

Types of Fractures

Transverse fractures, such as this fracture of the ulna, break a bone shaft across its long axis.

Spiral fractures, such as this fracture of the tibia, are produced by twisting stresses that spread along the length of the bone.

Displaced fractures produce new and abnormal bone arrangements; **nondisplaced fractures** retain the normal alignment of the bones or fragments.

Compression fractures occur in vertebrae subjected to extreme stresses, such as those produced by the forces that arise when you land on your seat in a fall.

In a **greenstick fracture**, such as this fracture of the radius, only one side of the shaft is broken, and the other is bent. This type of fracture generally occurs in children, whose long bones have yet to ossify fully.

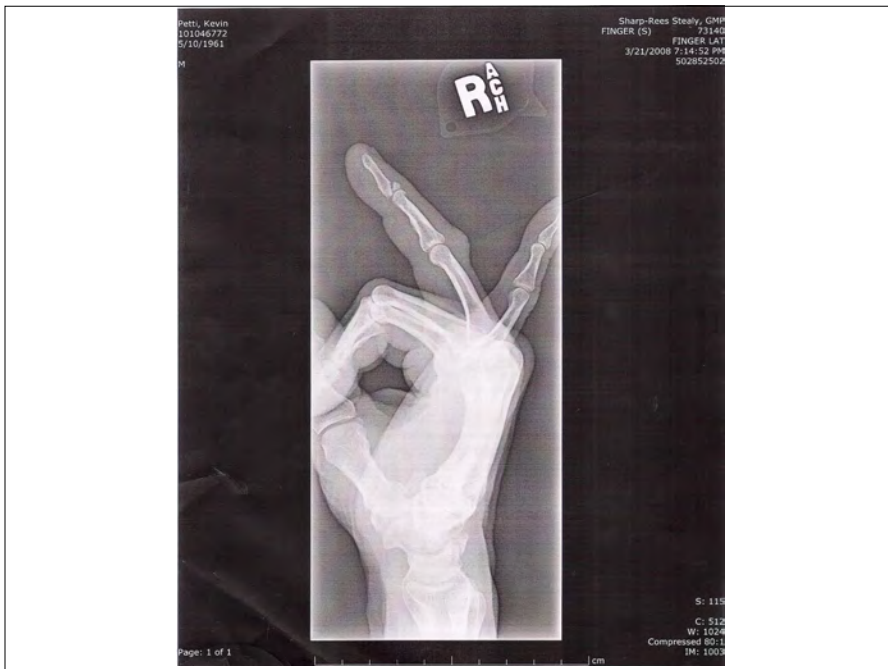
Comminuted fractures, such as this fracture of the femur, shatter the affected area into a multitude of bony fragments.

Epiphyseal fractures, such as this fracture of the femur, tend to occur where the bone matrix is undergoing calcification and chondrocytes are dying. A clean transverse fracture along this line generally heals well. Unless carefully treated, fractures between the epiphysis and the epiphyseal cartilage can permanently stop growth at this site.

A Pott fracture occurs at the ankle and affects both bones of the leg.

A Colles fracture, a break in the distal portion of the radius, is typically the result of reaching out to cushion a fall.

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Age and Dietary Related Changes to Bone



(a) Normal spongy bone (SEM × 25)

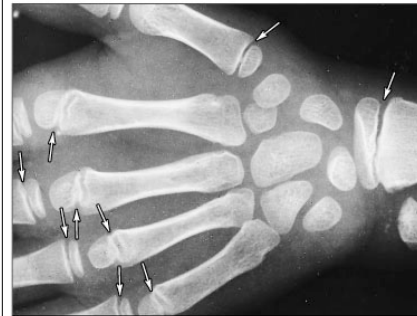


(b) Spongy bone in osteoporosis (SEM × 21)



The legs of an individual with rickets

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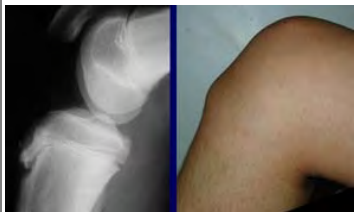
(a) Epiphyseal cartilages

