

BEAT THE BREAK

A Guide to Osteoporosis, Healthy Bones and Fall Prevention



Tel: 1890 930 013
HomeInstead.ie

**Home
Instead**
SENIOR CARE®
To us, it's personal.

Beat the Break:

A Guide to Osteoporosis, Healthy Bones and Fall Prevention

About this booklet

No matter what age you are, it is never too late to build strong bones and avoid dangerous slips and trips. That's why Home Instead Senior Care has produced this booklet- to help you learn everything you need to know about osteoporosis-the most widespread bone disease in the world. The booklet also shares a number of fall prevention tips so you can maintain your independence and avoid breaking a bone from a slip or fall.

Most people with osteoporosis do not even know they have it until they break a bone, which is why it is often called a "silent disease." Only 15% of osteoporosis sufferers are actually diagnosed, leaving a staggering 85% undiagnosed. So there is a real need to give this silent disease a voice and help increase people's awareness of osteoporosis- what it is, how it can be prevented and how it can be treated.

After reading this booklet you may realise that you have signs or symptoms of osteoporosis- just remember it is treatable in the majority of people and there have been 90 year olds who have improved after receiving treatment.

At Home Instead Senior Care we hope that you will find this booklet useful and are encouraged to improve your bone health and safeguard your independence. However, it is important to remember that this booklet is not a substitute for medical advice and we encourage you to speak to a medical professional about any bone or health concerns you may have.

What is Osteoporosis?

Osteoporosis is the leading bone disease in the world. It is commonly referred to as "brittle bone disease" as it weakens bones, leading to an increased risk of fractures. The most common bones to break are the wrist, hip and spine. Recent research has revealed that every 30 seconds, someone in the EU has a fracture as a result of osteoporosis.

Osteoporosis affects both men and women, however women are at a higher risk of developing the disease. One in two women over the age of 50 and one in five men over the age of 50 will be affected by osteoporosis.

The good news is osteoporosis is largely treatable and even preventable in the majority of people. However, without treatment, osteoporosis can progress causing pain, disability and loss of independence.

What is Osteopenia?

Osteopenia is a condition where a person suffers from lower than normal bone mineral density. It is considered to be the early stage of osteoporosis.

Why does Osteopenia/ Osteoporosis develop?

Bone is a living, growing tissue. Like other tissues in the body, bone is continually being renewed as old bone is broken down and replaced with new bone. Any imbalance in this process can lead to the development of weak or brittle bones, increasing the risk of suffering a fracture.



Signs and symptoms of Osteoporosis

- **Loss of height:** Many people believe that it is normal to lose height as you get older. However, if a person loses more than two centimetres, it is a red flag that they should get a DXA (dual energy X-ray absorptiometry) scan to measure bone mineral density and rule out osteoporosis.
- **A hump:** If a hump develops from osteoporosis, the bones in the spine are collapsing and will continue to collapse unless prevention methods are put in place. The hump develops because there is no bone to keep the body upright.



- **Change in body shape and size:** A person's body shape and size can change due to vertebrae collapsing. When this happens, the ribs drop down as there is not enough bone to hold the body upright, this causes the stomach contents to be pushed out.
- **Back pain:** Sudden and severe lower, mid, and upper back pain could be a sign that a fracture has occurred.

Who is at risk of developing Osteoporosis?

There are many reasons why a person can develop osteoporosis and below is a list of some of the most common risk factors:

- **Family history:** 60% of your bone health is determined by genetics, therefore, if a parent, grandparent or a close family member suffers or suffered from osteoporosis, then you may be at a higher risk of developing the disease.

