New Surgery Available for Common ACL Injury

Dr. Darren Johnson, M.D.

One of the most common injuries I see as an orthopaedic surgeon is the dreaded ACL rupture. Most are familiar with the term "ACL" – or anterior cruciate ligament – and are looking for anything but that diagnosis. However, a new type of surgery for ACL injury, called the anatomic double-bundle reconstruction technique, may help athletes return to their sport at the same performance level with a lowered risk of osteoarthritis development – a common risk factor for this type of knee injury.

Female soccer players and basketball players rupture their ACL four to eight times more frequently than their age matched male counterparts when comparing equal athletic exposure risk. One reason could be that women are simply more ACL dependent for sports than their male counterparts. Other theories have included hormonal differences between men and women, and women landing with more inward collapse of the knees, which puts undue stress on the ACL.

The anatomical differences between men and women may simply place the ACL more at risk. Women who have their ACL reconstructed are also at greater risk of re-tearing their graft than their sport-age-matched male counterparts.

Various studies have been conducted to find out what can be done to help prevent ACL tears in women. It has been found that neuromuscular training helps athletes control their landings after jumping. Proper body positions and techniques when cutting and pivoting have also been found to be important. A strong neuromuscular program that is multifaceted and done during the off-season and pre-season may help decrease chances of ACL injuries.
New Surgery, Cont.

Sheri McNew, director of Athletic Training Services at UK Orthopaedics, says her group has worked with local soccer clubs to incorporate such a program into their off-season training. This type of program needs to be planned and incorporated by health care professionals such as certified athletic trainers who understand which exercises are most beneficial. There is still much research to be done in this area but so far results have shown promise in reducing ACL injuries.

Just 20 or 30 years ago, an ACL tear would be considered a career-ending injury. With current ACL reconstruction techniques, only about 70 percent return to the same level they were performing at before the injury. Of more concern is that previously reconstructed ACL patients “retire” at a much higher rate than those uninjured. This early retirement from sports as well as weekend warrior type activities is a critical issue with female athletes participating at an elite level in soccer, basketball, gymnastics, cheerleading, and volleyball.

Currently most knee surgeons use a single-bundle reconstruction technique to replace the torn ACL. This technique does not restore normal knee kinematics of motion in three dimensional space.

The development of osteoarthritis has been observed on X-rays in up to 90 percent of patients at long-term (ten years) follow-up after single-bundle ACL reconstruction. This future development of osteoarthritis is the rule rather than the exception after ACL injury and reconstruction. When you consider that the majority of female ACL tears and reconstruction are being performed in the 13-18 age group, this is of grave concern.

This may be because single-bundle ACL reconstruction does not adequately restore normal knee movement characteristics, particularly rotational stability. Anatomic double-bundle ACL reconstruction, a newer procedure, does a much better job of restoring knee stability, which could result in decreasing the risk of early osteoarthritis in female patients.

I recently performed the anatomic double-bundle ACL on 17-year-old Morgan Foster who tore the ACL in her right knee during a soccer match. Her father, Mike Foster, spoke with renowned orthopedic surgeons all across the country and was prepared to travel as far as it took to find the best care for his daughter, who dreams of playing Division I soccer someday.

"We were prepared to go to anywhere because, as a parent, you owe it to your child not to let her dream die," he said.

The junior standout from George Washington High School in Charleston, W.Va., was in her fourth match of the season when she planted her foot, went to turn and was bumped by an opponent. One day after I repaired her injured knee, Foster was in the UK sports physical therapy department and excited about her chances for a full recovery.

"Hopefully, I'll be back on the field in six months and ready to play soccer again," Morgan said.

Dr. Darren Johnson is a surgeon in the University of Kentucky Department of Orthopaedic Surgery and Sports Medicine.
They Were Marshall:

Barton and Smaha to Share Wisdom Borne of Tragedy

Many athletic trainers will be confronted with the death of an athlete during their careers, but few will face the magnitude of tragedy Bobby Barton, EdD, ATC, and Mark Smaha, MS, ATC, confronted after the Marshall University plane crash in 1970.

The two men - who both went on to serve as NATA presidents - will share their moving story during the 2009 Annual Meetings as the Johnson & Johnson Keynote speakers.

On Nov. 14, 1970 Marshall University’s charter plane crashed while returning from playing a football game. All 75 people on board were killed, including 37 Thundering Herd football players.

Barton was a former graduate student in athletic training at Marshall who had moved on to a new job at the University of Florida, and Smaha had replaced Barton at Marshall. Though fate spared them from being on the flight, they weren’t spared from the ensuing trauma. The men were summoned to the crash scene to identify bodies. They pushed aside their incredible grief and did what was necessary.

After a week, the two went their separate ways, on starkly different paths in life.

Barton returned to Florida and a network of support. His new coworkers assembled a grief counseling team for him, while family and friends rallied.

But Smaha, naturally inclined to draw inward, found himself surrounded by grief in a community that was suffering and leaning on him for strength. He remained stoic through 14 funerals, never crying for 28 years. By the late 1990s, he was diagnosed with delayed-onset Post Traumatic Stress Disorder.

Come learn from the voices of experience as Barton and Smaha share their hard-won insights on how to prepare for, and cope with, tragedy.

The Johnson & Johnson Keynote will take place Friday, June 19 at 3PM (following the Hall of Fame Induction). Register for the Annual Meeting at www.nata.org/annualmeeting.

Text: Jordan Bostic

Thank You!

UK Orthopaedic Surgery & Sports Medicine along with DonJoy would like to thank everyone for the continued success of the the Comeback Athlete Award. This award and it’s segement on the Scholastic Ball Report has helped to make the Saturday morning Scholastic Ball Report one of the highest rated shows on WKYT! Please continue to to send your nominations in!
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Upcoming Events

- May 21-23: State High School Tennis Tournament, Lexington
- May 22-23: State High School Track Meet, Louisville
- June 5-6: State High School Fastpitch Tournament, Owensboro
- June 11-13: State High School Baseball Tournament, Lexington