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(b) Epiphyseal lines

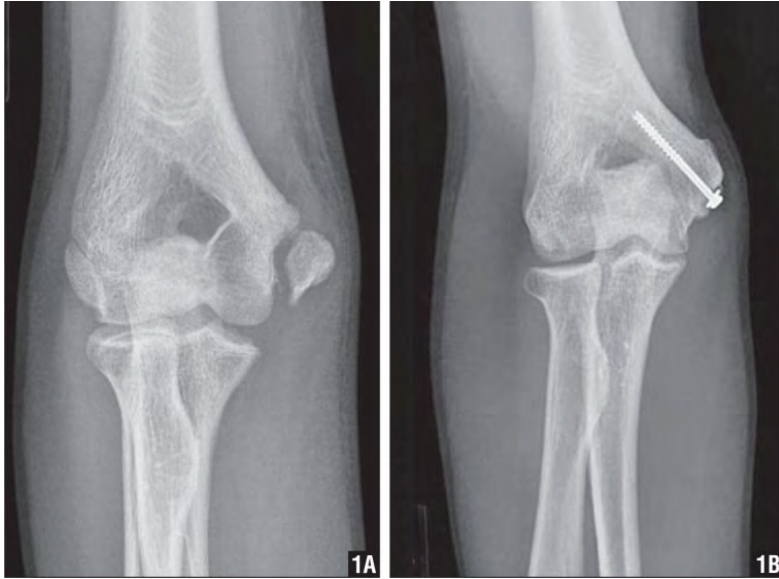
Osgood-Schlatter Disease



Sever's Disease



Little League Elbow



Avulsion Fracture



(a) Kyphosis

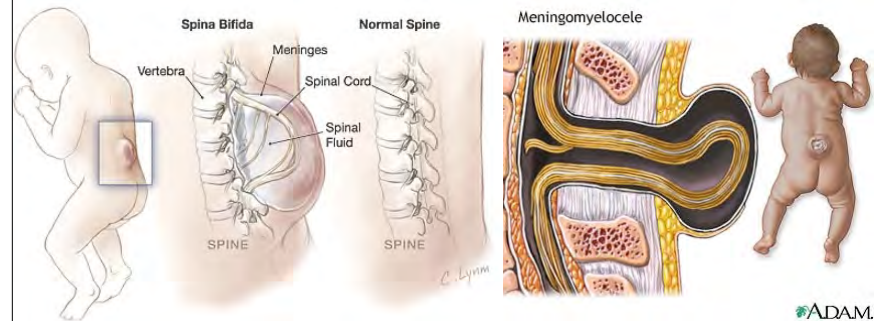
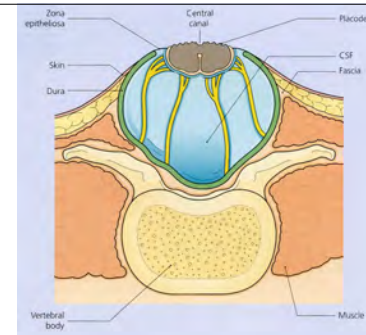


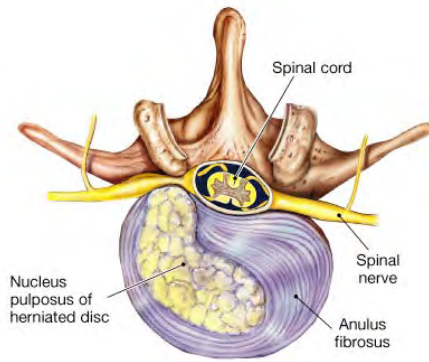
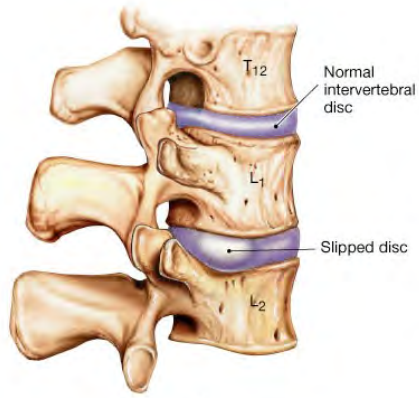
(b) Lordosis



(c) Scoliosis

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(a)

(b)

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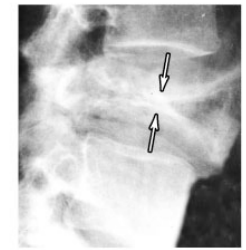
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Compression Fracture

