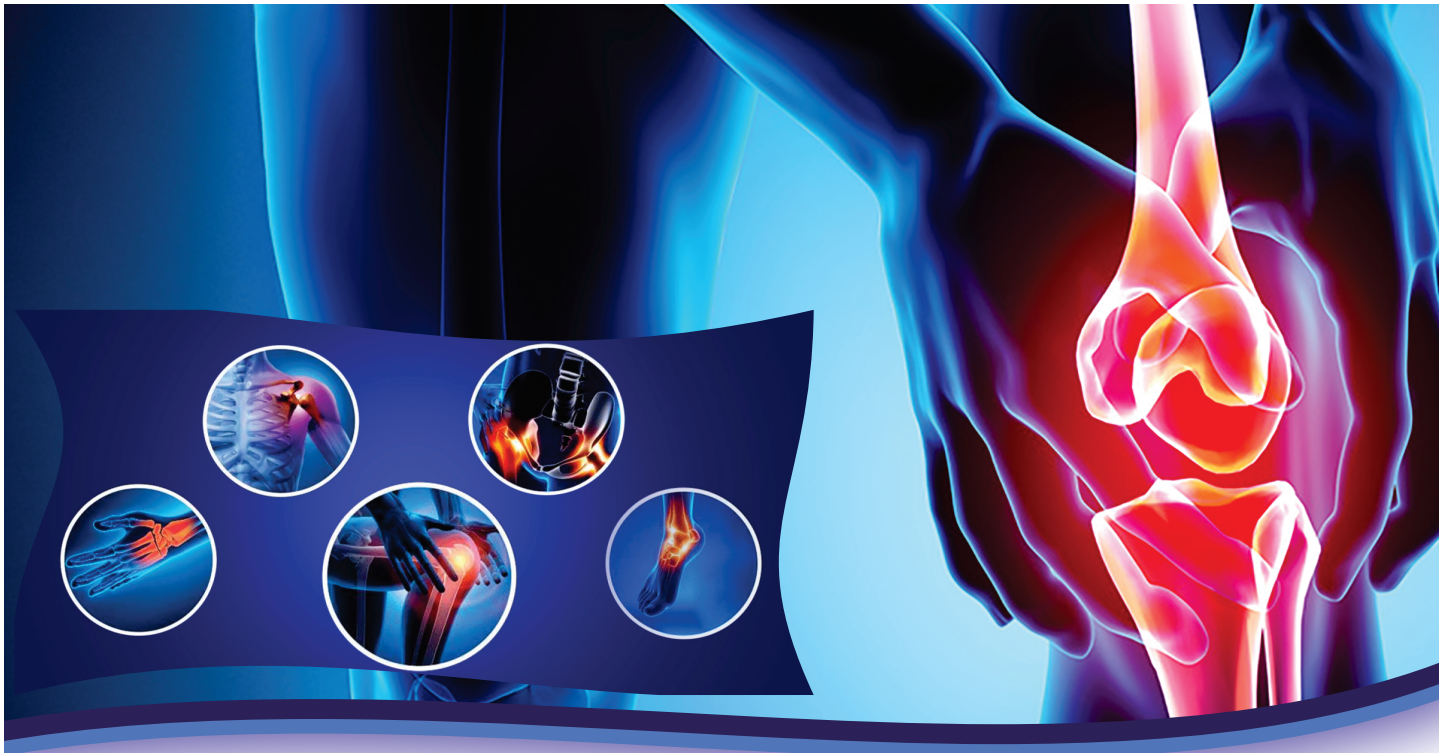




OneShot 4.0 **Orthopaedics**



ORTHOPAEDICS

Sl. No.	CHAPTER	Page No.
1.	<i>Basics of Bone</i>	363
2.	<i>Metabolic Disorder / Skeletal Dysplasia</i>	365
3.	<i>Trauma: General Consideration</i>	371
4.	<i>Trauma: Upper Limb</i>	375
5.	<i>Spine and Regional Conditions</i>	383
6.	<i>Trauma: Lower Limb</i>	387
7.	<i>Trauma: Nerve Injuries</i>	393
8.	<i>Bone Tumors</i>	399
9.	<i>Infections</i>	405
10.	<i>Paediatric Orthopaedics</i>	411
11.	<i>Joint Disorders</i>	417

“

One day, all the late nights, the sacrifices, and the self-doubt will turn into a single moment—a result screen that changes your life forever.

This exam is not just a test of knowledge, it is a test of patience, consistency, and mental strength. The ones who keep showing up every single day are the ones who eventually win.

Stay focused and consistent...

All the best...

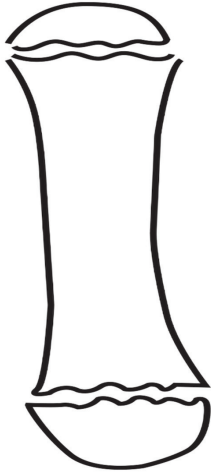
- Dr. Sushil Vijay

”

