

# Side-stepping ACL injuries

Easy-to-implement training exercises can help coaches reduce the risk of ACL injuries in their young athletes while enhancing their skills in the process

**As the mom of a young athlete, as well as being a physician,** the number of youngsters I see suffering ACL injuries these days alarms me.

Whether you're a coach or a parent, it should have your attention, too.

ACL injuries are life-changing events for a child, requiring anywhere from six to 24 months of often painful rehabilitation while costing an average of \$17,000 when surgery is required.

Nearly 80 percent of all ACL injuries suffered by girls involve no contact with other players, while roughly half of all ACL injuries suffered by boys are the result of non-contact, as well.

building drills. Parents can even perform these with their children at home, enjoying fun bonding time together while guarding against unwanted injuries that force kids to the sidelines for long periods of time.

Kiki Lara, the men's soccer coach at the University of Dayton who has also played professionally until recently, has seen first-hand the impact preventative training has in chopping down the number of non-contact injuries that occur, and those same principles apply from the pros to the pee-wee level.

"By constantly incorporating injury prevention exercises into training and making them as important an aspect to learning the game as technical work, we will



The walking lunge hold is a great warm-up exercise that focuses on the thighs, hamstrings and core area of the body, which often are overlooked in training and expose athletes to injuries. This is similar to the walking lunge, with the major difference being that players hold the one-legged stance for 3-5 seconds before stepping into the next deep lunge.

That means sharp cuts on the basketball court or sudden changes of direction on the soccer field are ending kids' seasons and, in some cases, chasing them away from the sport for good.

But it may not have to be that way.

## Proactive prevention

Most ACL tears occur during sports such as basketball, football, soccer and skiing. Typically, the ligament tears when the athlete slows down suddenly or cuts or pivots with their feet firmly planted, twisting or overextending the knee. Landing awkwardly from a jump also is a frequent cause of ACL injury.

The risk of ACL injuries can be significantly reduced, all through easy-to-implement training routines that coaches can incorporate into their practices without taking valuable time away from their skill-

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help an athlete improve their game overall," he said.

You can use some of the following exercises with your team to not only help them reduce their injury risk, but also perform skills at a higher level:

► Teach your athletes to anticipate. Encourage them to always be aware of what is happening around them and to expect being bumped and to have weird landings. Remind them to be ready for anything, to land lightly on the balls of their feet and to ALWAYS keep their knees bent. Landing lightly, keeping the knees bent and parallel (not knock kneed) and landing with the weight on the toes are the key principles to keep in mind that I repeat every time I work with kids, as well as encourage them to help each other remember.



The side lunge walk, also known as the Up Over Fence Squat, requires players to lift their leading leg high up (as though lifting it over a fence), and stepping as far away from their other leg as possible to get a dynamic stretch for the groin. Then they end in a deep squat before repeating again. This also builds strength in the gluteals and enhances balance.



Seated in-outs are a great core exercise. The child sits on the ground, leans back and kicks her legs out straight and then returns them to the tuck position. She performs for one minute. To increase the difficulty level have the child raise her arms up high instead of using them to help her balance, or have her do the exercise on a wobble device (shown in photo).

partner 10 feet away and stabilizes himself on one leg. The player tosses the ball to his partner and then jumps up as high as he can on one leg. They repeat 10 times. This can also be done alone where the player touches the ball to the ground in-between jumps. The players do second and third sets at 15 and 20 feet apart. The key elements are to always have the player keep their knee bent and lean backward with their weight and land lightly on their toes. This exercise not only builds strength but balance and is great for not only helping protect the players' knee but building strength for quicker deceleration and cutting. A "star jump" is another simple and effective way to build functional strength. The athlete simply jumps up and spreads his arms and legs apart (much like an exaggerated jumping jack). After 10 in a row, the body will fatigue, but it is important to keep the explosive force behind each jump.

► Build balance through agility drills. Wobble boards or inflatable balance discs are not only fun for kids to use but are great tools for strengthening leg muscles and building agility. Even simple one-legged standing contests provide health benefits for players.

► Focus on exercises for the hamstrings and core area of the body, since these are traditionally undertrained, which puts athletes at increased risk of injury. Crunches, backward lunge walks, seated twists and crab walks should be a part of the warm-up regimen.

Studies show that these exercises need to be done for six to 11 weeks in order to have a measurable effect on the body. **sk**

► Engage the muscles that you want to promote. Be sure to include backward running and side shuttles in your warm-up to wake up the hip muscles. Having the kids firing these muscles before play is a great way to get them awake and ready for action.

► Always include some dynamic stretching to the kids' warm-up or cool down routine. When possible, try to have these stretches mimic the movement of the sport. You want players performing these slowly and just slightly past their normal comfort zone. Some examples of dynamic stretches are the side lunge walk, where the child reaches her leg out broadly to the side, dips into a deep squat and then shifts her weight side to side in an effort to get a stretch in her groin and build strength in her gluteals. If done slowly and intentionally, this also helps with balance. Also, "runners A skips" are fantastic for warming up the muscles of sprinting along with creating a dynamic stretch to the hamstring. The athlete basically skips with exaggerated knees high and arms forcefully swinging up and pulling back with each step. The key elements are: keep an arch in the lower back, keep the toes up (not pointed down toward the ground) and push hard off of the ground in an effort to use the gluteal muscles to get high up.

► Enhance players' power through Plyometrics, such as the single leg jump, an exercise in which the athlete faces a

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