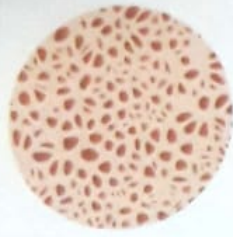


# **LOVE YOUR BONES**

**Protect your future**



**Know your risk for osteoporosis**



Osteoporosis is a problem worldwide, and in many countries, up to one in three women and one in five men aged 50 years or over will suffer an osteoporotic fracture. Osteoporosis causes bones to become weak and fragile, so that they break easily, even as a result of a minor fall, a bump, a sneeze, or a sudden movement. Fractures caused by osteoporosis can be life-threatening and a major cause of pain and long-term disability.

## **BE PROACTIVE**

**Find out whether you are at risk and get tested!**

Strong bones, together with strong muscles, will help you enjoy an active, mobile and independent future. Put simply: the state of your bone health can determine your future quality of life. In women over 45 years of age osteoporosis accounts for more days spent in hospital than many other diseases, including diabetes, heart attack and breast cancer. Hip fractures, one of the most serious and life-threatening, fracture events, often result in the need for assisted care, and loss of physical independence. Fewer than half of those who survive a hip fracture regain their previous level of function. Approximately 20-25% of people who suffer a hip fracture die within a year.

## **5 STEPS TO HEALTHY BONES AND A FRACTURE-FREE FUTURE**



### **1. Exercise regularly**

Weight-bearing, muscle-strengthening and balance-training exercises are best.



### **2. Ensure a diet rich in bone-healthy nutrients**

Calcium, vitamin D and protein are the most important for bone health. Safe exposure to sunshine will help you get enough vitamin D.





### 3. Avoid negative lifestyle habits

Maintain a healthy body weight, avoid smoking and excessive drinking.



### 4. Find out whether you have risk factors

and bring these to your doctor's attention, especially if you've had a previous fracture or have specific diseases and medications that affect bone health.



### 5. Get tested and treated if needed.

If you're at high risk you will likely need medication to ensure optimal protection against fracture.

## TAKE ACTION for change

One of the important steps you can take to protect your future is to recognize whether you have significant risk factors. Recognizing osteoporosis risk factors will help you take early action for prevention, which should have an enormously positive impact on your bone health in later years.

Here are some of the more **common risk factors which are modifiable**, that means you CAN change them and reduce your risk of osteoporosis and fractures:

### Smoking

We all know the dangers of smoking. But many don't know that compared to nonsmokers, people who smoke, or have smoked in the past, are at increased risk of any fracture. Smoking increases the risk of hip fracture by up to 1.8 times.



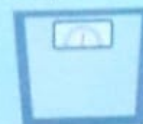
### Excessive alcohol consumption

People who drink more than 2 units of alcohol daily have a 40% increased risk of sustaining any osteoporotic fracture, compared to people with moderate or no alcohol intake. Drinking in moderation will benefit your overall health, not just your bones.



### Low Body Mass Index (BMI)

Maintaining a healthy body weight is important too. BMI below 19 is considered underweight and a risk factor for osteoporosis. Low BMI may also result from poor nutrition and low intake of bone-healthy nutrients like calcium, protein and vitamin D.





### Poor nutrition

A nutritious diet rich in calcium, protein, fruits and vegetables benefits bone and muscle health at all ages. Malnutrition in seniors is a special concern, particularly because they are more susceptible to osteoporosis, falls and fractures.

### Vitamin D deficiency

Vitamin D is made in our skin with exposure to the sun's ultraviolet rays. Vitamin D is essential for bone health in that it helps the body absorb calcium. Few foods contain vitamin D and sunlight is not always a reliable source of vitamin D. That's why vitamin D deficiency is common, particularly in the elderly, in those who do not go outdoors, or in the winter months at northern latitudes. IOF recommends supplements for those at risk and in seniors aged 60 years or over for falls and fracture protection.



### Frequent falls



Ninety percent of hip fractures occur as a result of a fall. Poor eye sight, loss of balance, neuromuscular dysfunction, dementia, immobilization, and use of sleeping pills (all relatively common in seniors), significantly increase the risk of falls and fractures. If you're prone to falls you should take action by fall-proofing your home and improving your muscle strength and balance through targeted exercises.

### Insufficient exercise

The saying "move it or lose it" refers to the fact that inactivity results in increased bone loss. That's why it's important to get regular weight-bearing and muscle-strengthening exercise. Adults with a sedentary lifestyle lose bone more rapidly, and studies have shown that sedentary older adults are more likely to have a hip fracture than those who are more active.



### Eating disorders

Disorders such as anorexia and bulimia which can result in extreme weight loss are dangerous for bone health. In young women this can lead to estrogen deficiency (much like menopause) and dramatically reduced calcium intake. The result is rapid bone mineral loss.



## Certain medications

Some medications may have side effects that directly weaken bone or increase the risk of fractures due to falls. Patients taking any of the following medication should consult with their doctor about increased risk to bone health:

- Glucocorticosteroids, oral or inhaled (e.g. for asthma, arthritis)
- Certain immunosuppressants (calmodulin/calcineurin phosphatase inhibitors)
- Thyroid hormone treatment (L-Thyroxine)
- Certain steroid hormones (medroxyprogesterone acetate, luteinising hormone releasing hormone agonists)
- Aromatase inhibitors (used in breast cancer)
- Certain antipsychotics
- Certain anticonvulsants
- Certain antiepileptic drugs
- Lithium
- Proton pump inhibitors



## Primary/secondary hypogonadism in men

Hypogonadal young men with low testosterone levels have low bone density, which can be increased through testosterone replacement therapy. At any age, acute hypogonadism, such as that resulting from orchiectomy for prostate cancer, accelerates bone loss to a similar rate as seen in menopausal women. The bone loss following orchiectomy is rapid for several years, and in most cases treatment should be prescribed to prevent it.

## Certain medical disorders

Some diseases, as well as the medications used to treat the disease, may weaken bone and increase the risk of fractures. Among the more common diseases and disorders which may place you at risk include:

- Rheumatoid arthritis
- Nutritional/gastrointestinal problems (Crohn's disease etc.)
- Chronic kidney disease
- HIV
- Hematological disorders/malignancy (including prostate and breast cancer)
- Some inherited disorders
- Hypogonadal states (Turner syndrome/Klinefelter syndrome, amenorrhea etc.)
- Endocrine disorders (diabetes, Cushing's syndrome, hyperparathyroidism etc.)
- Immobility

## Menopause/hysterectomy

Postmenopausal women, and those who have had their ovaries removed or who have experienced early menopause before the age of 45 years, must be particularly vigilant about their bone health. Rapid bone loss begins after menopause when the protective effect of estrogen is reduced. For some women hormone replacement therapy may help slow down bone loss, when initiated before the age of 60 years or within 10 years after menopause.



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