MEN it’s time to make noise and break the Silence, NOT your Bones

At age 27, I was diagnosed with the early stages of Osteoporosis. Most people are bewildered when I tell them that I have it, since they usually associate it as “an old women’s disease”.

Ravind Jeawon

Osteoporosis affects 1 in 4 men, 1 in 2 women over 50 and children can also be affected

Irish Osteoporosis Society
At age 27, I was diagnosed with the early stages of Osteoporosis. Most people are bewildered when I tell them that I have it, since they usually associate it as “an Old women’s disease”.

I was very fortunate to be diagnosed, as most males are not. I am now on a treatment plan and my bones have been steadily improving.

I want to help the Irish Osteoporosis Society Charity increase the awareness of how Osteoporosis can affect people of all age groups.

I especially want to highlight that Osteoporosis is a preventable and treatable disease and that males need to be proactive about their bone health.

Ravind Jeawon
One in four MEN over 50 will break a bone due to Osteoporosis, even though it is preventable and treatable in the majority of people.

It can affect males of all age groups however the reality is men are severely under diagnosed.

The word “Fracture” means to break a bone

Osteoporosis is known as the “Silent Killer” because there are no signs and symptoms prior to a person breaking bones. However, anyone who has had a hip fracture will disagree with it being called a “silent disease”, due to the pain, disability and loss of independence they have experienced. A person can be 100% independent, fracture their hip and lose their independence.

20% of people aged 60+ who fracture a hip will pass away within 6-12 months.

50% of people aged 60+ who fracture a hip will not be able to wash, dress or walk across a room unaided.

Only 30% of people aged 60+ who fracture a hip will regain their independence. Once a person has fractured their hip, their risk of fracturing again is high, unless treatment is initiated.

90% of hip fractures are due to osteoporosis.

One hip fracture costs €55,000 in total, yet a DXA scan for osteoporosis costs approximately €100.

At present it is estimated that 300,000 people in Ireland have Osteoporosis. Studies show that only 15% of patients who have fractured due to Osteoporosis are diagnosed, assessed for or treated for their osteoporosis.

Fractures are one of the most expensive conditions to treat today, and the third leading cause of chronic nursing home admissions in the USA.

Each year, approximately 80,000 American men will fracture a hip.

Men are more likely than women to require care in a long-term facility after a hip fracture.

Men are more likely than women to die within a year after breaking a hip.

Each year, approximately 80,000 American men will fracture a hip.

One in three men in Australia over the age of sixty will suffer a fracture due to osteoporosis.
- Approximately 30,000 hip fractures occur in Canada each year, and over one quarter of these occur in men.
- Osteoporosis Fractures are preventable and a DXA scan can diagnose osteoporosis before a fracture occurs.
- Treatment has been shown to reduce pain, reduce the risk of future fractures and reduce the amount of deaths following fractures.

**Men older than 50 are more likely to break a bone due to osteoporosis than they are to get prostate cancer.**

### Osteoporosis in Men:
Men are at a significant disadvantage when it comes to Osteoporosis because osteoporosis is widely considered to be a condition that only affects older women. This is why it is so important for males to be proactive regarding the many risk factors for osteoporosis, and the signs and symptoms of undiagnosed Osteoporosis.

### What is Osteoporosis?
Osteoporosis means porous bones. Osteoporosis is called the “Silent disease” because there are **NO signs and symptoms**, prior to a person breaking a bone. The effects of Osteoporosis are not silent.

As we get older, more bone is naturally lost than is replaced, but people with Osteoporosis lose more bone than people who do not have the disease. Osteoporosis causes bones to become fragile and therefore they break easily e.g. through a minor bump or fall. With severe undiagnosed Osteoporosis, a person can fracture a rib/s from a cough or sneeze. This is why any one who has unexplained fractures, should be screened for Osteoporosis.