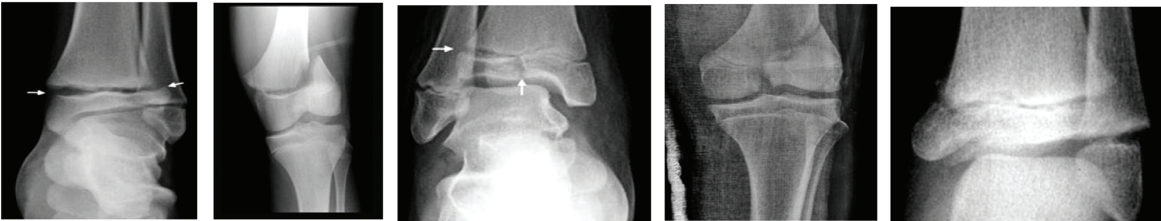




BASICS OF BONE



Salter and Harris Classification





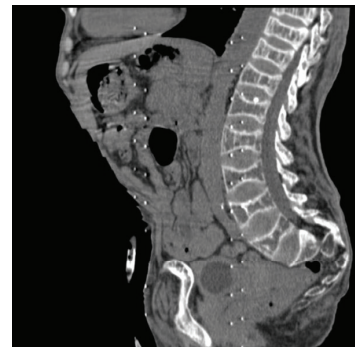
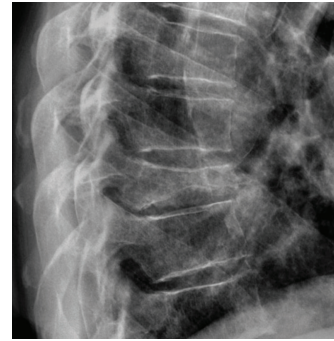
NOTES



METABOLIC DISORDER / SKELETAL DYSPLASIA

COMPOSITION OF BONE

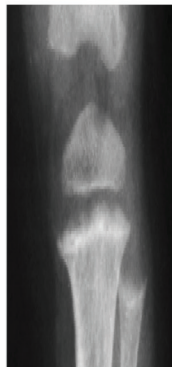
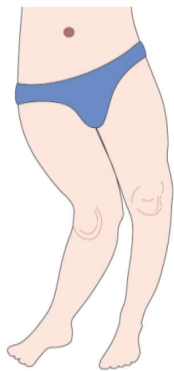
OSTEOPOROSIS



Medications are broadly divided into three categories

A. Inhibit Resorption of bone	Drug (Trade Name)	Dosage
	Alendronate (Fosamax)	Treatment: 70 mg weekly or 10 mg daily Prevention: 35 mg weekly or 5 mg daily
	Ibandronate (Boniva)	Treatment or Prevention: 2.5 mg daily or 150 mg monthly Treatment: 3 mg every 3 months
	Risedronate (Actonel)	Treatment: 5 mg daily or 35 mg weekly; 75 mg/day for 2 days each month or 150 mg monthly Prevention: 5 mg daily or 35 mg weekly
	Zoledronic acid (Reclast)	Treatment: 5 mg once yearly
B. Promote formation of bone	C. Dual action Strontium Ranelate	
	D. Denosumab It is a monoclonal antibody, which blocks RANK ligand.	

DISORDER OF MINERALIZATION





DISORDER RELATED TO PROTEINS

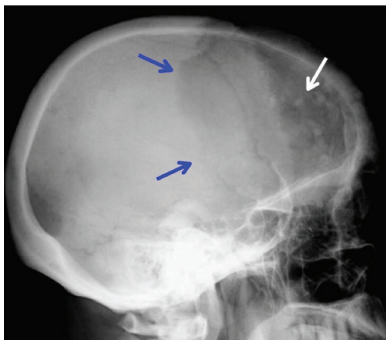
Scurvy (VIT-C Deficiency)

*Osteogenesis Imperfecta (Fragilitas ossium/
Lobstein vrolik's disease/Brittle bone disease)*

OSTEOCLAST PATHOLOGIES

Paget's Disease

Osteopetrosis





NOTES

TRAUMA: GENERAL CONSIDERATION

Classification for Open Fractures

Eye Opening	Score	Verbal Response	Score	Motor Response	Score
Eyes open spontaneously	4	Oriented	5	Obeys/follows commands	6
Eyes open to sound	3	Confused conversation	4	Localize to pain	5
Eyes open to pain	2	Inappropriate/random words	3	Withdrawal to pain (Normal flexion)	4
No eye opening	1	Incomprehensible sounds	2	Abnormal flexion to pain (Decorticate)	3
		No verbal response	1	Abnormal extension to pain (Decerebrate)	2
				No Motor response	1

Pupils unreactive to light	Score
Both pupil	2
One pupil	1
Neither pupil	0

For total GCS, subtract pupil reactivity score from calculated GCS



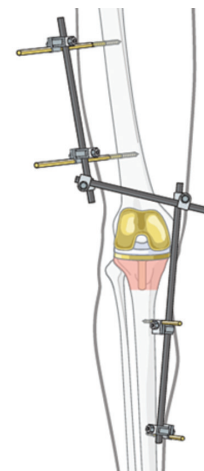
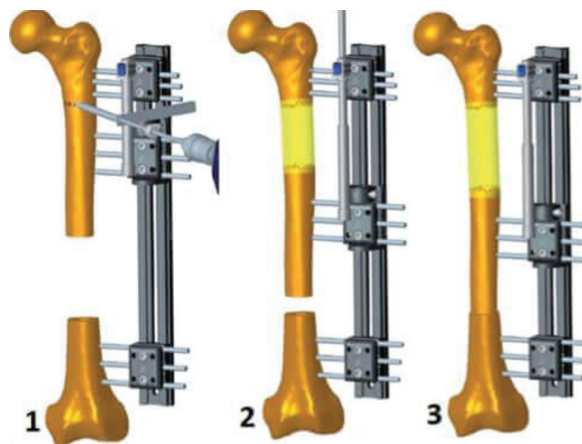
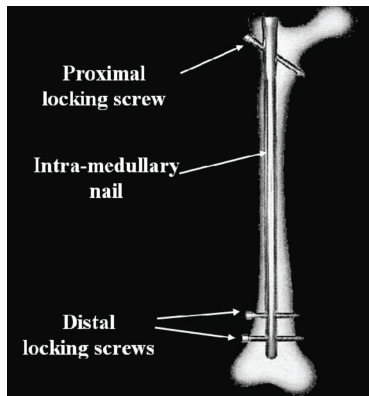
Orthopaedics

- *M/C used bone substitute :*

- *Fracture of necessities :*

- *Site of malunion*

- *Non-union*





NOTES



TRAUMA: UPPER LIMB

SHOULDER DISLOCATION

Head of the humerus loses its articulation with the glenoid cavity of the scapula
It is a common injury as only around 1/3 of humeral head articulates with glenoid.

