlying condition will help to control the production of parathyroid hormone, reducing the risk of bone weakness and osteoporosis. Vitamin D tablets can be taken to correct vitamin D deficiency, which often occurs if the kidneys are not functioning properly. It is very important to discuss this with your doctor first. A special diet or medications may be necessary if your parathyroid hormone and calcium levels are still too high after treatment of the underlying condition.



Other factors that influence your risk of developing osteoporosis

Your overall risk of developing osteoporosis will depend on many factors not related to your hyperparathyroidism.

Osteoporosis is more common in women who have been through menopause, so women at this stage of life who also have hyperparathyroidism 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 hyperparathyroidism is proving difficult to control or has already led to bone weakening, you may need osteoporosis medications to reduce your risk of breaking a bone. Any other osteoporosis risk factors you have will be taken into account when your doctor considers your need for osteoporosis medication. 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.

Calcium supplements are not recommended in hyperparathyroidism

People who do not get enough calcium from their diet are often advised to take calcium tablets to help keep their bones healthy. However, calcium tablets are not recommended for people with primary hyperparathyroidism, as they may increase calcium levels in the blood.

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 hyperparathyroidism. You should ensure you have adequate:

Calcium – 3 serves of dairy foods daily, or increases 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. www.osteoporosis.org.au