

# ACL re-injury appears to be a subject of 'relative risk'

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Children who have an immediate family member with a history of anterior cruciate ligament (ACL) tears are more likely to experience future complications that require additional surgical repair.

The study abstract "'Relative' Risk of ACL Re-Injury," will be presented on Saturday, Nov. 3 at the American Academy of Pediatrics 2018 National Conference & Exhibition in Orlando, Fla. Researchers aimed to identify the proportion of pediatric ACL patients with a first-degree relative (mother or father) who had suffered an ACL tear.

Researchers examined data from 425 childhood patients who underwent primary (no previous tears) ACL reconstruction at an urban tertiary care children's hospital between January 2009 and May 2016. Approximately 4 years after [surgery](#), patients were contacted and asked to complete a follow up survey. The survey asked about complications after surgery, including graft rupture, additional ACL injury and meniscus tears—along with questions about whether other relatives may have suffered an ACL tear in the past.

The survey results found that the average age at surgery was 15 years old. Researchers then divided these patients into three groups by the number of relatives who had experienced an ACL tear: those with no relatives experiencing ACL tear, those with one relative with the condition, and those with more than one relative with the condition. Of the patients who experienced primary ACL repair, 23 percent had at least one first-degree relative with a previously torn ACL, and 3 percent

had more than one-first degree relative with an ACL tear.

Graft failures were 40 percent more likely in children who had two or more first-degree relatives with ACL tears. Patients in this group were 66 percent more likely to develop complications that involved additional surgeries, compared to those with no family history (or only one family member) of previous ACL injury. However, across the groups, there was no difference in the number of meniscus or ligamentous injuries when family history was considered.

"By showing that pediatric ACL patients who have strong family histories of ACL tears are more prone to subsequent complications, we hope that our research will influence awareness and post-operative rehabilitation protocols," said Theodore Ganley, MD, director, Sports Medicine and Performance Center at the Children's Hospital of Philadelphia, and associate professor of orthopaedic surgery at the Hospital of the University of Pennsylvania.

While several other studies have examined ACL injuries in relatives of ACL patients, they have mostly included adult patients, and few have looked at post-operative outcomes. This study adds to the existing research by reporting on family histories of ACL tears and its impact on the pediatric population. It also addresses post-operative outcomes for patients with strong ACL family histories.

Provided by American Academy of Pediatrics

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