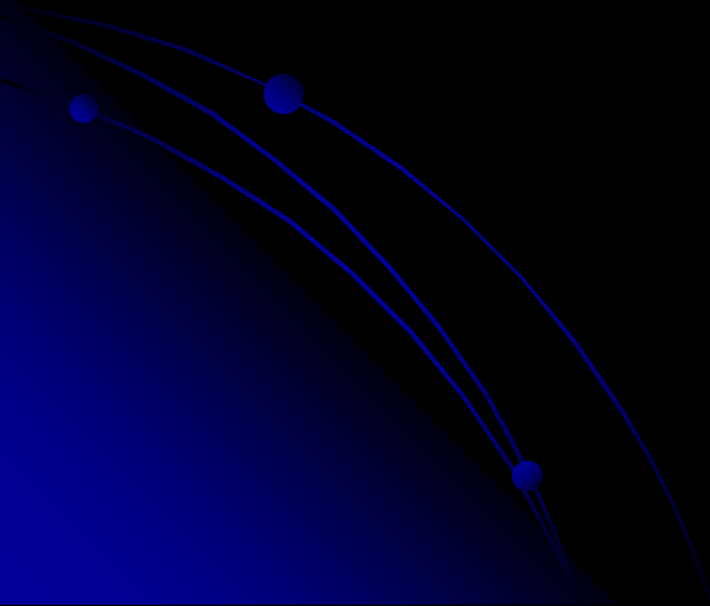


Bone Ontogeny/Development and common foot and leg postures

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Advanced Paediatric
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Physiotherapist

Bow Legs (Genu Varum)

- Normal under 18 months
 - Correction starts to occur as the child starts walking
 - Can be present up to 3-4 years of age
- 