1. Anterior Dislocation	2. Posterior Dislocation	3. Inferior Dislocation

Technique of Reduction

- a. Kocher's method (Team method)
Traction in plane of deformity followed by external rotation, adduction and finally medial rotation.





Orthopaedics

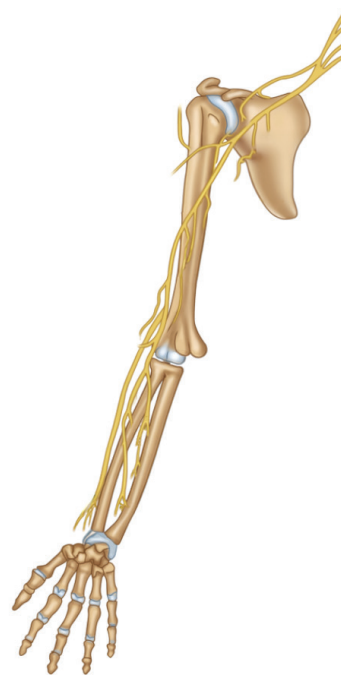
Complication



FRACTURE OF SHAFT OF THE HUMERUS



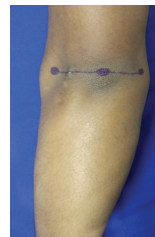
RADIAL NERVE



ELBOW

Important features of elbow

1. Three point relationship at elbow :

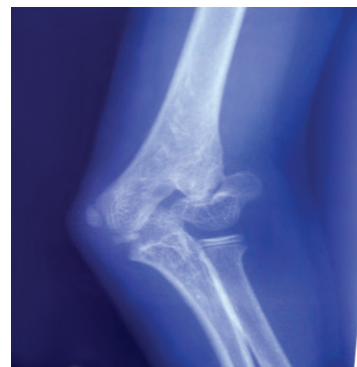


<p><i>a. Conditions associated with breach in triangle</i></p>	<p><i>b. Conditions with no change in triangle</i></p>	<p><i>c. Condition causing reversal of triangle</i></p>
--	--	---

ELBOW - SUPRACONDYLAR FRACTURES



FRACTURE OF THE LATERAL CONDYLE OF HUMERUS



Fish tail deformity seen at -



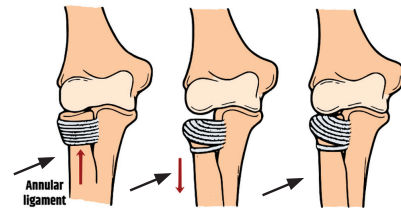
DISLOCATION OF THE ELBOW JOINT

Terrible triad of elbow or "Hotchkiss terrible triad".



- *Lateral epicondylitis =*
- *Medial epicondylitis =*
- *Olecranon bursitis =*

PULLED ELBOW



MONTEGGIA FRACTURE DISLOCATION



GALEAZZI FRACTURE DISLOCATION







SCAPHOID FRACTURE



LUNATE



Lunate dislocation

Bennet's fracture dislocation



1.A fracture

Rolando's fracture



1.A fracture

- *Dequervain tenosynovitis =*



- *Ganglion*



NOTES

SPINE AND REGIONAL CONDITIONS

1). *Hangman's fracture*



2). *Clay shovellers injury*



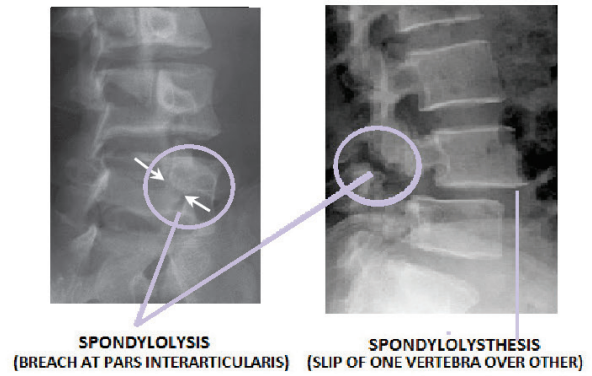
3). *Chance fracture*



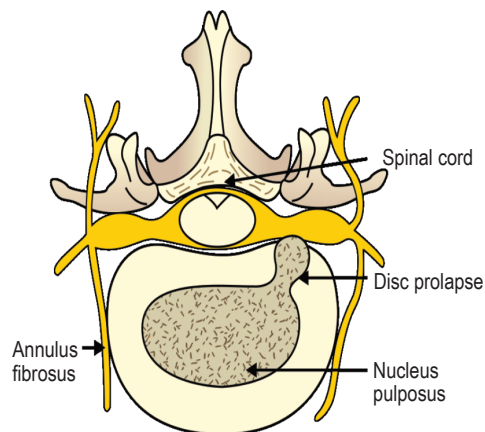
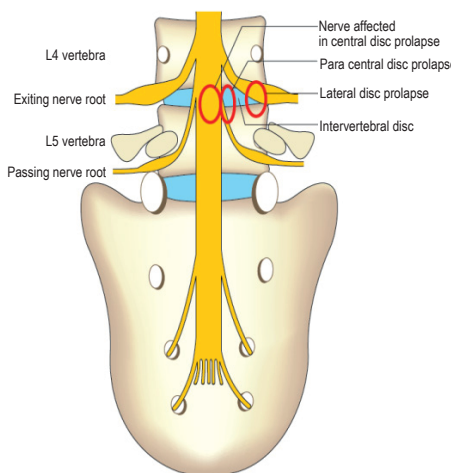
4). *Scoliosis*



