

Anterior Cruciate Ligament Injury



FAST FACTS

2–6x

higher risk for ACL injuries in female athletes versus males per athletic exposure

17

age at which ACL tears reach peak incidence

50%

of ACL tears are associated with meniscal tears

5–40%

graft re-tear rate after ACL reconstruction in young athletes

An anterior cruciate ligament (ACL) tear is one of the most common serious injuries in athletes. The highest ACL injury tear rate in high school sports happens to basketball and soccer players. Junior high and younger high school athletes often have open growth plates which can dramatically affect ACL surgical treatment.

ASSESSMENT

Perform history and physical exam (HPE) with probing questions around the injuring event.

- Compare injured knee to uninjured knee to help visually determine if an effusion is present. An effusion increases the likelihood of an intra-articular injury, including ACL tear or meniscal tear.
- “Lachman’s test”—While the patient is supine, place the injured knee in about 20 degrees of flexion. Stabilize distal femur with one hand. Place other hand behind the proximal tibia with thumb on tubercle. Pull the proximal tibia forward from resting position, measure the translation of the tibia tubercle relative to the patella, and compare to the normal knee. If >3mm, definitively diagnose ACL tear. However, due to patient apprehension and stiffness, you likely will be unable to perform this test in the first few weeks after injury.
- Check sideways patella translation to R/O patellar dislocation, which the clinical presentation can overlap with ACL tear.
- Order X-ray or check emergency/urgent care X-ray report for fracture.

HPE (HISTORY AND PHYSICAL EXAM) RED FLAGS

Event History

- Planted foot and twisted knee
- Executed a cutting move
- Heard a “pop” when it happened
- Visited urgent care or emergency department and was diagnosed with “knee sprain”

Physical Exam

- Stiff, swollen and painful knee that is difficult to touch/examine
- Failed “Lachman’s test”—or inability to perform test due to extreme pain

MANAGEMENT/TREATMENT

Almost all young athletes will need their ACL tear reconstructed. If the athlete is still growing, the standard surgical ACL repair is adapted to avoid disturbing the growth plate of the knee. Meniscal tears are often associated with ACL tears, and are also fixed during ACL repair surgery.

An MRI is the best way to confirm ACL tear diagnosis. This can be ordered by the specialist after they confirm the history and physical findings.

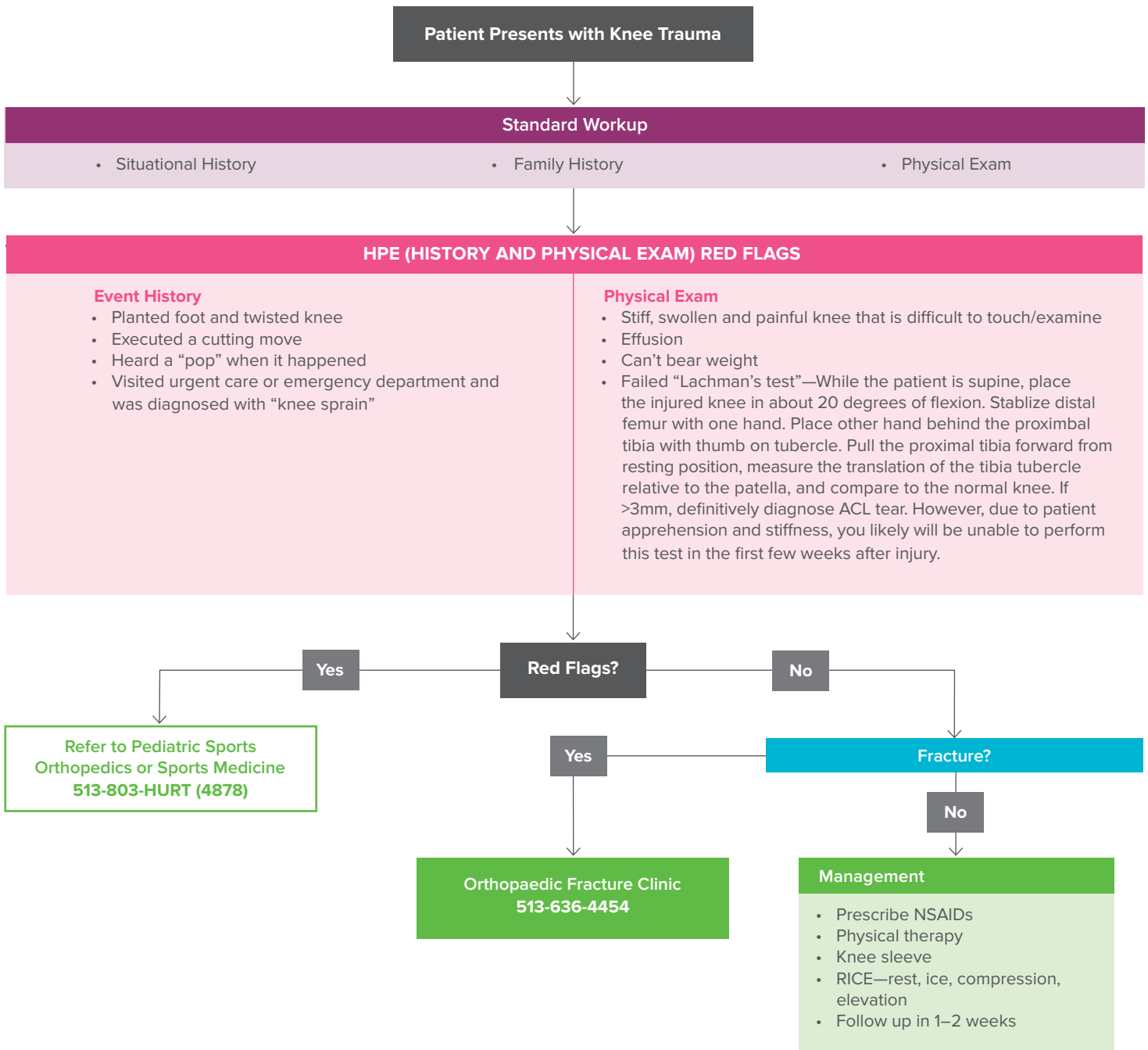
WHEN TO REFER

Refer any patient with a traumatic knee effusion or history/exam consistent with ACL tear to Cincinnati Children’s Sports Medicine or Orthopedics for further evaluation and management.

If you would like additional copies of this tool, or would like more information, please contact the Physician Outreach and Engagement team at Cincinnati Children’s.

For urgent issues, or to speak with the specialist on call 24/7, call the Physician Priority Link® at 513-636-7997.

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