Management of Anterior Cruciate Ligament Injuries

Last updated August 30, 2022

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Recommendations

HISTORY AND PHYSICAL

- A relevant history should be obtained, and a focused musculoskeletal exam of the lower extremities should be performed when assessing for an ACL injury. (*S*)

SURGERY TIMING

- When surgical treatment is indicated for an acute isolated ACL tear, early reconstruction is preferred because the risk of additional cartilage and meniscal injury starts to increase within 3 months. (*S*)

SINGLE OR DOUBLE BUNDLE RECONSTRUCTION

- In patients undergoing intraarticular ACL reconstruction single or double bundle techniques can be considered because measured outcomes are similar. (*S*)

AUTOGRAFT VS ALLOGRAFT

- When performing an ACL reconstruction, surgeons should consider autograft over allograft to improve patient outcomes and decrease ACL graft failure rate, particularly in young and/or active patients. (*S*)

AUTOGRAFT SOURCE

- When performing an ACL reconstruction with autograft for skeletally mature patients, surgeons may favor BTB to reduce the risk of graft failure or infection, or hamstring to reduce the risk of anterior or kneeling pain. (*M*)

ACL TRAINING PROGRAMS

- Training programs designed to prevent injury can be used to reduce the risk of primary ACL injuries in athletes participating in high-risk sports. (*M*)

ANTEROLATERAL LIGAMENT / LATERAL EXTRAARTICULAR TENODESIS

- ALL Reconstruction / LET could be considered when performing hamstring autograft reconstruction in select patients to reduce graft failure and improve short-term function, although long-term outcomes are yet unclear. (*M*)

REPAIR VS. RECONSTRUCTION

- ACL tears indicated for surgery should be treated with ACL reconstruction rather than repair because of the lower risk of revision surgery. (*S*)

ASPIRATION OF THE KNEE

- In the absence of reliable evidence, it is the opinion of the workgroup that physicians may consider aspirating painful, tense effusions after knee injury. (*C*)

ACL SURGICAL RECONSTRUCTION

- ACL reconstruction can be considered in order to lower the risk of future meniscus pathology or procedures, particularly in younger and/or more active patients. ACL reconstruction may be considered to improve long term pain and function. (*L*)

MENISCAL REPAIR

- In patients with ACL tear and meniscal tear, meniscal preservation should be considered to optimize joint health and function. (*L*)

COMBINED ACL / MCL TEAR

- In patients with combined ACL and MCL tears, non-operative treatment of the MCL injury results in good patient outcomes, although operative treatment of the MCL may be considered in select cases. (*L*)

PROPHYLACTIC KNEE BRACING

- Prophylactic bracing is not a preferred option to prevent ACL injury. (*L*)

RETURN TO SPORT

- Functional evaluation, such as the hop test, may be considered as one factor to determine return to sport after ACL reconstruction. (*L*)

RETURN TO ACTIVITY FUNCTIONAL BRACING

- Functional knee braces are not recommended for routine use in patients who have received isolated primary ACL reconstruction, as they confer no clinical benefit. (*L*)

Recommendation Grading

Grading of Recommendations

Strength	Overall Strength of Evidence	Description of Evidence Quality
Strong	Strong	Evidence from two or more "High" quality studies with consistent findings for recommending for or against the intervention.
Moderate	Moderate	Evidence from two or more "Moderate" quality studies with consistent findings, or evidence from a single "High" quality study for recommending for or against the intervention.
Limited	Low Strength Evidence or Conflicting Evidence	Evidence from two or more "Low" quality studies with consistent findings or evidence from a single "Moderate" quality study recommending for against the intervention or diagnostic or the evidence is insufficient or conflicting and does not allow a recommendation for or against the intervention.
Consensus*	No Evidence	There is no supporting evidence. In the absence of reliable evidence, the guideline development group is making a recommendation based on their clinical opinion. Consensus statements are published in a separate, complimentary document.

Abbreviations

- **ACL**: Anterior Cruciate Ligament
- **BTB**: Bone Patellar Bone

Overview

Title
Management of Anterior Cruciate Ligament Injuries

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American Academy of Orthopaedic Surgeons

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Guideline

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Target Provider Population
Orthpaedic surgeons, emergency medicine physicians and other allied providers

Inclusion Criteria
Male, Female, Adolescent, Adult, Child

Health Care Settings
Ambulatory, Emergency care, Outpatient, Operating and recovery room

Intended Users
Athletics coaching, nurse, nurse practitioner, occupational therapist, physical therapist, physician, physician assistant

Scope
Assessment and screening, Treatment, Management, Prevention, Rehabilitation

Diseases/Conditions (MeSH)
D016118 - Anterior Cruciate Ligament

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Methodology

Number of Source Documents	342
Literature Search Start Date	June 6, 2020
Literature Search End Date	August 27, 2021