SPONDYLOLYSTHESIS



PROLAPSED INTERVERTEBRAL DISC



- M/C levels-
- Types-

M/C root to get compressed b/w-

- L4-L5-
- L5-S1-



NOTES

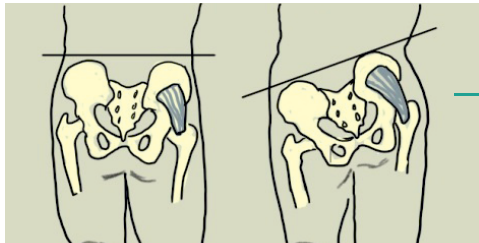


NOTES



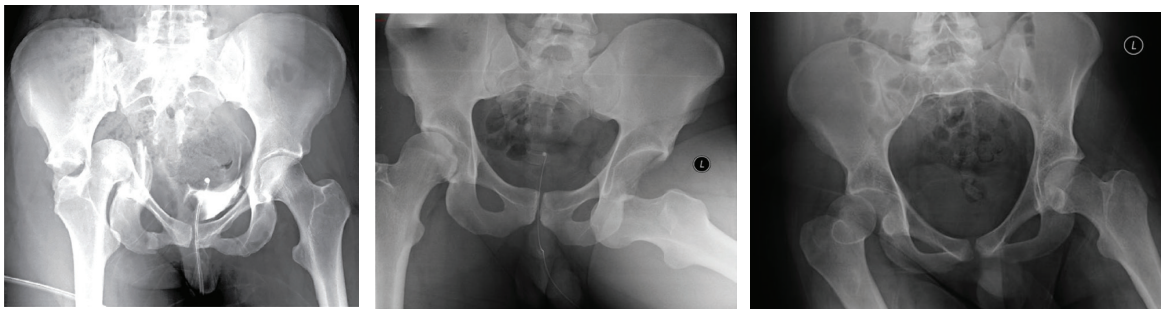
TRAUMA: LOWER LIMB

TRENDELENBERG'S TEST



→ The Fault in this patient is on _____ Side

DISLOCATION OF HIP



Hip dislocations are of three types (anterior, posterior and central)

Most commonest is posterior dislocation

Parameter	Anterior dislocation	Posterior dislocation	Central dislocation
1. Mechanism of injury			
2. Limb length			
3. Palpation of femoral head			
4. Possible associated injury			

Vascular sign of Narath is positive (Pulsation of femoral vessels not palpable as bony base of vessel is lost)



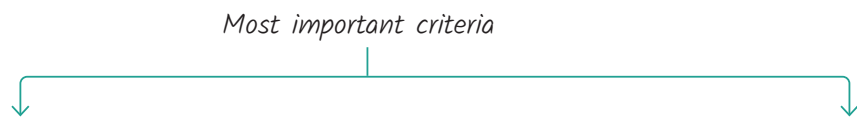
FRACTURE NECK OF FEMUR

1. Classification

Intracapsular

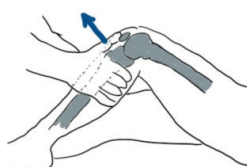
Extracapsular

2. Treatment

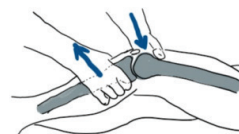




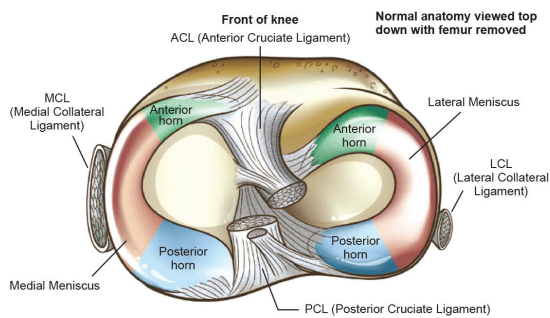
INJURIES AROUND KNEE



Drawer test (90° knee flexion)



Lachman test (20° knee flexion)



