

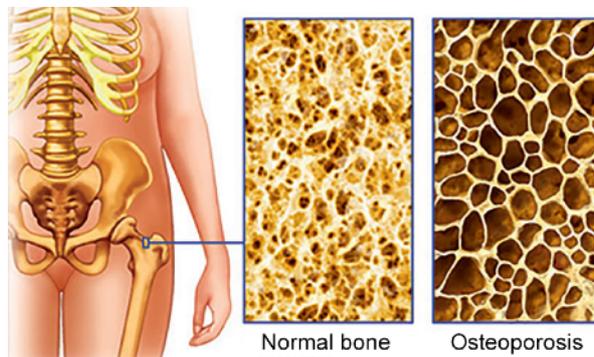


# Osteoporosis

How to take good care of your bones?



Osteoporosis is a condition that affects the bones. Its main symptoms are a reduction of bone density and damage to the bone tissue, making the bone more brittle and increasing the risk of fractures. Fractures are particularly significant.

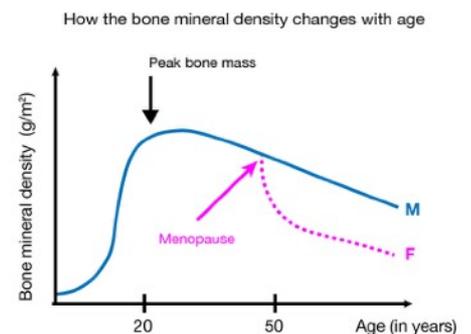


Contrary to a widely held belief, the bone is in fact a living tissue that is continuously renewed in a person's lifetime. The « old » bone is destroyed and the healthy « new » bone produced. This mechanism is known as « bone remodelling ».

The bone capital is built up until the age of around 20; this is the growth phase. Then on reaching adulthood the activities of resorption and formation are balanced out; the tissue is simply renewed and the bone structure now remains stable. The ageing process is accompanied by a “natural” reduction of the bone capital.

Many factors influence remodelling of the bones, foremost among them:

- the production of sex hormones: oestrogens and androgens; that is why this problem is mainly encountered after the menopause and andropause.
- Absorption of calcium and vitamin D.



Did you know that after a fracture this process, together with suitable treatment, enables the bone to be repaired?

# What about the risk factors?

- *Age: the risk of osteoporosis rises as we get older;*
- *The risk is greater for women;*
- *An early menopause: the earlier the menopause occurs, the higher the risk (especially if the menopause occurs before 40);*
- *A family history of osteoporosis;*
- *A low body mass index (BMI). A BMI of between 20 and 25 is ideal. An even lower BMI is a risk factor for osteoporosis;*
- *A vitamin D deficiency;*
- *A calcium deficiency;*
- *Excessive alcohol consumption: studies have shown that drinking more than 2 units of alcohol a day can increase the risk of osteoporosis, while the consumption of more than 4 units may double the risk of fractures;*
- *Tobacco use also increases this risk of osteoporosis: tobacco has an early negative role because it already leads to a reduction of bone mineral density in young smokers.*
- *The lack of physical activity and prolonged immobility;*
- *Some endocrine conditions such as hyperthyroidism;*
- *Some digestive pathologies which cause malabsorption;*
- *Prolonged courses of cortisone-based treatment.*



## What are the signs and symptoms?

*Osteoporosis is not usually accompanied by any clinical sign or pain. That is why it is called a silent illness until a fracture occurs; bone fragility makes this more likely.*

## How can osteoporosis be diagnosed?

- *First of all, it is important to review your risk factors to determine whether you belong to a population group that is at risk.*
- *Osteoporosis can sometimes be detected by chance during a radiographic examination.*
- *However, the reference examination is a bone densitometry. This examination enables the bone density to be measured; it is easy to perform and causes little exposure to radiation.*



# How to prevent osteoporosis?

There are 3 key factors to keep your bones healthy:

- Calcium;
- Vitamin D;
- Physical activity.

1 - A varied and balanced diet is vital with the emphasis on **calcium** intake:

- Drinking mineral water can be an important daily source. Don't forget to read the labels! Choose water with a calcium content of more than 200 mg/litre.
- Vegetables with the highest calcium contents are leaks, cabbages, spinach, rocket salad, watercress...
- Pulses such as haricot beans are a good source of calcium.
- Oilseeds such as almonds can round off the daily intake.
- Think of seafood: seaweed and sardines are very rich in calcium.

2 - **Vitamin D** only occurs in small quantities in food and is mainly synthesized by the skin on exposure to ultraviolet sunlight. It plays a vital role in that it favours calcium absorption by the digestive tube, stimulating bone formation and reducing its loss.



All over Europe, the intensity of UVB radiation is not high enough from November to March and permits only minimum production of vitamin D.

Even if the sources of vitamin D in food are limited, remember to choose:

- Oily fish such as salmon (especially wild salmon), mackerel, herring, sardines
- Eggs and liver can be additional sources.

Exposure to daylight remains the key vitamin D activating factor. You need only expose your face and hands for 20 minutes a day.

The desirability of vitamin D supplements and doses in medical practice is a widely debated and controversial subject. Discuss your personal situation with your doctor!

3 - **Physical activity** plays a key role in osteoporosis prevention.

Our skeleton is sensitive to gravity and weight-bearing activities.

Physical exercise in childhood and adolescence seems to modify the bone structure, so increasing the initial bone capital.



*At every stage in life, the adoption of an active lifestyle is a factor which protects the bones! Otherwise, if you do not move for long periods your bones tend to demineralize. Astronauts are an excellent example: after a long period of weightlessness, muscle and bone losses occur.*

*Did you know that impact sports such as jogging, jumping or skipping greatly stimulate the bone cells?*



*Osteoporosis is therefore a silent disease and a risk to public health. Although genetic factors play an important role in its occurrence, prevention is based on healthy life hygiene, including a balanced diet and regular physical activity.*

*You should start this prevention strategy as soon as possible and maintain it throughout your life.*

*Don't forget other risk factors either: avoid tobacco and moderate your alcohol consumption!*

*Consult your doctor regularly!*

*He will be able to adjust prevention strategies to your own situation in the light of your personal and family case history and any treatments you are taking. If necessary, he will also be able to prescribe a suitable therapy.*