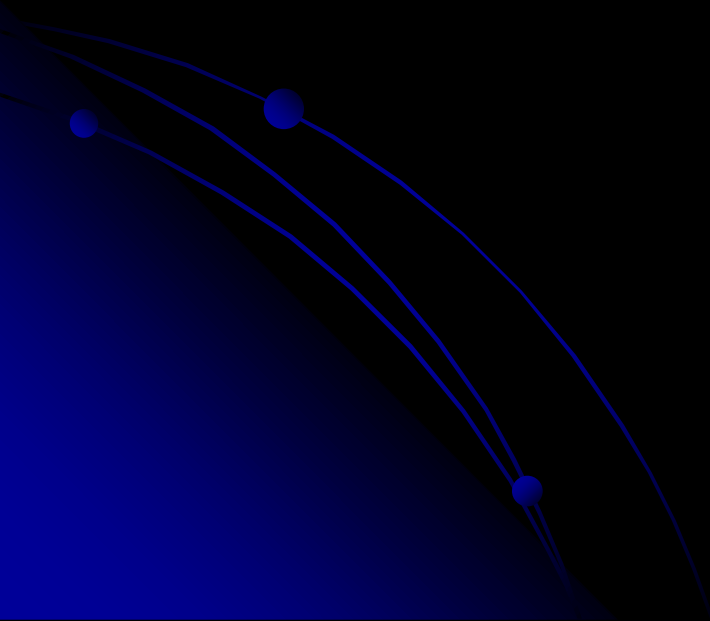
Diagnosis

- Simple observation

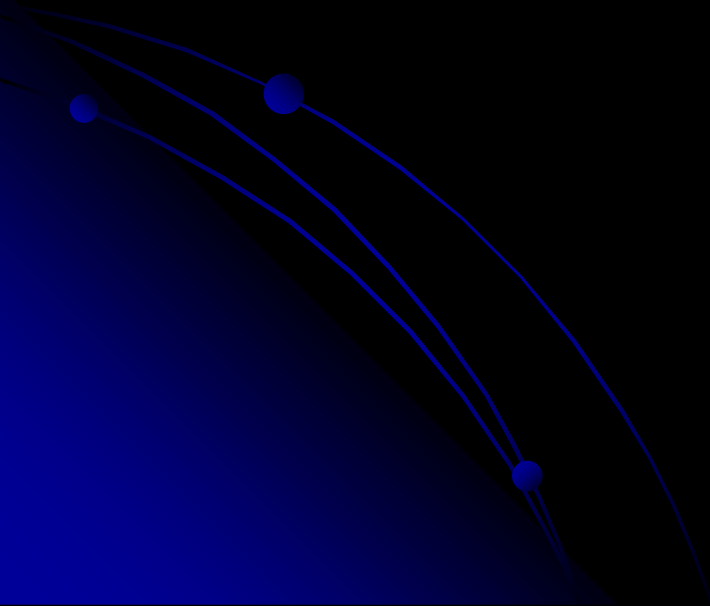


Physiological Bowing


- Normal
- No treatment required
- Can run in families



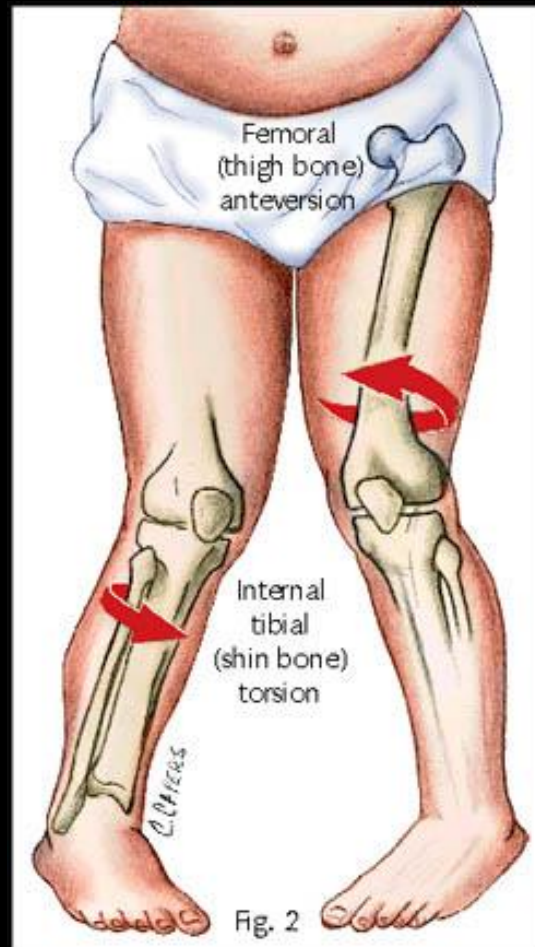
Pathological Bowing

- Worsens as the child grows
 - Usually unilateral presentation
 - Treatment is usually required
 - Can be caused by various illnesses
- 

Knock- Knees (genu-valgum)

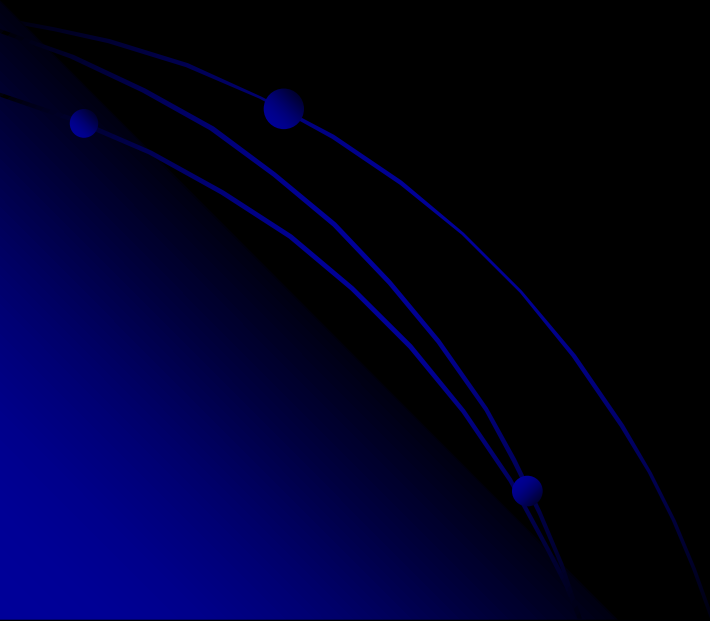
- Part of normal bone development seen at around the ages of 3-4
 - Normal and usually disappears around the ages of 6-7
 - Very noticeable in children who have flat feet or are overweight
- 

