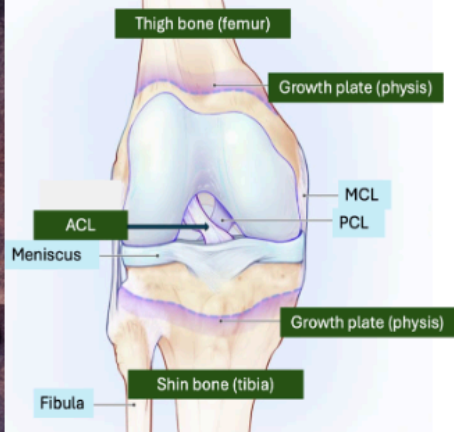


CHILDREN'S ACL INJURY

IN THE UK

Diagnosis - Growth Plate Protection
Surgical Treatment



WHY ACL INJURIES ARE INCREASING

- ▶ Early sport specialisation
- ▶ Year-round competition
- ▶ Higher training intensity
- ▶ Increased participation of boys and girls in pivoting sports

Highest risk:
13-17

SYMPTOMS OF ACL TEAR

- ▶ Audible "pop"
- ✓ Immediate swelling



Immediate pain



Knee instability



Recurrent swelling



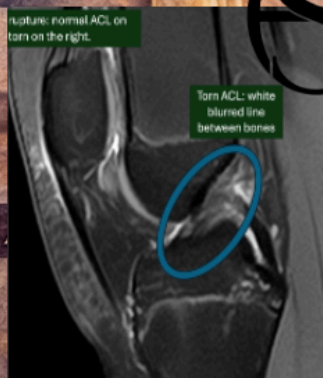
Reduced confidence in sport

DIAGNOSIS

- ▶ Clinical examination:
- ▶ Lachman test
- ▶ Anterior drawer
- ▶ Effusion assessment

MRI SCAN CONFIRMS

- ▶ ACL rupture
- ▶ Meniscus injury
- ▶ Bone bruising



HOW CHILDREN TEAR THE ACL

- ▶ Non-contact twisting injury
- ▶ Foot planted on the ground
- ▶ Sudden change of direction

Common sports:

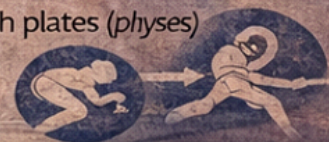
- ▶ Football
- ▶ Skiing
- ▶ Netball



GROWTH PLATE CONSIDERATIONS

Children have open growth plates (*physes*) in the distal femur

- ▶ Proximal tibia



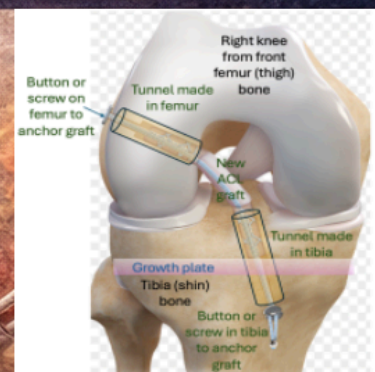
ACL SURGERY IN CHILDREN

Key principles:

- ▶ Protect growth plates
- ▶ Restore knee stability
- ▶ Prevent meniscus damage

Common grafts:

- ▶ Hamstring tendon graft
- ▶ Quadriceps tendon graft



RECOVERY AFTER ACL SURGERY

- ▶ Early phase
 - ▶ Brace and crutches
 - ▶ 4-6 weeks protected weight bearing
- ▶ Rehabilitation
 - ▶ Progressive strengthening
 - ▶ Neuromuscular training
 - ▶ Return-to-sport testing



SUCCESS RATES

- ▶ ACL reconstruction in children:
 - 85-93%** successful outcomes
 - 7-15%** failure rate within 5 years



Injury prevention

- ▶ Strength and conditioning
- ▶ Balance and co-ordination
- ▶ Movement and landing

LONG-TERM RISKS of DELAYED TREATMENT

- ▶ Meniscal tears
- ▶ Cartilage damage
- ▶ Early osteoarthritis



Paediatric ACL injuries require specialist assessment and growth-plate-safe surgery to protect the developing knee.