FRACTURE TALUS

Eponyms of fracture at Talus


- Aviator's
- Shepherd
- Snowboard

- Subchondral Radiolucent band in Talar dome is Indicative of _____

M.C Cx →

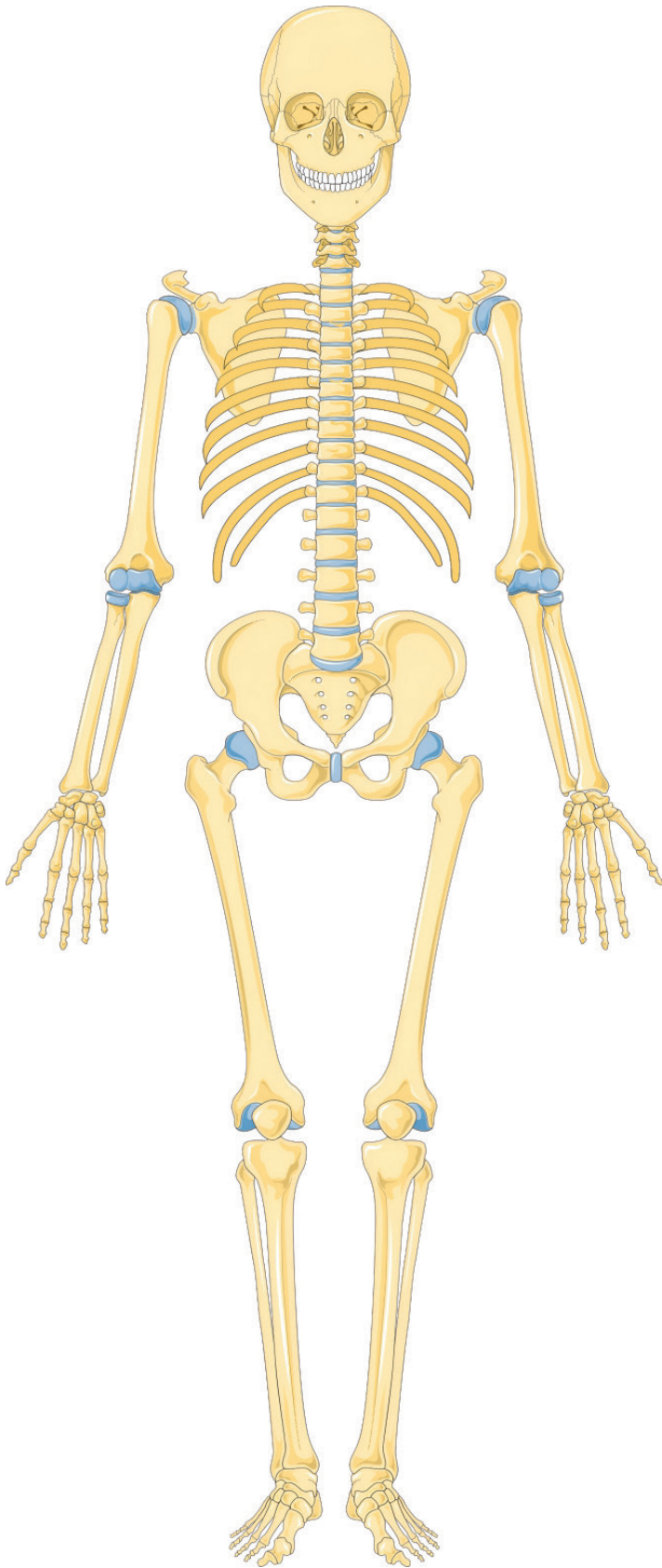


AROUND FOOT

<p>LISFRANC</p>	<p>JONES :</p> 
<p>CHOPART</p>	<p>MARCH :</p>



For your quick- recap





NOTES



TRAUMA: NERVE INJURY

Trauma: Nerve Injury

Sites

Nerve Injuries

Classifications

ERB' Palsy

Arm -

Elbow -

Forearm -

Limb -



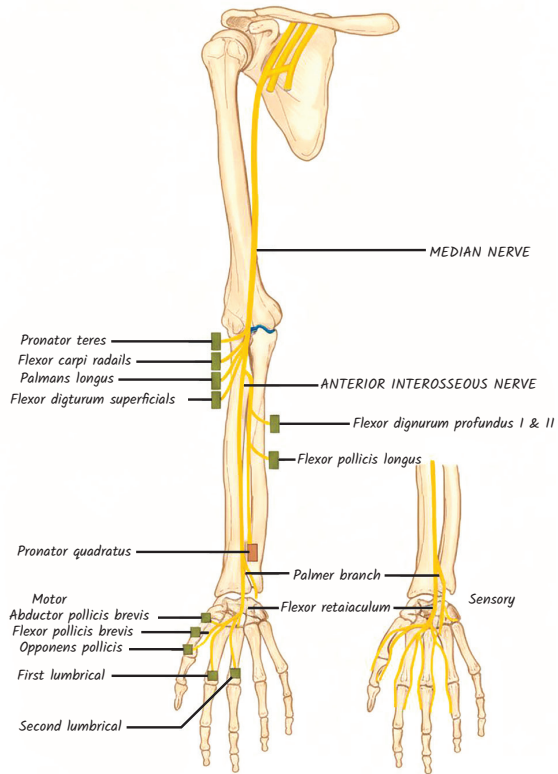
Klumpke's paralysis

Presentation -

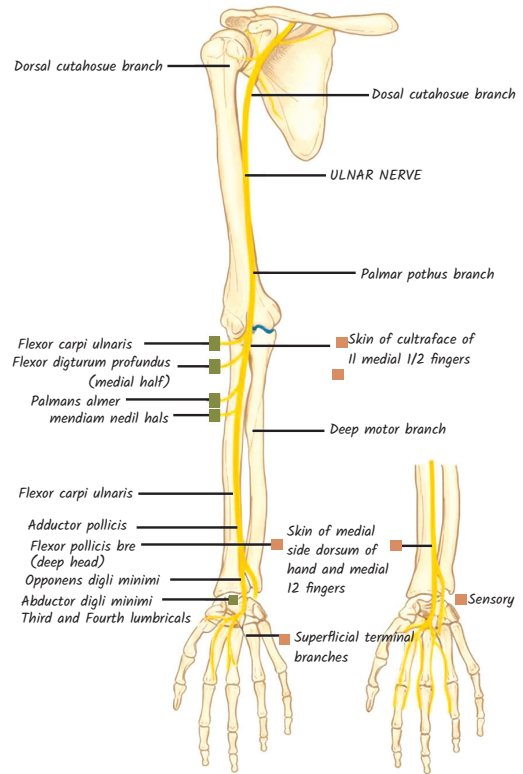


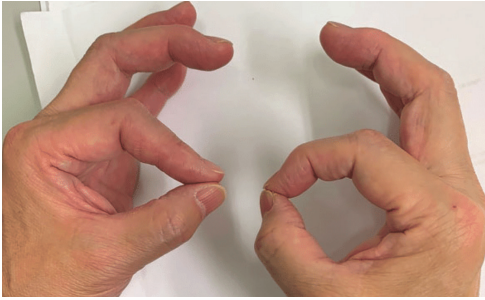
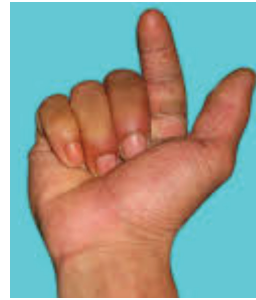
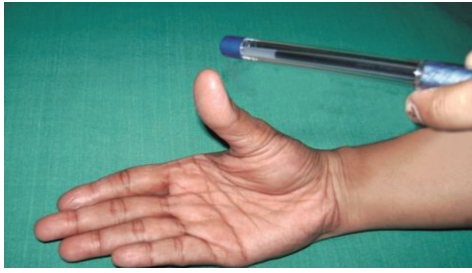


