

Graft size and patient age may be predictor of need for future ACL revisions

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A smaller sized hamstring graft in an anterior cruciate ligament (ACL) reconstruction patient less than 20 years old may increase revision rates, according to research presented at the American Orthopaedic Society for Sports Medicine's Annual Meeting in San Diego today.

"Hamstring [grafts](#) are commonly used in ACL reconstruction surgeries and vary in size, with the average being 8mm in diameter. Our research illustrated that when a patient was younger than 20 years old and had a graft of less than 8mm, they were more likely to have a future revision surgery," said lead researcher, Robert A. Magnussen of Duke [Sports Medicine](#) in Durham, North Carolina.

The researchers studied 256 patients who ranged in age from 11 to 52 years old. Eighteen individuals (7 percent) underwent revision ACL surgery at an average of 12 months after the initial surgery. Only 1.7 percent of the individuals with grafts greater than 8 mm had revisions while 13.6 percent of the patients with grafts 7 mm or less had revisions. One revision was required in the 137 patients age 20 or older but 17 revisions were required in the 119 patients under 20. No statistically significant association was determined between the ratio of graft size to patient weight, height or [Body Mass Index](#) (BMI).

"Increased activity levels of younger patients may contribute to the increased revision rates noted in the patients studied," said Magnussen. "However, research into why the smaller grafts failed at higher rates is ongoing. We hope to improve ACL reconstruction outcomes for [young athletes](#) and help them get back on the field safely."

Provided by American Orthopaedic Society for Sports Medicine

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