Knock Knees

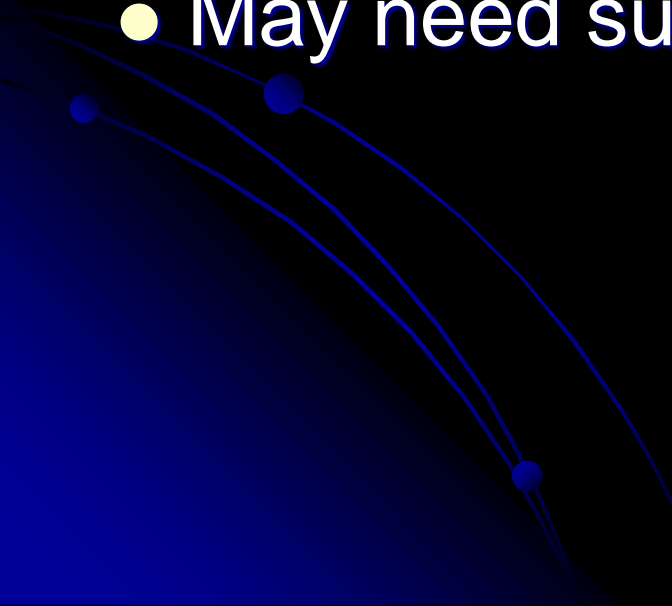


Pathological Genu -Valgum

- Often unilateral
- Can be caused by various conditions
- May require surgery for correction



Rotational deformities

- Internal/medial tibial torsion
 - Twisting of the tibia inwards and can make physiological bowing appear worse than it is.
 - May need surgical correction
- 

Femoral Rotation

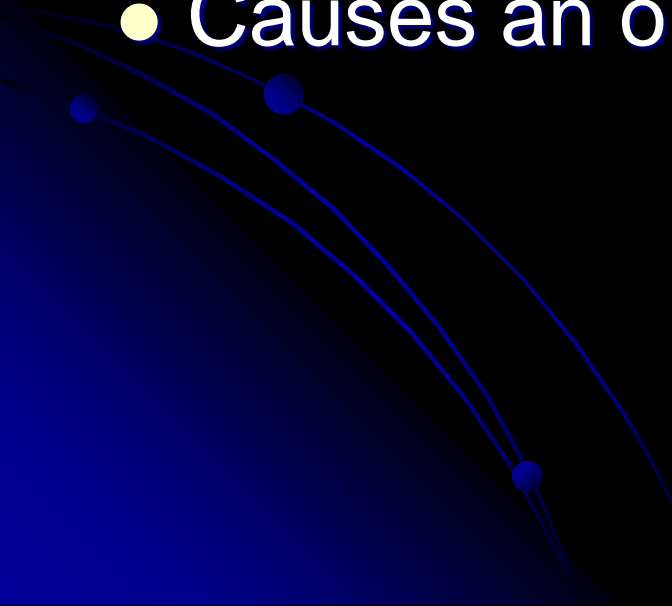
- By the ages of 9-12 the femurs have usually developed and any rotation corrected



Femoral Ante -version

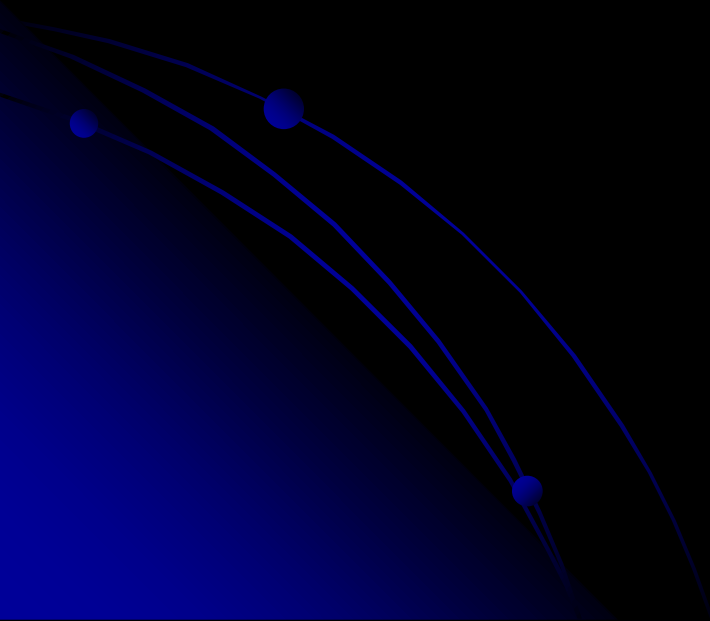
- Most common cause of intoeing after the age of 3
- Occurs more often in girls than boys
- Legs appear inwardly rotated and patellae squint at each other
- Children prefer to W sit.
- Need a CT scan for true measurement

