

ACL Injury

ACL Injury (anterior cruciate ligament injury) is a tear or sprain of one of the major ligaments in the knee. It plays a key role in stabilizing the knee during movements such as pivoting, jumping, or sudden stops. Injury can range from a mild sprain to a complete rupture.



Clinical Features:

- Swelling in knee
- Redness around the knee
- Reduced ROM
- Pain during movement
- Popping sound at time of injury
- Fever



Risk Factors:

- Age:
(15–45 years)
- Gender:
Female 3× more likely than males
- Type of sport:
Football and Volleyball strain the ACL
- Knee Hyperextension:
Bending the knee backward



Stages of ACL Injury:

1. Grade I (Mild Sprain):
Ligament is stretched. Mild pain, slight swelling, stable knee
2. Grade II (Partial Tear):
Partial tear. Moderate pain, swelling, some instability
3. Grade III (Complete Tear):
Full tear. Severe pain, major swelling, unstable knee Surgery often needed



ACL Injury Prevention:

1. Neuromuscular Training:
• For balance and coordination
2. Strengthening:
• Focus on legs and core muscles
3. Plyometrics:
• Proper jump and landing technique
4. Warm-up:
• Dynamic stretches before activity



Physical Modalities:

- Cryo/Thermotherapy:
Ice for acute pain; heat for tissue flexibility pre-exercise
- Electrical Stimulation:
NMES to activate quads; TENS for pain relief
- Therapeutic Ultrasound:
Accelerates tissue healing and reduces fibrosis