Osteoporosis can affect any bone, but the most common bones to break are the wrist, spine and hip, this is because of the type of bone in these three areas.
What is Osteopenia?
Osteopenia is the early stages of Osteoporosis; however research shows that the majority of broken bones happen in the moderate to marked Osteopenia range. This is why prevention of further bone loss is essential.

Signs and Symptoms of Undiagnosed Osteoporosis

- **Fractures (broken bones) due to low trauma**: Any adult who breaks a bone from a trip and fall or less, even if it was on ice or cement.

- **Loss in height**: 2-16cm - It should not be considered normal at any age to loose height. It is a red flag if a person has lost more than 2 cm in height, the person should be screened for Osteoporosis.

- **Sudden severe episodes of upper, middle or low back pain**: Osteoporosis should be ruled out if a person has undiagnosed back pain, especially if the person has lost height or developed a hump on their back.

- **A hump developing on a person’s upper back**: A person should get a DXA scan, which includes their upper back. If it is osteoporosis, the bones in the spine are collapsing (fracturing) and will continue to fracture unless treatment is initiated.

- **Change in body shape or size**: Usually associated with loss of height. This can happen due to the vertebra collapsing (bones in spine), followed by the rib cage ending up resting on the pelvis, because the spine has lost bone support to hold it upright. A pot belly can then occur as there is no place for the stomach contents to go, other than outwards. This can cause severe pain and/or difficulty in breathing and swallowing, in severe undiagnosed Osteoporosis patients.
If you have one or more signs/symptoms or risk factors for Osteoporosis, please contact your Doctor regarding the possibility of getting a DXA scan. Since there are no signs or symptoms prior to a fracture, it makes more sense if you are at risk to check your bones, than hope you do not have it and end up with multiple broken bones that could have been prevented.

A person works their whole life hoping to enjoy their retirement, unfortunately many people do not reach retirement age independently.

DO NOT let this happen to you or a loved one.

Who is at risk of developing Osteoporosis

There are many reasons why a person can develop osteoporosis. Bone is a living tissue that is constantly being removed and replaced. Bones need normal sex hormones, calcium, vitamin D3, adequate calories, proteins and weight bearing/strengthening exercise to keep them healthy. Below is a list of some of the risk factors. You will notice that some of these are other diseases, some are treatments used to treat other diseases and some are secondary effects of a disease or lifestyle choice.

Lifestyle Factors

● The Most common cause in Males is Testosterone Deficiency: Low levels of Testosterone = Hypogonadism
● Hypogonadism: This is when a person experiences one or more of the following: loss of sex drive, loss of erections, depression or fatigue.
● Klinefelter’s syndrome: Is a condition in which a male has an extra X chromosome. XXY instead of normal XY
● Testes removed: This may cause low levels of testosterone, which may affect bone.
● Mumps after puberty: This may cause low levels of testosterone, which may affect bone.
● Injury or infection to testes: This can cause low levels of testosterone, which may affect bone.

Genetic - Family History

● Research shows that 80% of a person’s bone is influenced by genetics, especially in laying down the amount of bone during childhood. This is why if a parent, grandparent or sibling has broken a bone due to a low trauma, lost height, developed a
hump or has been diagnosed with Osteopenia or Osteoporosis, there could be a genetic link. A family history of a fractured hip is one of the strongest links.

**Lifestyle Risk Factors**

- **Physiological Stress:** Inadequate nutrition, poor absorption, excessive exercise, inadequate rest periods or excessive sports competitions can lead to physiological stress. This can affect sex hormone levels which can negatively affect bone and may also lead to increased cortisol levels, which can cause bone loss.

- **Psychological stress:** Due to any cause. If it is associated with inadequate nutrition and poor absorption, this can result in increased Cortisol and Prolactin levels in the blood, which can increase bone loss.

- **Alcohol:** Men who regularly consume more than 21 units of alcohol per week are at higher risk. 1 unit is equivalent to a half pint of beer, 1 small glass of wine or 1 measure of spirits.

- **Smoking:** Smoking is a strong risk factor for bone loss and it is essential that those diagnosed seek help to quit.

