PREVENTING KNEE INJURIES

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Knee injuries are among the most common injuries suffered by high school athletes. Sprains and tears of the anterior cruciate ligament (ACL) or medical collateral ligament (MCL) can occur to any athlete in any sport, but preventative programs are available. VYPE Editor-In-Chief Tim Polzer asked Dr. Eric Stehly, an orthopaedic surgeon on the medical staff at Baylor Regional Medical Center at Grapevine, about the latest research regarding knee injuries and their prevention.

VYPE: What knee injuries are most common to high school athletes?

Dr. Stehly: Stehly: The most common knee injuries we see involve ACL or MCL sprains or ruptures in athletes playing girls' basketball, girls' soccer, football and volleyball. Most ACL injuries are non-contact, meaning there wasn’t a collision with another player. They’re often pivoting or landing injuries in which the player is changing directions really fast. In football, for example, many knee injuries occur when running backs or defensive backs are pivoting really quickly or changing directions. They don’t have to be tackled or hit to injure their knee.

VYPE: Are knee injuries more common among female athletes?

Dr. Stehly: Knee injuries are definitely increasing among females. I’d say it’s a little less than 2 to 1, but we do see more female patients. Several studies have shown that there are a couple of anatomical differences between women and men that make women more susceptible to knee injuries. One of them being women having wider hips, so they have a little different shape to their legs, and are a little bit knock kneed compared to men. The shape of the female femur is also different, with a narrower notch that can cause an impingement with the tendon. A female’s muscle balance is also a little different from a male’s. I also think part of the increase can be found in the numbers of participants. With football, you probably have 200-300 kids playing football at a typical school, but there may be 50 girls basketball players, so the ratio can be higher.

VYPE: How can a high school athlete or trainer identify a knee injury?

Dr. Stehly: We work with trainers at Byron Nelson High School, Grapevine, Colleyville and other high schools about identifying knee injuries in their athletes. Typically, the athlete will hear a “pop” and experience some immediate discomfort. With an ACL tear, the knee will usually swell up immediately or within an hour or so, and it’s pretty obvious. The athlete rarely will be able to return to play that day. Some athletes have been known to go back and play with partial ACL ruptures. Trainers will usually ice the knee, put the athlete on crutches, give them anti-inflammatory medication and send them over to see us.

VYPE: What can a high school athlete do to prevent knee injuries?

Dr. Stehly: We separate knee injury prevention programs between male and female. We’ve found that female high school athletes can reduce their knee injuries by participating in a jump-training program. The program teaches the athlete how to take off with better form that trains specific muscles and lessens the stress on her knee. Males benefit more from balance programs designed to equal the balance between their quads and hamstrings. We don’t want one overpowering the other and throwing the knee off balance. While many athletes, such as offensive linemen, now wear knee braces to prevent injuries, we’ve found that they don’t protect against ACL injuries, but can help avoid MCL injuries.