

Fractures, dislocations, sprains & strains, osteomalacia, rickets, osteoporosis and osteomyelitis.

Common Fractures:

- Upper- clavicle, humerus and scaphoid
- Lower- femur, tibia and fibula

Location of the fracture:

1. NOF- due to osteoporosis
2. Intertrochanteric- elderly
3. Shaft of femur- young person
4. Tibia and Fibula- young person

* Shaft stronger than the NOF

Common Dislocations:

- Shoulder, elbow, wrist and hip

Type of dislocations:

1. Dislocation- at a joint where trauma produces complete dissociation of the articulating surfaces of the joint
2. Subluxation- when the articulating surfaces remain partially in contact with each other

Sprain

-LIGAMENT TEAR

Strain

-MUSCLE or TENDON Stretch or tear
 Grade 1- microscopic- maybe painful
 Grade 2- partial- pain when stretching
 Grade 3- Complete tear- defect in muscle belly

-Osteomalacia

What?

Soft bone

Why?

Mineralisation
 Inadequate mineralisation
 Vitamin D deficiency



Risk Factors?

Light skin colour, age, sunscreen use, chronic renal failure

Clinical Manifestation?

Bone pain, waddling gait, muscle weakness

Evaluation

-monitor serum calcium and inorganic phosphate levels

-Radiography

-Bone biopsy

Treatment

-Diet changes and supplement

-adjust calcium and phosphate levels to normal

-Renal dialysis or transplant

-Suppress secondary hyperthyroidism

-Rickets

What?

Soft bone

Why?

Risk Factors?

Children, premature birth, malnutrition

Treatment

-Surgery

-Deformity improves with normalisation of bone metabolism

Clinical Manifestation? Bowed legs, deformities to the skull, rib cage and pelvis	
<p>-Osteoporosis What? Decrease bone strength and density (metabolic bone disease) Why? Menopause= decrease estrogen hormones that's needed to maintain bone growth and strength Risk Factors? Age, sex, race, family history Clinical Manifestation? Weakened bones, fractures of bone occurring at the hip, waist and vertebral column Who? 90yrs 1/3 FEMALES</p>	
<p>Osteomyelitis What? Bone Infection, mainly from bacteria Clinical Manifestation?</p>	
<p>Exogenous -Open wounds, fractures, animal bites or soft tissue to bone</p>	<p>Endogenous -Blood from an infection elsewhere -From bone to soft tissue -Found in infants, children, elderly -M>F</p>

Osteoarthritis and Rheumatoid Arthritis

<p>OSTEOARTHRITIS What: Joint disease that affect the articular cartilage No articular cartilage= bone against bone = osteophytes formation Who: >40yrs , M>F until 55 Cause: Trauma, inflammation of joint, joint instability, drugs and obesity Symptoms:</p> <ol style="list-style-type: none"> I. Pain and stiffness in one or more joints II. Enlargement or swelling of a joint III. Tenderness IV. Reduces range of movement V. Muscle wasting and deformity <p>Articular Cartilage</p> <ul style="list-style-type: none"> • Connective tissue that covers and protects the ends of bones in synovial joints • Absorbs shock to protect bone • Depends on chondrocytes (its synthesis of components for normal tissue) <p>*Osteoarthritis is when this matrix is unbalanced= increase degeneration and</p>
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decrease chondrocytes

Stages of OA

Early- Joint space narrowing, osteophytes formation

Moderate- Joint space obliteration, loss of ROM

Erosive- Subchondral cysts appeared , crepitus is palpable – cartilage loss and joint surface irregularity

Late- Subchondral bone collapse, bone repair and remodelling.