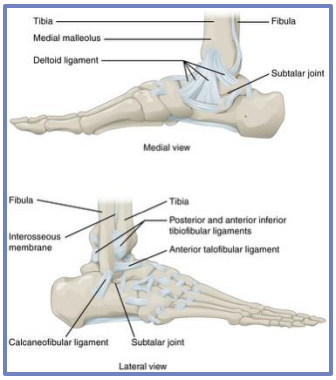
ANKLE SPRAINS

Type	Ligaments damaged	Mechanism of Action
Lateral Ankle Sprain (>90%)	Lateral ligament complex, commonly anterior talofibular ligament (ATFL)	Inversion on plantarflexed foot
Medial ankle sprain (rarely occur in isolation)	Medial deltoid ligament complex	Eversion injury
Syndesmotic sprain (high ankle sprain)	Distal tibiofibular syndesmosis ligaments	Contact injury + external rotation to dorsiflexed ankle



PRESENTATION

HISTORY

- Timing of injury
- Ability to weight bear at time of injury and after
- History of previous injuries
- Pain characteristics (location, aggregating and improving factors)

PHYSICAL EXAM

Look

- Swelling
- Ecchymosis
- Deformity

Feel

- Palpate all soft tissue and bony areas around the ankle
- Tenderness at lateral or medial ligament complex
- Tenderness at areas required for Ottawa Ankle Rules

Move

- Pain with inversion or eversion of ankle
- Limited range of motion of ankle

Special Tests

- **Anterior drawer sign *(lateral sprain)*:** With foot neutral, stabilize the ankle and apply anterior force to heel. Positive test: Increased laxity compared to uninjured side
- **Talar tilt *(lateral sprain)*:** With foot neutral, apply inversion force. Positive test: Increased inversion compared to uninjured side
- **Squeeze test *(syndesmosis injuries)*:** Compress fibula against tibia at mid calf. Positive test: Pain at anterior inferior tibiofibular ligament (AiTFL)

INVESTIGATIONS + DIAGNOSIS

- Clinical Diagnosis = History + Physical Exam
- X-rays are not routinely required for ankle injuries but may be indicated based on the Ottawa Ankle Rules, which are validated for use in children over 2 years of age.

Severity:
Grade 1: Mild tenderness/swelling, minimal functional loss
Grade 2: Moderate pain/swelling, some functional loss, mild/moderate instability
Grade 3: Severe swelling/ecchymosis, unable to weight bear, mechanical instability

MANAGEMENT

Acute	Chronic
Protect, **R**est, **I**ce, **C**ompression, **E**levation Pain management: Acetaminophen and NSAIDS Avoid immobilization Start early rehabilitation (range of motion, balance and proprioception)	As severity of injury increases more treatment is need and can include: Physiotherapy Additional support using a brace or aircast Surgical intervention (for chronic instability) Note: Syndesmosis ankle injuries often require more extensive management and an orthopedics consult

September 2025
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