Femoral Retroversion

- Less common as the foetal position makes the femur internally rotate not externally
 - Leg appears laterally rotated and the patellae point outwards
 - Causes an out-toeing gait pattern
- 

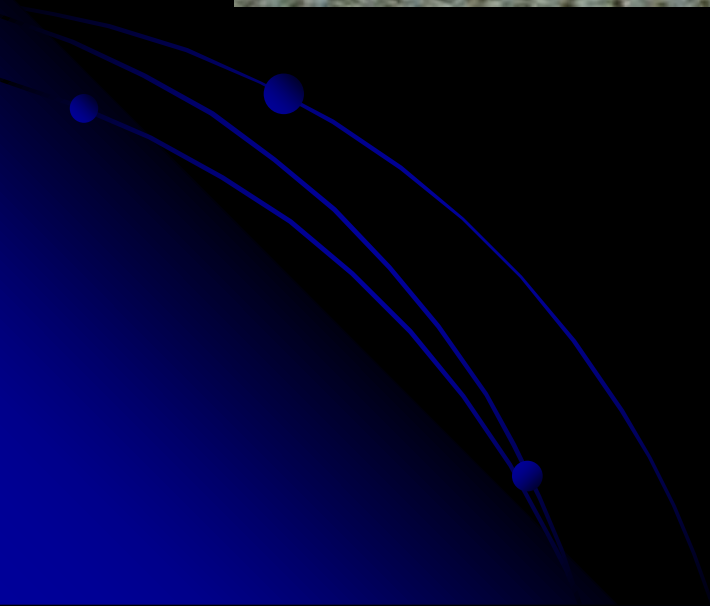
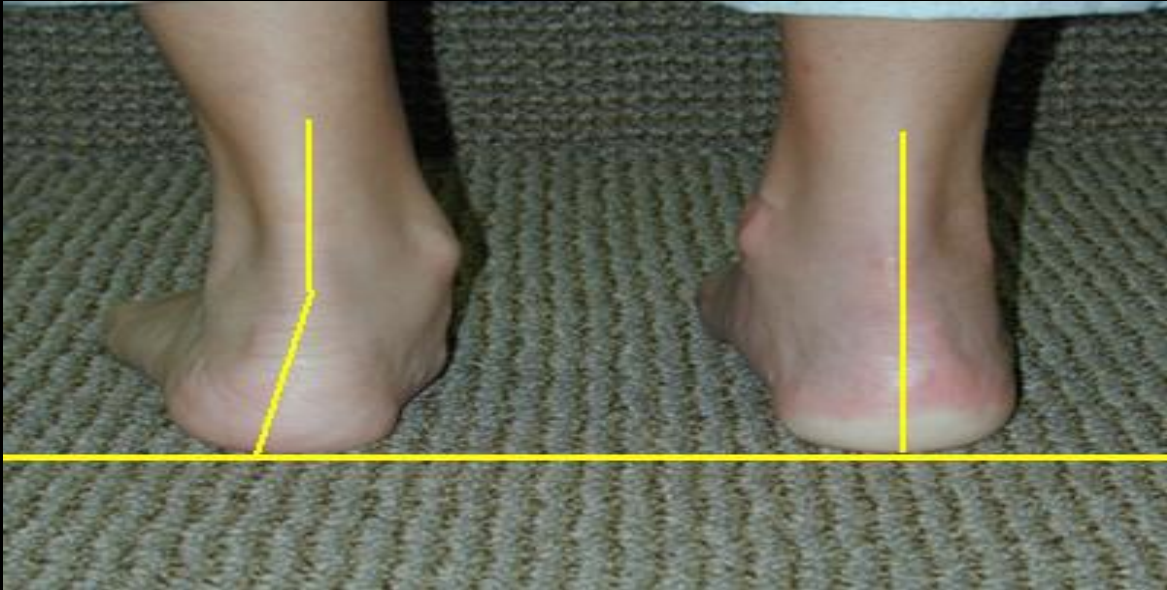
Treatment

- Usually none!