- **Low Body weight:** If you are unsure if you are underweight for your height, check with your doctor or a dietician.

- **Eating disorders:** Past or present history of anorexia and/or bulimia or constant dieting.

- **Not enough calories for amount of exercise:** Overtraining in athletes, particularly those that have to maintain a low body weight for their sport, can be associated with low levels of testosterone and high levels of cortisol which can affect bone.

- **Diet:** Low daily intake of Calcium and/or Vitamin D3 and protein. Intolerance to dairy products, vegetarians or vegans, who do not take the recommended daily amount of Calcium, Vitamin D3 and protein, are higher risk to develop Osteoporosis. Calcium and vitamin D3 supplements are available for those who can not get the required amounts from food.

- **Lack of regular weight bearing exercise:** Those who do not do regular weight bearing exercise are at a higher risk to develop osteoporosis.

**Secondary Effects**

**Impaired mobility (bed bound or wheelchair) for 6 weeks or longer**

- When a person is non weight bearing there are no stresses put on the bone. Weigh bearing is necessary for them to stay strong and...
healthy, therefore bone can be lost, if this does not occur. If this happens during pre-puberty/teenage years it can significantly decrease the amount of bone laid down. Examples: Cerebral Palsy, Rheumatoid Arthritis.

Various medications, other conditions or treatments for other diseases can contribute to developing osteoporosis.

- **Cancer and Osteoporosis:** Men who have or had prostate cancer and have been treated or are being treated with androgen deprivation therapy (ADT), are at an increased risk of developing osteoporosis. This is due to the decline of the sex hormones, testosterone and oestrogen. It is imperative for male and female cancer patients to contact their physician, to check if any of their treatments cause bone loss. If the answer is yes, a DXA scan and prevention of bone loss should be initiated or treatment for Osteoporosis.

- **Chemotherapy/Radiation or Aromatase inhibitors for the treatment of prostate and breast cancer:** Any adult or child who has received or who will be receiving any of these treatments should have a DXA scan and be treated preventively or for Osteoporosis.

- **Corticosteroids:** Increase bone loss, especially during the first six months of treatment such as prednisolone, prednisone or cortisone.

- **Chronic Heparin or Warfarin:** There are two of the many medications that can cause bone loss. Please check with your doctor regarding any medications you are taking.

- **Some Anticonvulsants:** Tegretol, Phenytoin, Eplim, Lamotrigine, Valproate, Carbamazepine, Oxcarbazepine, Levetiracetam, Topiramate, and Gabapentin

- **Barbiturates:** Phenobarbital, Phenobarbitone or Primidone

- **Post Organ Transplant Therapy patients:** some of the treatments can cause bone loss.

- **Antipsychotic medications:** such as long term Lithium

- **Some anti-depressants:** Therapy Selective serotonin reuptake inhibitors (SSRIs) Citalopram, Escitalopram, Fluoxetine, Paroxetine and Sertraline

- **Proton pump inhibitors:** Esomeprazole, Omeprazole and Pantoprazole

- **Calciuretic Diuretics (water pills):** Diuretics other than Thiazide which protect against bone loss. Loop diuretics: Furosemide and Burinex.
Gastrointestinal Disorders: such as Coeliac, Crohn’s, Ulcerative Colitis and Primary Biliary Cirrhosis.

Rheumatoid Arthritis: the disease itself and steroid treatments.

Endocrine Disorders: such as high levels of Prolactin, Cortisol or excessive Thyroid hormone.

Asthma: Oral Corticosteroids and in some cases steroid inhalers

Diabetes: Those with poorly controlled diabetes appear to be at a higher risk, especially those with peripheral neuropathy.

Haemochromatosis: Excessive iron is deposited in the liver and other organs, which may result in low levels of sex hormones, which can affect bone.

Bone Marrow Disorders: Multiple Myeloma, Systemic Mastocytosis, Disseminated carcinomatosis, all may increase bone loss.

Connective Tissue Disease: May have abnormal bone collagen which can increase a person’s risk of osteoporosis.

