

OSTEOGENESIS IMPERFECTA

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Definition

- According to National Health Institute Osteogenesis Imperfecta (OI) is a genetic disorder characterized by bones that break easily, often from little or no apparent cause.
- There are different Types of OI, and the characteristics features can vary from person to person.

Types of OI

Type I

- Most common
- Bones predisposed to fractures. Most fractures occur before puberty.
- Normal or near normal stature.
- Sclera bluish, purple or gray tint.
- Triangular face
- Tendency toward spinal curvature
- Bone deformity absent or minimal
- Brittle teeth
- Possible hearing loss, often beginning in early 20's 30's
- Collagen structure is normal, but the amount might be less.

Type II

- Most severe
- Frequently lethal

Type III

- Bones fracture easily. Fractures often present at birth
- Short Stature
- Sclera blue, purple, gray tint
- Loose joints and poor muscle development in arms and legs.
- Barrel rib cage
- Respiratory problems
- Hearing loss
- Triangular face
- Collagen improperly formed.

Type IV

- Between Type I and Type III in severity
- Sclera is white or near white
- Mild to moderate bone deformity

Type V

- Clinically similar to Type IV
- Large calluses at the sites of fractures
- Normal teeth
- White Sclera
- Bones has a mesh like appearance

Type VI and Other Types

- Only diagnosed by a bone biopsy, and their bones are fish scale like
- Approximately only eight people have this type
- There are other Types of OI but for the purpose of this presentation it is not relevant

Treatment

- Physical therapy if needed
- Rodding for fractures if needed
- Medications, such as Vitamin D, and Calcium and IV infusions of medication, over a three day period
- Aquatic therapy

Safety Issues for School

- If child is walking consider hallway crowding, distance, and obstacles
- Child might be affected by warm temperatures, and have excessive sweating
- Receive info from doctor on any limitations regarding physical activity
- If wearing any splints, afo's or braces how to apply them correctly

If a child falls

- Call the school nurse
- Do not attempt to move the student without the nurse being present
- Usually the child will cry if there is a new fracture
- If a child has hurt their arm, they usually hold the sore arm next to their body
- There can be swelling or bruising at the site

The Importance of Independence

- It is important for the child with OI to learn independence
- Children can learn to trust others if they need help with lifting, or positioning
- Children can learn how to direct what is needed to help them
- Just like all children, pushing, shoving, and hitting and respect of personal space is important
- Child might use mobility devices, such as walker, or wheelchair

Some accommodations

- Someone to carry books, and a set of books at home
- Adaptive PE or approval of what can be done in PE
- Cubby or locker at the end of row
- Extra time to get from one class to another
- Might need adult assistance
- Transportation needs, safety
- Preferential seating
- OT/PT consult for school
- Fire evacuation plan/ Emergency medical plan

Questions