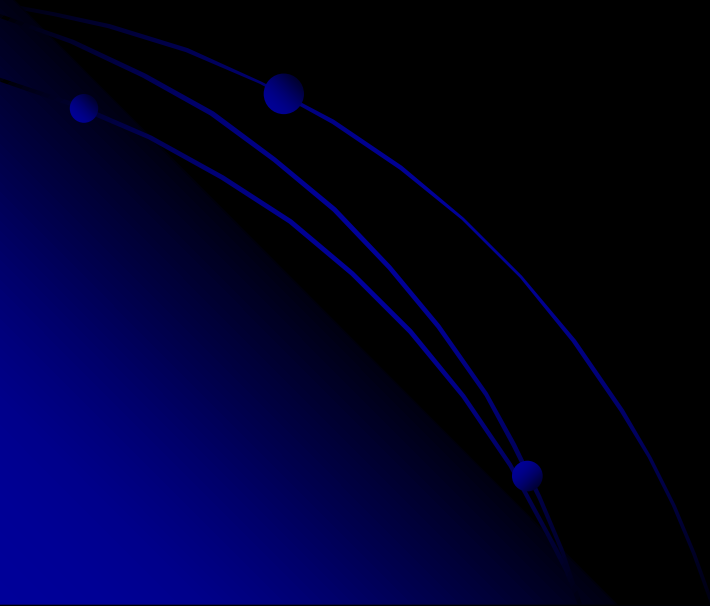


Flat Feet (Pes Planus)

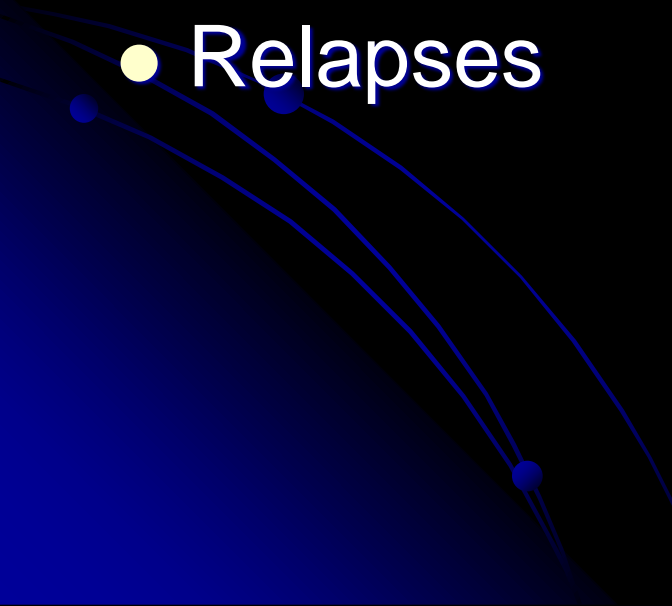
- Normal in babies and small children up to 3-5 years of age
- Longitudinal arch is usually developed by 5-6 years of age
- Can be a physiological or a pathological flat foot



Pathological flat foot

- Some degree of stiffness effecting the sub talar joint, tight TAs and loss of dorsiflexion
 - Various Causes: Talipes calcaneo valgus, congenital vertical talus, tarsal coalitions
- 

Toe Walkers

- Is it idiopathic.....
 - Intervention
 - Relapses
- 

Case studies

- An 11 year old presents in clinic with anterior knee pain and on examination they are very knock kneed with an intermalleoli distance of greater than 12cm. What would you do?
- A 15 year old presents with a history of unilateral hip pain over a 2 month period. On examination you notice that they stand with the leg externally rotated and are out toeing as they walk. They also have limited hip abduction on this side. What would you do?

Case Studies Cont...

- A 17 year old presents with a limp during gait of sudden onset and pain around the medial side of the knee. What would you want to ask/ consider during this examination.....
- 