- **Eating disorders:** People who suffer or have suffered from an eating disorder are at extremely high risk of developing osteopenia and osteoporosis.
- **Gastrointestinal disorders:** People with coeliac disease, Crohn's disease, ulcerative colitis or primary biliary cirrhosis are predisposed to osteoporosis.
- **Endocrine disorders:** People with high levels of cortisol, thyroid problems and cushing syndrome are at a higher risk of developing osteoporosis as these conditions induce bone loss.
- The following conditions are also associated with osteoporosis: rheumatoid arthritis; diabetes; Turner's syndrome; bone marrow disorders; connective tissue disease; klinefelter's syndrome; haemochromatosis; multiple sclerosis; Parkinson's disease; and chronic obstructive pulmonary disease. Asthmatics using steroid inhalers also suffer a high risk of developing osteoporosis.

Treatments which negatively affect bone health

Certain medical treatments have been associated with an increase in osteoporosis, such as:

- Chemotherapy or radiation
- Aromatase inhibitors for cancer of the breast and prostate
- GnRh analogues (gonadotropin-releasing hormone agonist) used to treat endometriosis or prostate cancer
- Corticosteroids such as prednisolone, prednisone or cortisone
- Some anticonvulsants for epilepsy
- Post organ transplant therapy
- Diuretics such as lasix and burinex
- Chronic heparin or warfarin
- Antipsychotic medications such as long term lithium therapy

Lifestyle factors which negatively affect bone health

The following lifestyle factors are associated with osteoporosis:

- Excessive physiological or psychological stress
- Low body weight
- Lack of regular weight bearing exercise
- Poor diet
- Smoking and alcohol use



Additional risk factors for women

Oestrogen plays an important role in the maintenance of healthy bones for women and those with an oestrogen deficiency are at a higher risk of developing osteoporosis.

A woman is more likely to suffer an oestrogen deficiency if she had her first period after age fifteen or experienced irregular or no periods. Post menopausal women also suffer a higher risk of developing osteoporosis, especially those who experienced menopausal prematurely (before 45 years).

Additional risk factors for men

Most men that suffer from osteoporosis also have a testosterone deficiency. Symptoms of this include loss of sex drive, depression, and fatigue.

Diagnosis of Osteoporosis

A DXA scan of the spine and hips is the only test the Irish Osteoporosis Society recommends for the diagnosis of osteoporosis. It is a non-invasive medical test and is usually completed in about ten minutes so it is quick and painless.



Treatment of Osteoporosis

There are many treatments available for osteoporosis and it is important to speak to your doctor about a treatment plan that is right for you. The treatment plan prescribed by doctors is usually based on the following factors:

- A person's risk of fracture or re-fracture
- A person's DXA results of spine and hips
- The risk factors involved
- A person's age
- A person's medical history

Healthy eating, appropriate exercise and a healthy lifestyle is absolutely essential if you want to promote bone health.

Healthy eating

Healthy eating is essential for healthy bones. Bones are living tissue and therefore need certain foods to stay strong and healthy. A well balanced diet should contain a variety of foods providing adequate calories, which should be made up of:

- **50-55% carbohydrates** - carbohydrates can be found in foods such as bread, cereal, pasta, rice, potatoes, fruit and vegetables.
- **30% fat** - poly and mono unsaturated fats can be found in foods such as low-fat milk, yoghurt and low-fat cheese.
- **10-15% protein** - protein rich foods include fish and poultry.
- **30 grams of fibre** - wholegrain cereals, fruit and vegetables are rich in fibre.

It is also important to drink at least 6 - 8 glasses of water a day to stay hydrated. Your diet should also be rich in calcium and vitamin D as they are essential nutrients in the prevention and treatment of osteoporosis as they help improve bone strength.



How much do I need?

Adults (men)	1000 mg per day
Adults (women)	1000 mg per day
Pregnant Women (second half)	1200 mg per day
Breastfeeding Women (first 6 months)	1500 mg per day
Children (1-10 years)	800 mg per day
Teenagers (11-18 years)	1200 mg per day

CALCIUM CHART

The table below gives an indication of the calcium content in everyday foods. Choosing calcium rich foods will help maintain a healthy skeleton.

