Many elite college athletes return to play after ACL surgery

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The majority of athletes included in a new study by researchers at the University of North Carolina School of Medicine were able to return to play after having knee surgery to repair an anterior cruciate ligament (ACL) injury.

In addition, the study found that athletes who had ACL surgery when they were in high school or younger were much more likely to suffer repeat ACL reinjuries than athletes who experienced their first ACL injury during collegiate play.

"It's very clear from our data that the younger the elite athlete, the higher risk for reinjury," said Ganesh M.V. Kamath, MD, assistant professor of orthopaedics in the UNC School of Medicine and lead author of the study.

"It's clear that these kids are going to get back to playing sports at a higher level, but there is something in their makeup that put's them at high risk for tearing the ACL in the same or the other knee again. Once the athlete though gets past adolescence, this risk seems to go way down."

The study, published in the *American Journal of Sports Medicine*, is believed to be the first to systematically examine the return to play and reinjury rates among elite Division I college athletes after ACL surgery.

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risk for reinjury.

The researchers performed a retrospective medical chart review of all UNC athletes from 2000 to 2009 who had ACL surgery. A total of 89 men and women athletes from several varsity-level sports were included. Thirty-five had ACL reconstruction as precollegiates while 54 had ACL surgery during college.

The return to play rates were almost identical in both groups: athletes in the precollegiate group used 78 percent of their total playing eligibility after injury while athletes in the intracollegiate group used 77 percent. In addition, 88.3 percent of those in the intracollegiate group played an additional non-redshirt year after their injury.

The two groups were very different, though, when reinjury and reoperation rates were compared. The precollegiate group had a 17.1 percent injury rate with their original ACL surgery with a 20 percent rate of an ACL injury in the other knee, compared to 1.9 percent and 11 percent for the collegiate group. In addition, the reoperation rate for the precollegiate group, at 51.4 percent, was more than twice as high than the 20.4 percent reoperation rate in the collegiate group.

"This is the next necessary area of focused research in ACL surgery," Kamath said. "We know that the vast majority of people do well, but unfortunately there are a select few, oftentimes, the best athletes who go on to reinjure themselves and require a second surgery."

In addition to Dr. Kamath, authors of the study are Jeffrey T. Spang, MD, Timothy Murphy, MD; R. Alexander Creighton, MD; Neal Viradia, MD; and Timothy N. Taft, MD. All are from the UNC School of Medicine.

UNC is also one of the study sites participating in the Multicenter ACL

Revision Study (MARS). The MARS study, which is based at Vanderbilt University, is aimed at identifying clinically useful predictors of outcome that may inform practice decisions and improve revision ACL reconstruction outcomes.

Earlier this year a research paper from the MARS group won the O'Donoghue Sports Injury Research Award. The award is given by the American Orthopaedic Society for Sports Medicine to the best overall paper which deals with clinical based research or human in-vivo research.

"Our inclusion in the MARS group allows us to collaborate with other surgeons and lead the way in how to take care of these complicated patients," said Dr. Spang, assistant professor of orthopaedics at UNC. "Multicenter collaborative research like this is a must in order to stay on the forefront of ACL reconstruction outcomes."

Provided by University of North Carolina Health Care

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