MEDIAN NERVE



ULNAR NERVE





Knuckle Bender Splint



Cock-up Splint





NOTES

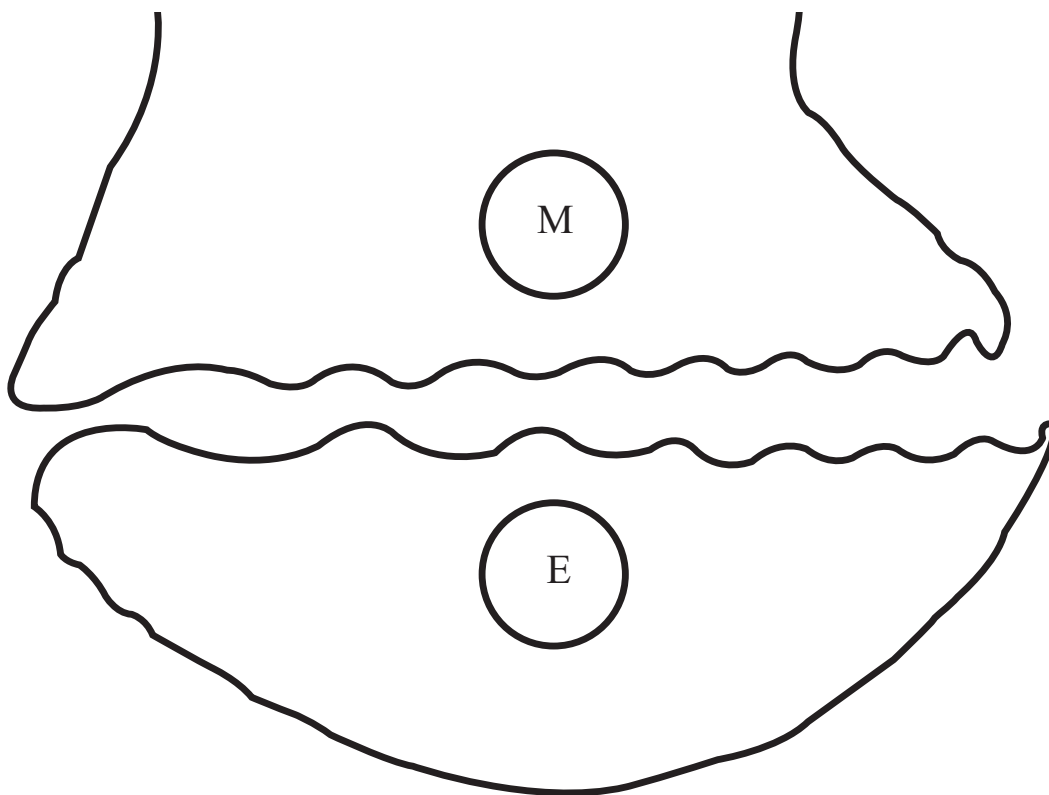


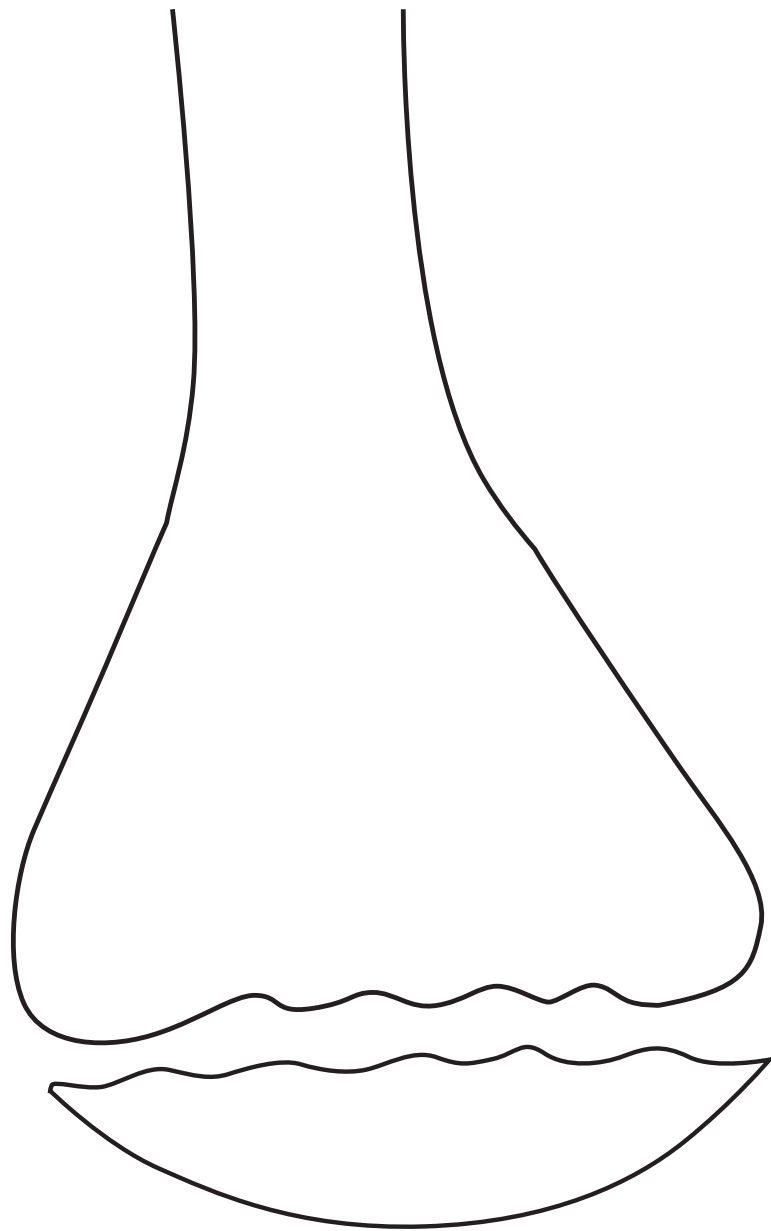
NOTES

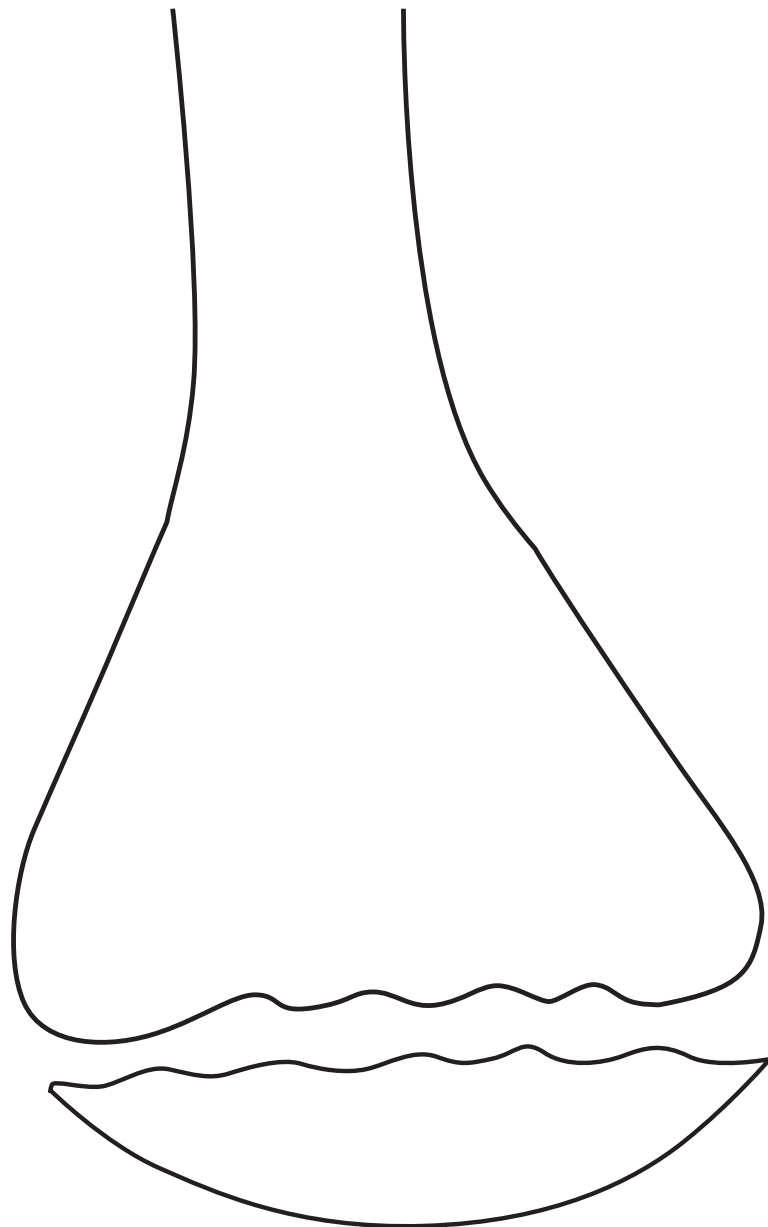


BONE TUMORS

Approach to Bone Tumors



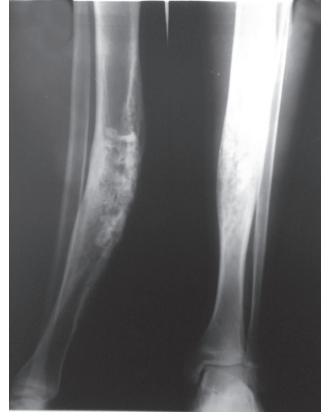




1. Osteoid Osteoma



2. Fibrous dysplasia



*3. Non Ossifying Fibroma/
Fibrous Cortical Defect*



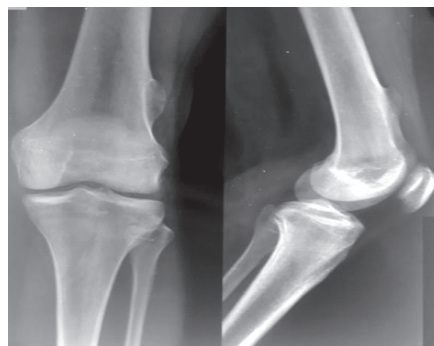
4. Fibrous Dysplasia



5. Enchondroma



6. Osteochondroma

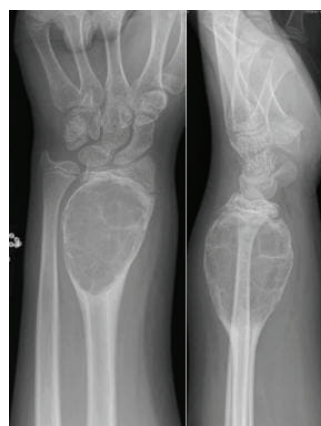




7. UBC
(Unicameral Bone Cyst)



8. ABC
(Aneurysmal Bone Cyst)



9. Benign Aggressive Tumour



10. Malignant Tumors of Bone
Osteosarcoma



11. Chondroblastoma



12. Ewing's Sarcoma



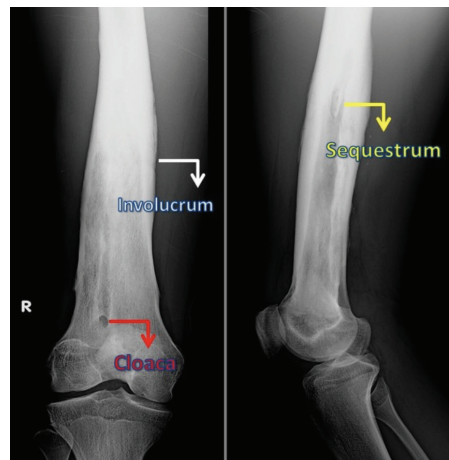


NOTES

INFECTIONS

Common Organisms Causing Osteomyelitis

	Condition / Age group	Most Common Organism
1.	All age groups	<i>Staphylococcus aureus</i>