Food	Weight	Calcium (mg)
Whole milk	190ml	224
Semi-skimmed milk	190ml	231
Skimmed milk	190ml	235
Soya milk	190ml	25
Goat's milk	190ml	190
Low-fat yoghurt	150g	225
Cheddar cheese	28g	202
Cottage cheese	112g	82
Boiled broccoli	112g	45
Baked beans	112g	59
Large orange	200g	58
Dried apricots	100g	170
Brazil nuts	100g	170
Whitebait (fried)	56g	482
Salmon (tinned)	56g	52
Tofu	100g	480
Milk chocolate	56g	123
Dried apricots	100g	170
Ice cream	112g	134

Milk, cheese and yoghurt are some of the best sources of calcium. A glass of milk and a match box sized piece of cheese contain between 250-300mg of calcium. Pregnant women and teenagers require 1200mg/day of calcium and will need at least five of these servings to get the recommended daily intake.

However, some calcium supplements cause constipation so it is important to drink plenty of fluids throughout the day. It is also important to consult your doctor before taking any new supplements or medication.

Vitamin D

There is a world wide vitamin D deficiency which is increasing the risk of older people developing osteoporosis. The sun is the best source of vitamin D and a few minutes of sunlight a day will enable the body to increase vitamin D levels.

Vitamin D can also be found in foods such as oily fish. Eating salmon, tuna, sardines, mackerel, halibut or herring once a week will help you meet your vitamin D requirements. Other dietary sources of vitamin D include dairy products; margarine; eggs; chicken liver; soya milk and rice milk.

People who develop a vitamin D deficiency, such as older people living in nursing homes, who rarely spend time outside, may require a vitamin D supplement. Again it is important to consult a medical practitioner before taking any new supplement.

How much do I need?

10ug or 1000 international units (iu) is the recommended dose of vitamin D for adults.

Exercise and bone health

It is important to note that exercise must be taken regularly to have any benefit. If you have been diagnosed with either it is recommended that you undergo a health assessment by a chartered physiotherapist.

A physiotherapist can advise you of what exercises are safe and appropriate to do at home and what ones you should avoid, such as sit-ups, kickboxing or any exercise that puts additional stress on your vertebrae.

The type of exercise you do depends on your age, your medical history, your DXA scan results and your risk of suffering a fracture.

It is important to note that exercise must be taken regularly to have any benefit. Regular exercise must be a permanent lifestyle decision because if you stop, the beneficial effects gradually wear off. Muscles adapt to extra use within weeks but bones take several months.



Basic rules for exercising

- Always warm up before exercising.
- Try to pick an activity that you know you like, so you will not dread exercising. Varying your activities reduces your risk of getting bored and will stimulate more bone growth.
- Gradually build up the intensity and the amount of time you spend exercising.
- Resistance training using weights and gym machines has been shown to promote bone health by increasing your muscle strength and bone density.



Other lifestyle changes which can prevent Osteoporosis

- Avoid alcohol - Excess consumption of alcohol can increase the risk of fracture and reduce bone formation. Women should limit their alcohol intake to 14 units per week and men to 21 units per week. One unit is roughly equal to half a pint of beer or one pub measure of spirits or one small glass of wine.
- Avoid smoking - The toxins in cigarettes negatively affect bone health and should be avoided, especially if you have been diagnosed with osteopenia or osteoporosis.
- Maintain a healthy body weight - Restrictive dieting leading to excessive weight loss can negatively affect bone health.

Preventing falls

The following statistics reveal some startling truths about falling and the importance of fall prevention:

- 90% of hip fractures in older people are due to osteoporosis.
- 20% of people aged 60+ who fracture their hip will pass away due to complications within 6-12 months.
- 50% of people aged 60+ who fracture their hip will not be able to wash, bath or walk across a room unaided. They will become dependent on family or friends to take care of them or will need to go into a nursing home.
- Only 30% of people aged 60+ who fracture their hip regain their independence.
- Between the ages of 65 to 74, 62% of accidents are related to people falling.
- From age 70 and older, a person is 25 times more likely to sustain a hip fracture.
- 82% of accidents to people over the age of 75 are fall related.

