

Sports

No More Tears. How child's play can help prevent ACL injuries

By Sean Gregory

IN THE SECOND HALF OF A SEPTEMBER FOOTBALL game, Nick Denove, 11, went out for a pass. He cut toward the middle of the field as he had done so many times before—the Naples, Fla., youngster had been playing Pop Warner football since he was 5. This time, however, Denove collapsed to the ground like a hunted duck. He tore his anterior cruciate ligament (ACL), the tissue that gives jocks knee stability when they play sports. “Are you kidding?” Nick’s mother Lisa thought when she heard the news. “Torn ACLs happen to pro athletes or weekend warriors.”

And, it turns out, little kids. The Children’s Hospital of Philadelphia (CHOP) has uncovered data to support the anecdotal evidence surgeons were gathering: the number of ACL tears treated at CHOP rose 400% from 1999 to early 2011, increasing 11% annually. Meanwhile, incidence of what was previously thought to be the most severe child knee injury, the fracture of a piece of bone called the tibial spine that juts up from the shinbone, rose just 1% over this period. “Kids are now doing the same sports as their heroes,” says Dr. Theodore Ganley, a leading pediatric surgeon at CHOP who commonly treats these injuries in younger teenagers and once had to fix the ACL of a 6-year-old. “They’re doing things year-round, in multiple teams, in multiple leagues. Now they are getting the same injuries as their heroes.”

The main culprit for this spike is the intensity of organized sports. As kids play on more specialized travel teams, they increase their chances of getting hurt. But some doctors also suspect that the nature of modern play could be contributing to these injuries. If you’re more likely to concentrate on, say, soccer from a very early age, you’ll be constantly repeating the starting, stopping, jumping and pivoting motions that can lead to an ACL tear. You may develop strong quads, but what about hamstrings? What about your upper body? Imbalances in neuromuscular development leave you with less overall balance and higher levels of injury. But if children play a variety of games outside of organized sports, they can develop more muscle groups. They’ll be more likely to slack off when they get tired, out of earshot of taskmaster coaches. “We don’t feel like we see these injuries

in free play,” says Dr. Todd Lawrence, another CHOP surgeon.

Better warm-up exercises are key to helping prevent ACL tears in kids, doctors say. That means less reaching for their toes with the zeal of a fork picking up peas and more dynamic stretches—like lifting a knee to the chest—plus squats, hops and jumps. Studies suggest that such plyometric exercises can reduce ACL-injury risk. Darin Padua, an injury-prevention expert from the University of North Carolina, designed a pediatric program geared toward 10-year-olds that breaks stretches into shorter time chunks in order to hold a child’s attention span. The exercises increase kids’ body control, decreasing the chance of an ACL tear.

It’s hard to preach injury prevention to children who just want to get out onto the field. So doctors recommend touting the performance-enhancing benefits. Kids who followed a CHOP injury-prevention exercise program, for example, were shown to jump higher. Kids like having hops. And they hate sitting on the sidelines while their buddies go out and play. ■

400%

Percentage increase in ACL tears treated at the Children’s Hospital of Philadelphia from 1999 to early 2011