



OSTEOPOROSIS.RISK.CHECK

COULD YOU BE AT RISK OF
OSTEOPOROSIS AND FRACTURES?

Find out by taking this quick and simple risk check

Don't let osteoporosis affect you!
If you are at risk, talk to your doctor



www.osteoporosis.foundation

1. Are you aged 60 or older?

- Yes
- No



The risk of osteoporosis increases with age. Even if you have no other clinical risk factors, if you are a woman aged 60 years or over, or a man aged 70 years or over, you should discuss bone health at your next check-up.

2. Have you broken a bone after the age of 50?

- Yes
- No



If you've broken a bone after a minor fall (from standing height), it may be because of osteoporosis. One broken bone is a major risk factor for a new fracture, with the highest risk in the following two years.

3. Are you underweight?

- Yes
- No

| To calculate your BMI in case you do not know it | | BMI value | Meaning |
|--|--|--------------|----------------|
| Metric units | Imperial units | Below 19.0 | Underweight |
| $BMI = \frac{\text{weight in kilograms}}{\text{height in meters}^2}$ | $BMI = \frac{\text{weight in pounds} \times 703}{\text{height in inches}^2}$ | 19.1 to 24.9 | Normal/Healthy |
| | | 25.0 to 29.9 | Overweight |
| | | Above 30.0 | Obese |



A Body Mass Index (BMI) of less than 19 kg/m² (equivalent to 19 lbs/in²) is a risk factor for osteoporosis. Being underweight can lead to lower oestrogen levels in girls/women, similar to after menopause, which may contribute to the development of osteoporosis. At the same time, frail people are at higher risk of fracture.



If you have ticked yes to 2 or more of the above questions, your replies suggest that you may have major risk factors for osteoporosis and fractures. We encourage you to ask for assessment and to discuss strategies to reduce your risk for osteoporosis-related fractures with your doctor.

4. After the age of 40, have you lost more than 4 cm in height (ca. 1.5 inches)?

- Yes
- No
- I do not know



Height loss of more than 4 cm (1.5 in) as an adult is often caused by spine fractures due to osteoporosis. Not all spine fractures are painful, which means that sometimes people don't know they have them.

5. Have either of your parents had a hip fracture?

- Yes
- No



If your parents had a hip fracture, you may be at higher risk of developing osteoporosis and having a fracture. If either of your parents had a stooped back or there is a strong family history of osteoporosis, this could also be a sign that you are at increased risk of developing osteoporosis.

6. Do you have any of the following disorders?

- Rheumatoid arthritis
- Digestive tract diseases (inflammatory bowel disease (IBD), coeliac disease)
- Prostate or breast cancer
- Diabetes
- Chronic kidney disease
- Thyroid or parathyroid gland disorders (hyperthyroidism, hyperparathyroidism)
- Lung disorder (chronic obstructive pulmonary disease (COPD))
- Low testosterone (hypogonadism)
- Early menopause, periods stopped, ovaries removed (low oestrogen due to hypogonadism)
- Prolonged immobility (for example, unable to walk unaided)
- HIV
- I do not know, but I will ask my doctor
- None of the above



Some medical disorders are linked to an increased risk of osteoporosis and fractures. This is known as secondary osteoporosis. Some conditions can also increase the risk of falling, which can lead to fractures.

7. Have you been treated with any of the following medications?

- Glucocorticoids, or "steroids", used to treat inflammation (e.g. prednisone tablets for 3 months or longer)
- Aromatase inhibitors used to treat breast cancer
- Androgen deprivation therapy used to treat prostate cancer
- Thiazolidinediones used to treat diabetes (e.g. pioglitazone)
- Immunosuppressants used after transplantation surgeries (e.g. calmodulin/calcineurin phosphatase inhibitors)
- Antidepressants used to treat depression, obsessive compulsive disorder etc. (e.g. selective serotonin reuptake inhibitors (SSRI))
- Anticonvulsant or antiepileptic drugs used to treat seizures (e.g. phenobarbital, carbamazepine and phenytoin)
- I do not know, but I will ask my doctor
- None of the above



Long-term use of certain treatments can increase bone loss, leading to an increased risk of fracture. Some treatments also increase the risk of falls, which can result in broken bones.

8. Do you drink excessive amounts of alcohol (more than 3 units a day) and/or currently smoke?

- Yes
- No



Drinking too much alcohol impacts negatively on bone health and can also lead to frequent falls, which increases the risk of fractures.



Whether you're a current smoker, or have smoked in the past, you should be aware that smoking has a negative impact on bone health.

THANK YOU FOR COMPLETING THE IOF OSTEOPOROSIS RISK CHECK!

**IF YOU HAVE ANSWERED YES TO ANY OF THE QUESTIONS
IN THIS RISK CHECK**



**YOUR REPLIES SUGGEST THAT YOU MAY HAVE RISK
FACTORS FOR OSTEOPOROSIS AND FRACTURES.**

We encourage you to discuss the status of your bone health and strategies to reduce your risk for osteoporosis related fractures with your doctor who may advise a risk assessment and/or bone densitometry testing.

We also encourage you to check the following pages for any other osteoporosis risk factors that may apply to you and to regularly check your risk for osteoporosis and fractures.

