

New AAOS guidelines outline prevention, treatment strategies for ACL injuries

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The American Academy of Orthopaedic Surgeons (AAOS) Board of Directors has approved Appropriate Use Criteria (AUCs) for anterior cruciate ligament (ACL) injury prevention programs and treatment, as well as rehabilitation and function checklists to help guide and ensure a safe return to sports for the treated athlete. The AUCs and checklists, and link to a smartphone app, are available online at <http://www.orthoguidelines.org/auc>.

Anterior cruciate ligament injuries and tears are among the most common injuries, affecting more than 250,000 Americans each year.

"Both prevention and treatment of ACL injuries can be confusing given the diversity of injured patients—from skeletally immature youth to older adults, low- and high-risk athletes playing a variety of sports, and patients with and without arthritis," said Robert Quinn, MD, AUC Section Leader on the Committee on Evidence-Based Quality and Value.

ACL treatment

Last year, the Academy released the Clinical Practice Guideline (CPG), "Management of Anterior Cruciate Ligament Injuries." The guideline recommends, with "moderate" supporting evidence, that reconstructive surgery occur within five months of an ACL injury to protect the knee joint. In addition, the CPG states that in young adults, ages 18 to 35, use of a patient's own tissue (autograft) is preferable over donor tissue

(allograft) to repair an ACL tear.

The new "Appropriate Use Guideline for the Treatment of Anterior Cruciate Ligament Injuries" provides more specific guidance to orthopaedic surgeons based on a patient's various indications, including age, activity level, presence of advanced arthritis, and the status of the ACL tear. The guidelines recommend specific next steps and procedures to ensure optimal recovery. Each treatment recommendation is ranked by level of appropriateness.

"The good news for patients and practitioners is that ACL reconstruction with autograft or allograft tissue is very successful," said Dr. Quinn.

"What these guidelines do is delineate, in a very easy-to-maneuver way, what the most appropriate treatments are in each category. It actually gives you the specific circumstances to plug in, and highlights where the evidence matches the recommendations."

Rehabilitation and return to play checklists

Most patients, especially high-level athletes, are eager to return to play following ACL surgery. However, there is a significant amount of post-surgical rehabilitation and functional recovery required before an athlete can resume sports play.

The new ACL Reconstruction Surgery "Return to Play" and "Postoperative Rehabilitation" checklists "are evidence-based lists on what should be going on before an athlete returns to play, and are constructed in a way that realistically sets expectations for what needs to be accomplished," said Dr. Quinn.

The "Postoperative Rehabilitation" checklist outlines the post-surgical protocol, from early range of motion, weight bearing and closed and open chain quad and hamstring therapy, to optional rehabilitative bracing

and neuromuscular stimulation.

According to the "Return to Play" checklist, a patient should feel confident that he or she can return to their sport of interest, and have been advised to participate in an ongoing ACL-prevention/movement-retraining program before resuming activities. In addition, the graft and surgical site have fully healed; and range of motion, balance, knee stability, strength and functional skills, have been restored.

ACL injury prevention guidelines

For athletes involved in competitive or recreational athletics, with no prior history of ACL reconstruction and no current history of ACL deficiency, the "Appropriate Use Guideline for ACL Injury Prevention Programs" provides advice regarding a supervised ACL [injury prevention](#) program, utilizing the best available scientific evidence and expert opinion.

"Injury prevention programs are very successful," said Dr. Quinn. "This AUC helps alleviate some of the controversy about when these good options are most applicable."

Like the treatment AUC, the injury prevention guidelines use patient indications and classifications—sex, growth status, activity level, sports participation and athlete risk, for example—to help determine whether or not a particular, supervised ACL injury prevention program is optimal.

For example, a supervised ACL Injury Prevention Program is rated as "appropriate" for a male, pre-pubertal, competitive athlete in a high-risk sport. However, the same program only "may be appropriate" for a female post-pubertal/mature, recreational athlete in a low-risk sport.

Provided by American Academy of Orthopaedic Surgeons

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