

# OSTEOGENESIS IMPERFECTA (BRITTLE BONES)

Osteogenesis Imperfecta (OI) is a genetic bone disorder characterised by fragile bones that break easily. OI is also known as brittle bone disease. A person born with OI is affected throughout their lifetime. OI is a rare condition - it is estimated that there are 1 in 15,000 babies born with the condition: which equates to about 5000 people in the UK.

OI is a disorder of collagen, a protein which forms the framework for the bone structure. In OI the collagen may be of poor quality, or there just may not be enough to support the mineral structure of the bones. This makes the bones weak and fragile and results in the bones being liable to fracture at any time, even without trauma.

OI exhibits wide variations in appearance and severity - a classification system describes the different types of OI. Severity can also be described as mild, moderate, or severe. Some people with OI hardly have any symptoms, whilst others have a physical disability requiring the use of walking sticks, walking frame or a wheelchair.

As the composition of collagen in the bone is affected, even when there are no fractures there will be other problems connected to the condition; such as the ligaments stretch more easily, joint hypermobility can affect the quality of life as it results in fatigue of many muscle groups. The mobility and performance of ordinary tasks of everyday living are impaired. Other symptoms can be; hearing loss, fatigue, joint laxity, curved bones, scoliosis, blue sclerae, dentinogenesis imperfecta (brittle teeth), and short stature amongst other medical problems.

Children's needs are **individual** - some children may require additional support:

- Awareness raising with peers so the child is not pushed over
- Auditory information, needing repeats of instructions / directions
- Fine motor skills, e.g. eating, cutting, writing
- Managing plaster casts after a bone fracture, i.e. continuing to access education
- Movements around the classroom may require a wheelchair
- Negotiating pathways, reducing the dangers of tripping or falling
- Walking around the school environment using splints or gaiters
- PE and school sports sessions due to lax ligaments, tiring easily
- Physical handling with care, as bones get broken easily
- Specially adapted keyboards, or other input devices linked to a computer

**FURTHER INFORMATION: The Brittle Bone Society** <http://www.brittlebone.org>