2.	Sickle cell anemia patient	<i>Salmonella</i>
3.	Drug abusers & immuno compromised patient	<i>Pseudomonas</i>
4.	Prolong parenteral therapy	Fungal
5.	Neonates	<i>Streptococcus group B</i>
6.	Patients on prolong parenteral therapy	Fungal
7.	Sexually active young adolescent	<i>Neisseria gonorrhoea</i>
8.	Animal bite	<i>Pasteurella multocida</i>
9.	Human bite	<i>Elkenella corrodens</i>







NOTES



NOTES



NOTES

PAEDIATRIC ORTHOPAEDICS

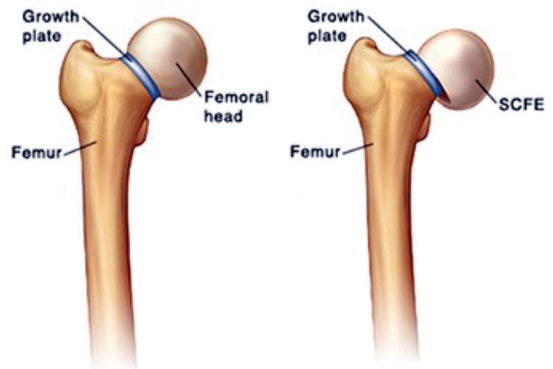
Perthes Disease



M/c age gp :

M/c presentation →

SCFE



M.c Age gp:

M.c Presentation →

CTEV - CONGENITAL TALIPES EQUINO VARUS



	<i>Occur at</i>	<i>Bone / joint involved</i>
<i>Adduction →</i>		
<i>Cavus →</i>		
<i>Varus →</i>		
<i>Equinus →</i>		

T/t to be started _____

Approach :

1. Technique used →

2. Order of correction →

3. Cx deformity →

4. No of cast Needed →

5 Method of Assessment →

6. Plaster A/k or B/k

7. Maintenance of correction _____ scoring

8.CTEV shoes