Multiple Sclerosis: If mobility (walking/weight bearing) is affected, bone may not be stimulated. The treatment is usually steroids, which can increase bone loss.

Parkinson’s disease: If mobility (walking/weight bearing) is affected, bone may not be stimulated, which can result in bone loss.

Coeliac Disease/Gluten sensitivity: One of the major causes of bone loss in Ireland is Gluten and wheat sensitivity. Those who have been diagnosed should be screened for Osteoporosis. If a person is sensitive to Gluten and/or wheat, absorption of nutrients can be affected, which can cause bone loss.

Coeliac/Gluten sensitivity symptoms – a person can have one or more of these symptoms:
- Bloating of stomach (after food, especially white bread, pasta, biscuits, cakes and beer)
- Stomach pain
- Diarrhoea (bad smell, loose stools, stools float in toilet, lighter colour)
- Flatulence (gas)
- Constipation
- Mouth ulcers
- Chronic tiredness after meals
- Anaemia

* Please speak to your doctor if you experience any of the symptoms above, you may need to be tested for Coeliac disease. If a person’s tests are positive, a gluten and wheat free diet is recommended.
If a person’s tests are negative for Coeliac, a suggestion is to try a Gluten and wheat free diet for three weeks. If the symptoms decline, you may be sensitive to them but not a true Coeliac. If the symptoms do not decline it is important to speak to your doctor, as this should be investigated.

If you are at risk of Osteoporosis
If you have one or more risk factors, we recommend that you speak to your Doctor about the possibility of getting a DXA scan done. Based on your results, you can then help prevent its onset or if you have osteopenia/osteoporosis, you can prevent further deterioration, reduce your risk of fracture and possible loss of independence.

Any senior citizen who has had a fall or a near fall, should be assessed by a Physiotherapist to help reduce their risk of further falls. There have been many advances in this area and all it can take is one fall for a person to lose their independence.

**DO NOT allow your pride to be the reason why you lose your independence**

The Irish Osteoporosis Society has a Fall prevention leaflet which gives suggestions on how people can reduce their risk of falling in their home, which is where most falls happen. The IOS also has a Fall prevention poster for GP’s offices, Physiotherapy departments and community centers etc.

To prevent and Treat Osteoporosis

**Calcium and Vitamin D3**
Calcium and Vitamin D3 are essential for healthy bone growth and maintaining bone health. Calcium is found largely in dairy products, but please check labels as amounts can vary.

A good way to ensure that you consume the recommended daily allowance (RDA) of calcium is to strive for three servings of dairy products each day.

A serving is equal to:
- A carton of yogurt
- A glass of fortified milk
- An ounce {matchbox size} of cheese
There are a variety of ways to incorporate dairy into your meals, whether by having milk with your cereal, cheese on your pizza, or fruit with your yogurt. Boiled spinach, soya milk, Brazil nuts and whitebait contain calcium. If you are unable to get your calcium from foods, calcium supplements are available; however it is essential that you take the daily amounts of vitamin D3. Combined Calcium and vitamin D3 Supplements are available.

**The levels of Calcium recommended for Males depend on your age:**

<table>
<thead>
<tr>
<th>Age</th>
<th>Recommended Calcium (mg per day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men 50+ years</td>
<td>1,200 mg</td>
</tr>
<tr>
<td>Men 19-49 years</td>
<td>1,000 mg</td>
</tr>
<tr>
<td>9-18 years</td>
<td>1,300 mg</td>
</tr>
<tr>
<td>4-8 years</td>
<td>800 mg</td>
</tr>
<tr>
<td>1-3 years</td>
<td>500 mg</td>
</tr>
<tr>
<td>0-12 months</td>
<td>525 mg (non breast fed infants only)</td>
</tr>
</tbody>
</table>

**Sources:**
* National Osteoporosis Society UK
** National Osteoporosis Foundation USA
*** IOF

**Vitamin D3**

Vitamin D3 is an essential part of preventing and treating Osteoporosis. Without Vitamin D3, calcium will not be as easily absorbed by your body, which could affect the formation of healthy bones and teeth. Vitamin D3 is critical for calcium absorption as it increases the body’s ability to absorb calcium, by as much as 30-80%.