Causes

The causes of falls are known as risk factors. Many of these risk factors are preventable and are outlined below:

Factor 1: Osteoporosis

Osteoporosis is a condition wherein bones become more porous, less resistant to stress, and more prone to fractures. What is debatable is whether brittle bones break after a fall, or break when stressed and in turn cause a fall. In either event, a decrease in bone density contributes to falls which can result in a person losing their independence. If you have had a fall or your balance is off, a chartered physiotherapist will be able to teach you exercises to increase your balance and therefore reduce your risk of falling.

Factor 2: Lack of Physical Activity

Failure to exercise regularly can result in poor muscle tone, decreased strength, decreased balance and loss of bone mass and flexibility. These all increase the likelihood of experiencing a slip or fall and the severity of injuries sustained as a result of a slip or fall.

Factor 3: Impaired Vision

Age-related vision diseases can increase the risk of falling. Cataracts and glaucoma can alter older peoples depth perception, visual acuity and peripheral vision. It is therefore important to have your eyes checked regularly so eye diseases such as cataracts and glaucoma can be detected early. It is also important to clean glasses daily to improve visibility.



Factor 4: Medications

Sedatives, anti-depressants, and anti-psychotic drugs may contribute to falls by reducing mental alertness, decreasing balance and affecting walking ability by causing drops in systolic blood pressure while standing. Additionally, people taking multiple medications suffer a greater risk of falling. It is advisable to talk to your doctor or pharmacist about ways to reduce your chances of falling by using the lowest effective dosage, regularly assessing the need for continued medication, and the need for walking aids while taking medications that affect balance.

Factor 5: Environmental Hazards

At least one-third of all falls suffered by the elderly involve environmental hazards in the home. The most common hazard for falls is tripping over objects on the floor. Other factors include poor lighting, loose rugs, lack of grab bars or poorly mounted grab bars, and unsteady furniture.

Prevention tips

It is useful to conduct a walk-through of your home to identify possible problems that may lead to falling. A home visit by an occupational therapist may also be useful in that they are trained to identify risk factors and recommend appropriate actions.

Outdoors

- Fix uneven cracks and pathways.
- Install handrails or grab bars on stairs and steps.
- Trim shrubbery along the pathway to the home.
- Keep footpaths clear of clutter.

All Living Spaces

- Secure rugs with nonskid tape as well as carpet edges.
- Install electrical outlets to hip level to prevent bending down and possibly losing your balance.
- Reduce clutter.
- Install nightlights or motion-sensitive lighting throughout the home.
- Remove wheels from all items of furniture.

Bathrooms

- Install grab bars on walls beside the bath and the toilet.
- Mount a liquid soap dispenser on the bath-wall.
- Install a portable, hand-held shower head.
- Install a raised toilet seat if needed.
- Use non-skid mats or carpet on floor surfaces that may get wet.

Kitchen

- Keep commonly used items within easy reach.
- Use a sturdy step stool when you need something from a high shelf.
- Make sure appliance cords are out of the way so you do not trip over them.
- Avoid using floor polish or wax to reduce slippery surfaces.

Bedroom

- Use a bedside light with a switch that is easy to turn on and off or a touch sensitive lamp.
- Use a nightlight to keep the room lit at night time.

Stairways, Hallways and Pathways

- Keep walking areas free of clutter.
- Avoid throw rugs.
- Install tightly fastened hand rails running the entire length and along both sides of stairs.
- Apply brightly coloured tape to the face of the steps to make them more visible.
- Install adequate lighting in stairways, hallways and pathways, with light switches placed at each end.