Lateral margin _____

Medial margin _____

Heel margin _____

CONGENITAL DISLOCATION OF HIP

- M.c Etiology → _____ dysplasia



- Test for new bone

a. _____ to dislocate hip

b. _____ to relocate hip

c. _____ for limb length comparison

d. Gait of neglected child → U/l → _____

→ B/l → _____

e. T/t - < 6 months _____

> 6 months - 18 months _____

> 18 months _____



NOTES



NOTES



NOTES



JOINT DISORDERS

OSTEOARTHRITIS (O.A)



- M/c joint involved - _____
- Usually not involved - _____
- Deformity knee - _____

Hands - _____

RHEUMATOID ARTHRITIS (R.A)



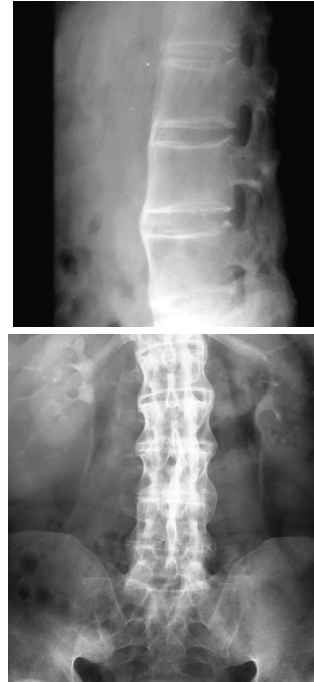
Swan neck deformity

- Finger - _____
- Knee - _____
- Vertebra - _____
- Hallux _____



ANKYLOSING SPONDYLITIS (AS)

- M/c involved joint -
- M/c complaint -
- Age gp -
- X-Ray
- HLA B27
- CL test = S.I joint = _____
Lumbar spine = _____



CRYSTAL DEPOSITION DISORDER

GOUT

PSEUDOGOUT

<u>GOUT</u>	<u>PSEUDOGOUT</u>



NOTES



NOTES