

## Our feet are foundation to athletic success

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Longtime patient and golf champion Ruth Femali, who's played golf almost seven decades, says, "I've worn orthotics over 20 years, and they've saved my legs." Courtesy of Robert Weil

Looking back at the past three decades as a sports podiatrist, I've seen some of the top women, girls, and grandmothers in all sports — runners; golfers; and tennis, volleyball, soccer and softball players, to name a few. It's been my experience that knee problems of all types — including runner's knee, jumper's knee, knee tendonitis, even knee arthritis — have always been more common in females. Even the traumatic ACL (anterior cruciate ligament) injuries are five to seven times more prevalent in girls.

The ACL is one of the main knee stabilizers. High-impact sports with a great deal of running, jumping and direction changes are notorious for these problems. Traumatic knee injuries are commonly seen by the orthopedic physicians and often are surgical problems.

The question, though, is why so much more common in females? For years it was thought that the reason was either girls were not as strong or not as experienced as their boy counterparts. Boy, that's changed! Over the past few decades, these explanations have lost all credibility. Female athletes today have been training in their sports and have every bit the experience the boys have. Young women who play soccer, volleyball and other sports at serious levels are as strong as the boys.

So, what's the story here; what about the anatomical and hormonal differences, female to male? The wider hips and subsequent angle difference of knee alignment are significant. This can produce more twist-force or torque through the knees. Also the tendency of females to be more flexible related to hormonal factors plays an important role in explaining these knee problems. Now, two points bear stressing here.

1. I'm not only talking about serious hard core athletes. This absolutely includes the recreational walker, jogger, tennis player or golfer.
2. Men and boys are not excluded from the relationship of foot function and knee problems.

Pronation of the foot (rolling inward) and the secondary internal rotation of the lower leg is part of the normal mechanics during walking or running. When pronation is excessive (flat feet for example), stress and twisting torque to the knees are increased. High arches can also stress knees. Wider hips and increased flexibility add to this joint stress.

Orthotics, custom shoe inserts to properly position the foot, can control excessive pronation and enhance leg and knee alignment. I've seen excellent results in both genders when orthotics are used, especially in

conjunction with proper strengthening. What is also very exciting is that many baby boomers or seniors with arthritis and wear and tear problems with their knees can also benefit.

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Important note — you don't need foot problems or foot pain to benefit from orthotics; often it's the areas above taking the abuse, like your knees, hips or back.

Your feet are the foundation to the rest of your body, so pay attention, especially if you or your kids have persistent or ongoing knee problems with sporting, walking and running activities.

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