Low levels of Vitamin D3 may be associated with high levels of parathyroid hormone, which takes calcium from the bones to maintain the calcium levels in the blood. Vitamin D3 also helps to regulate cell growth and the immune system.

Vitamin D3 is often referred to as the “sunshine vitamin”. However Ireland’s northerly latitude means we cannot rely on this source, especially in winter. Our summers have been non existent for several years; therefore Vitamin D from the “sun” is probably not realistic in the summer time.

When a persons skin is exposed to ultraviolet B rays, the skin makes vitamin D. Vitamin D is a fat-soluble vitamin that when consumed or made in the skin, can be stored in the blood and body fat, for several months.
Approximately 10-15 minutes of sunlight a day (depending on skin type), will enable the body to store vitamin D3. If you are very light skinned, 2-3 minutes exposure, 4-5 times during the day.

**NOTE:** It is very important to avoid over-exposure resulting in sunburn, as we are all aware of the damaging effects of the sun, especially in terms of skin cancer.

- Senior citizen’s ability to produce vitamin D3 in their skin from the sun is reduced with age and they are less able to convert it into the Vitamin D hormone that the body needs.
- People who are obese are at risk of low Vitamin D levels, as body fat has a tendency to hold onto vitamin D, thus reducing its overall availability to the rest of the body.
- Those with darker skin (eg. Africans) do not absorb vitamin D3 from the sun, as easily as lighter skinned people.

**A growing number of human metabolic, epidemiologic, and animal studies are indicating that low levels of Vitamin D, appear to be linked to the following conditions:**

- Immune function diseases such as: Type 1 diabetes, multiple sclerosis and rheumatoid arthritis.
- Some cancers (breast, colon and prostate) but further research is required to prove/understand these links.
- Low levels of Vitamin D have been linked with TB and osteomalacia in adults and rickets in children.
- A Vitamin D deficiency is thought to mimic the aches and pain symptoms of fibromyalgia.

Lack of absorption of vitamin D can occur in: gastrointestinal disorders such as Coeliac Disease (Gluten sensitivity), Crohn’s and Ulcerative Colitis and Primary Biliary cirrhosis.

Vitamin D3 supplementation has been shown to reduce the risk of fracture and falls and improve muscle function in senior citizens, especially when combined with calcium.

Vitamin D3 can be found in foods such as oily fish: herring, mackerel, tuna, sardines and salmon. Yogurts, fortified milks, egg yolks and chicken livers. Breakfast cereals can also be fortified but check labels as amounts can vary.
How much Vitamin D3 do you need?

<table>
<thead>
<tr>
<th>Group</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult men 50+ years</td>
<td>20-30µ/800-1000 IU per day**</td>
</tr>
<tr>
<td>Adult men 19-49 years</td>
<td>10-20µ/400-800 IU per day**</td>
</tr>
<tr>
<td>Children 1-18 years</td>
<td>10µ/400 IU per day***</td>
</tr>
<tr>
<td>Babies 0-12 months breast fed or formula fed</td>
<td>5µ/200 IU*</td>
</tr>
</tbody>
</table>

Sources:
* HSE 2011
** National Osteoporosis Foundation USA
*** American Academy of Paediatrics.

Weight bearing exercise

Weight bearing exercise is imperative for strong bones. Adults need to do 30 minutes a day and children need a minimum of 60 minutes a day. Weight bearing exercise is any activity where the person is putting their whole body weight on their feet. Swimming and riding a bike are great forms of exercise and continue if you enjoy them.