Fall Prevention: Your Home Safety Checklist

This checklist will help you take the steps to make your home a safer place to live:

- Are pathways and footpaths outside the home even and free from cracks?
- Are the walkways free from clutter?
- Are rugs and carpets secured with non-skid tape?
- Are there hand rails or grab bars installed beside the stairs or in the bathroom next to the toilet and bath?
- Are non skid mats placed in the bath tub?
- Is the kitchen floor free from liquid, grease or any other slippery substance?
- Have wheels been removed from all items of furniture?
- Do you use a nightlight to keep the bedroom lit at night time?
- Do you have light switches placed at each end of the stairway?
- Are steps visible?

If you checked no to any of this boxes please use the space below to record what needs to be done to make your home safer:

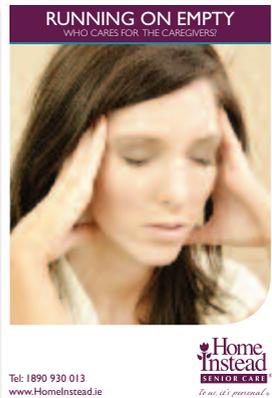
Helping You Understand Senior Care Issues

As Ireland's trusted source of home care for seniors, Home Instead Senior Care is committed to understanding the senior care issues you and your family face everyday. We are also committed to helping you older population and have published a number of guides designed to provide you with trusted information about issues such as dementia and communicating with elderly loved ones.

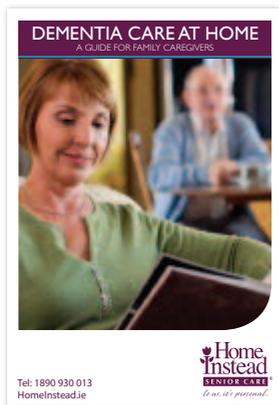
The following publications are available from any Home Instead Senior Care franchise office. You can also call 1890 930 013 to order a FREE copy of any guide.



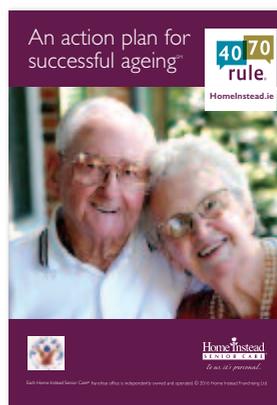
Too Close for Comfort?



Running on Empty



Dementia Care at Home



The 40-70 Rule

Acknowledgements

Home Instead Senior Care would like to express its gratitude to Michele O'Brien of The Irish Osteoporosis Society and Sean O'Brien, Senior Occupational Therapist of Beaumont Hospital for their contribution to this booklet. This booklet could not have been put together without their expert knowledge.

About Home Instead Senior Care

Home Instead Senior Care is Ireland's trusted source of home care for older people, allowing them to continue to be independent and live in their home for longer than otherwise possible.

Since 2005, the Home Instead Senior Care franchise network in Ireland has been devoted to providing the highest-quality senior home care. Compassionate Home Instead CAREGivers are an invaluable resource helping families eliminate worry, reduce stress and re-establish personal freedom. From Alzheimer's and dementia support to respite care and companionship, Home Instead Senior Care and its twenty three locally owned and operated offices are ready to help you through this difficult time.

Home Instead Senior Care was also the first home care organisation in Ireland to be a preferred provider for the Health Services Executive and the first to have a contract with them for the provision of enhanced home care services.

For more information, contact:

Home Instead Senior Care
305 Q House, Furze Road, Sandyford, Dublin 18
Tel: 1890 930 013 • Email: info@homeinstead.ie • Web: HomeInstead.ie

About the Irish Osteoporosis Society

The Irish Osteoporosis Society is a charity dedicated to reducing the incidence of osteoporosis and promoting bone health. The IOS provides information to the public and health professionals on all aspects of the disease and offers support to people with osteoporosis, their families, and everyone at risk of the disease.

For more information, contact:

Irish Osteoporosis Society
12 Burlington Road, Dublin 4
Tel: 1890 252 751 • Fax: 01 635 1698 • Email: info@irishosteoporosis.ie
Web: www.irishosteoporosis.ie



Each Home Instead Senior Care® franchise office is independently owned and operated.

© Home Instead Franchising Ltd. 2018