**IF YOU HAVE NOT REPLIED YES TO ANY OF THE EIGHT QUESTIONS
IN THIS RISK CHECK**

Please check whether other risk factors for osteoporosis, shown in the following pages, may apply to you.

To retake this Risk Check online, visit
<http://riskcheck.iofbonehealth.org>

DO ANY ADDITIONAL OSTEOPOROSIS RISK FACTORS APPLY TO YOU?

RISK FACTORS THAT YOU CAN CHANGE

AVOIDING DAIRY FOODS?



Calcium, the most important mineral for your bones, is contained mostly in dairy products. If you avoid, are allergic or intolerant to milk/dairy products, without taking any calcium supplements, you have probably been calcium-deficient and are at higher risk of osteoporosis.

GETTING ENOUGH SUNLIGHT?



Do you spend less than 10 minutes per day outdoors (with part of your body exposed to sunlight), without taking vitamin D supplements? Vitamin D is made in the skin upon exposure to UVB rays from the sun. Vitamin D benefits bone health as it is necessary for the absorption of calcium.

LITTLE PHYSICAL ACTIVITY?



Is your daily physical activity under 30 minutes a day (housework, walking, running etc.)? Lack of physical activity results in bone and muscle loss. Regular weight-bearing exercise (like jogging or walking) and muscle-strengthening exercise help build up and strengthen bones and muscles.

FREQUENT FALLS?



Falls are the primary cause of fractures and anyone who falls frequently (more than once in the past year) is at higher risk of breaking a bone. Exercise to improve muscle strength and balance, as well as fall prevention strategies at home, may help reduce the risk of falls.

RISK FACTORS THAT CAN'T BE CHANGED



RHEUMATOID ARTHRITIS?

Rheumatoid arthritis itself and the use of corticosteroids to fight this disease may lead to osteoporosis.



DIABETES?

Both diabetes type 1 and 2 have been linked to increased fracture risk.



BREAST OR PROSTATE CANCER THERAPY?

Prostate and breast cancer are treated by hormone removal, which contributes to bone loss. Cancer treatments such as chemotherapy, radiation therapy, and corticosteroids also negatively affect bone health.



HYPERTHYROID OR HYPERPARATHYROID?

Hyperthyroidism and hyperparathyroidism lead to bone loss and osteoporosis.



GLUCOCORTICOID TREATMENT?

Glucocorticoids, often known as "steroids" (e.g. prednisolone) are often prescribed for conditions like asthma, rheumatoid arthritis, and some inflammatory diseases. Use of corticosteroids by mouth for more than 3 consecutive months may lead to bone loss, with loss most rapid in the first 3-6 months of treatment.



DIGESTIVE DISEASES?

Conditions such as ulcerative colitis, Crohn's disease or coeliac disease lead to poor absorption of nutrients in food. Increased osteoporosis risk is due to malabsorption of calcium and other nutrients (and often low body weight). Long-term bone health is not likely to be affected in people with coeliac disease who consistently stick to a gluten-free diet.



EARLY MENOPAUSE?

Did your menopause occur before the age of 45? Oestrogen has a protective effect on bone. Once menopause begins your body produces lower levels of oestrogen and the rate of bone loss increases rapidly.



PERIODS STOPPED?

Have your periods ever stopped for 12 consecutive months or more (other than because of pregnancy, menopause, or hysterectomy)? No menstruation over a long period of time indicates low levels of oestrogen production – a factor which increases the risk of osteoporosis.



OVARIES REMOVED?

Were your ovaries removed before the age of 45, without you taking hormonal replacement therapy? Your ovaries are responsible for oestrogen production and lack of ovaries means that you've had an oestrogen deficiency – a factor which increases the risk of osteoporosis.



LOW TESTOSTERONE LEVELS?

Have you ever suffered from impotence, lack of libido or other symptoms related to low testosterone levels? Testosterone in men plays a similar role to oestrogen in women – lower levels of this hormone negatively affect bone health and may increase the risk of osteoporosis.

If any risk factors apply to you, it does not mean that you have osteoporosis, just that you may have a greater chance of developing this condition. In this case, be sure to discuss bone health with your doctor, who may advise a bone health assessment. If you have not identified any risk factors, we encourage you to lead a bone healthy lifestyle and keep monitoring your risks in the future.

TIPS FOR A BONE-HEALTHY LIFESTYLE

- **Increase your levels of physical activity** – aim to exercise for 30-40 minutes, three to four times each week with some weight-bearing and resistance exercises in the programme
- **Ensure a nutritious, balanced diet which includes enough dietary calcium** – see our calcium recommendations online
- Dairy intolerance? **Find out about calcium-rich alternatives** or explore which dairy products you can enjoy in moderation – use the IOF Calcium Calculator available on our website to estimate your approximate calcium intake
- Spend more time outdoors to ensure you are **getting enough vitamin D** or take supplements if required
- **Avoid smoking** and **drink alcohol only in moderation**

DON'T LET OSTEOPOROSIS AFFECT YOU, YOUR FAMILY OR FRIENDS!

For further information about osteoporosis, related fractures and to find your national osteoporosis society <http://osteoporosis.foundation>

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