**NOTE:** They are not true weight bearing, so you will need to do additional weight bearing exercise.

Examples of weight bearing exercise:

- **Dancing:** Is a great form of weight bearing, as your feet are constantly moving.
- **Walking:** It is essential to not walk the exact same path repeatedly, as bones can adjust to this within a few weeks. Example: first day, walk on the inside of the path, second day; walk on the outside of the path, as most paths are not level, or just cross the road. If your speed is 5 out of 10 (as long as you have good balance) every five minutes go from a 5 to 6 out of 10 for one minute, than back down to a 5 out of 10.
- **Running:** is weight bearing, but the pace and path as above need to be adjusted.
- **Intermittent jogging:** Walk first, than jog for one minute, than walk again.
- **Stair Climbing:** Up and down a flight of stairs is equivalent to 1 minute of weight bearing. When the TV or radio adverts come on, go up and down (walking not running) your flight of stairs.
- **GAA, Rugby, Football and Tennis, are all weight bearing**
- **Pilates and Nordic walking are also very helpful**
Make sure before you start any exercise program that you speak with your doctor.

If you have been diagnosed with Osteopenia and/or Osteoporosis and you would like to take a community class, go to the gym or a home exercise programme, we recommend that you be initially assessed by a Physiotherapist.

Please request a copy of your entire DXA scan report from where you had the DXA scan done or from your GP.

For a Physiotherapist to assist you, they will need to know exactly what shape your bones are in.

**Diagnosis**

The Earlier a person is diagnosed, the better the results. A DXA scan of your spine and hips is the gold standard for diagnosing Osteoporosis and is highly recommended if you are at risk.

The Irish Osteoporosis Society **does not** recommend any type of heel scan for the diagnosis of osteoporosis.

If a person has lost height, developed a hump, their head is protruding forward from their body or the person has undiagnosed middle or upper back pain, a DXA with an LVA (Lateral Vertebral Assessment) should be considered. If an LVA DXA is not available, a lateral thoracic X-ray can be done and this would be to rule out fractures in the middle, upper back area.

A DXA scan is a simple, painless test that is not claustrophobic and takes approximately 15 minutes.
Basic explanation of DXA Results
The results of a DXA scan in adults are called T Scores. In general if the persons score is positive, less than -1.0 (example: +1.2, +1.9, -0.4) the person does not have Osteopenia or Osteoporosis.

If the persons results have a (-) Negative before them (-1.1, -2.2 or higher -3.1), it is usually means the persons bones are not as healthy. -0.3 is not a negative result.

**NOTE:** Arthritic changes can give a false high positive reading on a DXA scan

The IOS had divided up Osteopenia to make it easier for people to understand their results, from a DXA scan of their spine and hips.

<table>
<thead>
<tr>
<th>Normal is a T score of above -1, e.g. +1.0, +1.9, -0.2</th>
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<tbody>
<tr>
<td><strong>Mild Osteopenia is a T Score of -1.0 to -1.49</strong></td>
</tr>
<tr>
<td><strong>Moderate Osteopenia is a T Score of -1.5 to -1.99</strong></td>
</tr>
<tr>
<td><strong>Marked Osteopenia is a T Score of -2 to -2.49</strong></td>
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</tbody>
</table>

Osteoporosis is a T Score of -2.5 or higher OR a broken bone from a trip and fall or less, unless proved otherwise.

All individual vertebrae and both areas of the hips T score results should be looked at, not just the total/average of L2-L4. Research shows that the majority of broken bones occur in the moderate to marked Osteopenia range.

**NOTE:** Your doctor should also look at the images on the report, to rule out false higher readings due to arthritis and for fractures.

