Irish Osteoporosis Society

National Experts in Osteoporosis

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Osteogenesis imperfecta (OI)

Osteogenesis Imperfecta is a condition that is also known as Brittle bone disease. It is a genetic disorder that mainly affects the persons bones, in that they break very easily.
OI is caused by abnormalities in the genes which control the production of collagen. Collagen is the fibrous framework of bone, which is important for bone strength.
There are approximately eight types of OI, Type 1 being the milder form and type 2 being the more severe. A person can have abnormalities in their joints, the sclera in their eyes, bruising and issues with their teeth. OI can result in short stature and deafness.
Babies with OI can actually fracture prior to birth. It can affect both sexes and the rate of fractures tend to decline in the teenage years. In all types of OI and both sexes, the fracture rates tend to decline in the teenage years. An increase in fractures can occur in women who have gone through the menopause, it is thought to be because their Oestrogen hormone levels have lowered. An increase in fractures can also occur in men in later years.

How is OI diagnosed?

Diagnosis of OI is usually by the symptoms the person has, but can be confirmed by collagen or DNA testing.
Bone density is the quantity of bone that, when measured by a DXA scan (the test for Osteoporosis), helps to indicate bone strength. The Irish Osteoporosis Society recommend that DXA scans are done on those with OI, in order that their bone density can be monitored.

How is OI treated?

Bisphosphonates are usually used in the treatment of severe OI.
They can be given by IV or by mouth.
Bisphosphonates break done the activity of the bone cells that break done bone.
It is very important that anyone with OI exercise regularly and lead a healthy lifestyle, to help to reduce their risk of fractures.

Is Osteogenesis Imperfecta that same as Osteoporosis?

No, they are different bone diseases.