The following highlighted areas are the T scores that should be looked at and explained to you:

<table>
<thead>
<tr>
<th>T score</th>
<th>Example Result</th>
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<tbody>
<tr>
<td>T score for L1 = -1= Normal</td>
<td></td>
</tr>
<tr>
<td>T score for L2 = -0.2 = Normal</td>
<td></td>
</tr>
<tr>
<td>T score for L3 = -1.3 = Mild Osteopenia</td>
<td></td>
</tr>
<tr>
<td>T score for L4 = -1.5 = Moderate Osteopenia</td>
<td></td>
</tr>
<tr>
<td>T score for right hip (neck) = -2.0 = Marked Osteopenia</td>
<td></td>
</tr>
<tr>
<td>T score for right hip (total) = -2.5 = Osteoporosis</td>
<td></td>
</tr>
<tr>
<td>T score for left hip (neck) = -3.9 = Severe Osteoporosis</td>
<td></td>
</tr>
<tr>
<td>T score for right hip (total) = -4.5 = Severe Osteoporosis</td>
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</tr>
</tbody>
</table>
Anyone who is diagnosed with Osteopenia and/or Osteoporosis, your doctor should complete a list of investigations to help find out the cause/s. A list of these tests are available from the charity.

In men who have positive DXA scans, it is essential that testosterone levels are checked, as low levels of testosterone are a major cause of Osteoporosis in men.

Rescanning is usually recommended every two years and the new results should be compared to the previous results, a decline should not have occurred.

In men whose DXA scan report says they have healthy bones, the daily amounts of calcium, vitamin D3 and appropriate weight bearing exercise will help to prevent them developing Osteoporosis.

If you are over the age of 60 when you get your first DXA scan and it is negative for Osteoporosis, a repeat DXA should be considered every five years. As we age, testosterone and oestrogen hormone levels can decline, increasing the risk of developing osteoporosis.

All causes should be found and addressed, in order for the person to improve and any decline in DXA results should be investigated

Treatment

Fortunately being diagnosed with Osteoporosis is not a death sentence, even though many people think it is. There are a variety of medications available to treat Osteoporosis. Some people, depending on how early it is caught and if all the cause/s are found and addressed, can reverse their bones back towards normal.

Those who have a condition that causes bone loss or are on a medication/s that cause bone loss, should be able to improve their bone strength and prevent fractures.

Calcium and Vitamin D3 are the building blocks of healthy bones. It is essential that calcium is taken in conjunction with Vitamin D3.

The efficacy of prescription osteoporosis treatments is maximized by osteoporosis patients getting the daily recommended amounts of calcium and vitamin D3.
The following are some of the combined Calcium and Vitamin D3 supplements available:

<table>
<thead>
<tr>
<th>Supplement</th>
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<tbody>
<tr>
<td>Calcichew D3 Forte</td>
</tr>
<tr>
<td>Osteofos D 3 forte</td>
</tr>
<tr>
<td>Kalcipos</td>
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<tr>
<td>Osteocare</td>
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Vitamin D3 supplements

<table>
<thead>
<tr>
<th>Supplement</th>
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<tr>
<td>Desunin</td>
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The following are some of the medications for the treatment of Males with Osteoporosis:

**Testosterone:** If a patient has low levels of testosterone, it can be given by injection or in a gel form.

**Strontium ranelate:** Strontium ranelate is prescribed for men (and postmenopausal women) to reduce the risk of vertebral and hip fractures. Strontium ranelate works by reducing bone breakdown and stimulating rebuilding of new bone. Strontium ranelate protects against vertebral, non-vertebral & hip fractures. Strontium ranelate safety and efficiency against fractures has been demonstrated in the long term (10 years).

**Bisphosphonates which are also known as Anti-resorptive medications:** These are non hormonal drugs which help maintain bone density and prevent further bone loss. The recommended treatment time on a bisphosphonates is currently 5 years.

**Zoledronic Acid:** It is a once-a-year IV infusion which takes approximately 15 minutes and it prevents bone loss.
70% of Osteoporosis patients worldwide stop taking their medication within one year.

People cannot feel or see improvements; so many people think that their osteoporosis treatment is not working. Osteoporosis is a “Silent” degeneration of the bone, and it is a “Silent” regeneration of your bones. When you have a repeat DXA scan, this should show the improvement in your bone health.

It is important to maintain your Doctor’s medical recommendations. Side affects are very rare, but if you experience them, please contact your doctor who can discuss changing your treatment plan. A person’s risk of fractures, usually far out weights their risk of a possible side affect.

The daily amount of calcium, vitamin D3 and appropriate weight bearing exercise are essential for preventing AND treating Osteopenia and/or Osteoporosis.
Conclusion

- Complications from Osteoporosis can cause pain, multiple fractures, disability, loss of independence and premature death in those that are not diagnosed.
- Your bones get increasingly weaker as you age and you will not feel it.
- If you follow the information in this leaflet, you have the opportunity to prevent or stop this progressive disease. By preventing or treating Osteoporosis, you can reduce your risk of losing your independence.
- PLEASE pass this information onto your male friends, colleagues and family members. The Irish Osteoporosis Society want to significantly increase the amount of men who have undiagnosed Osteoporosis and the amount of men at risk of developing this silent disease.

The Irish Osteoporosis Society is the only organisation who deals specifically with Osteoporosis and assists the public and health professionals in all areas of this Silent disease.

If you found this leaflet helpful, the Irish Osteoporosis Society would appreciate any donation you could give to the Charity. The Charity relies on donations to help us continue to raise awareness of this silent killer.

Sources: Irish Osteoporosis Society, NOS UK, American Osteoporosis Foundation, Osteoporosis Canada, Australian Osteoporosis, IOF

If you would like more information on Osteoporosis for yourself, a friend or a family member please contact:

The Irish Osteoporosis Society Charity
12 Burlington Road,
Garden Level,
Dublin 4.

Helpline: 1890 252 751
Tel: 01 637 5050
Email: info@irishosteoporosis.ie
www.irishosteoporosis.ie

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Aims of the Irish Osteoporosis Society

- To prevent the increase of Osteoporosis in Ireland by increasing awareness of this silent disease.
- To provide support, advice and information for people suffering from Osteoporosis or concerned they may be at risk.
- To make up-to-date information available to doctors and health care workers on current methods of prevention and treatment.
- To encourage research into this area in Ireland.

Services available to IOS members

- Helpline
- Website
- Awareness groups
- Lectures
- Public meetings
- Awareness campaigns
MO Membership and Donation Form SS

(PLEASE PRINT)

Mr/Mrs/Miss/Ms/Dr

Company (if relevant):

Address:

Telephone No: Mobile No:

*Email:

*Date of Birth:

* Your email will help to significantly reduce our posting costs. Your date of birth is important for us to know what age groups are contacting us. All information is confidential and will not be given to a third party.

☐ I wish to join the society
☐ I wish to renew my membership
☐ Receive more information from the Irish Osteoporosis Society
☐ Attend a 1 evening information class on Osteoporosis
☐ Volunteer time for the Irish Osteoporosis Society
☐ Promoting Osteoporosis awareness in my area
☐ Organise one fund raiser a year for the Irish Osteoporosis Society Charity
☐ Information on Legacies

I enclose the following subscription:

☐ €25 Charity Member

Name:

Address:

Telephone No: Email:

In addition, I would like to make a donation to the Irish Osteoporosis Society Charity in the amount of:

€1000 ☐ €500 ☐ €250 ☐ €100 ☐

€50 ☐ €25 ☐ €10 ☐

☐ Other €

All donations are used to keep the Charity’s basic services running.
Payment Details

Payment: please make cheques/PO payable to: The Irish Osteoporosis Society and crossed ‘Account payee only’.

Cheque ☐ Postal Order ☐ Visa ☐ MasterCard ☐ Laser ☐

Card Number: 

Expiry Date: 

Total Amount: €

Thank you for your support!

Please send this form together with your membership fee and/or donation to:

The Irish Osteoporosis Society,
12 Burlington Road,
Garden Level,
Ballsbridge,
Dublin 4.

Tel: Helpline 1890 252751
Tel: 01 637 5050
Fax: 01 668 0098
Email: info@irishosteoporosis.ie.
Web: www.irishosteoporosis.ie

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12 Burlington Road, Garden Level, Ballsbridge, Dublin 4
Helpline: 1890 252 751
Tel: 01 637 5050
Fax: 01 668 0098
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