

## Why are so many gifted athletes pigeon-toed?

[Mike Young](#)

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I was recently asked to contribute to the "Ask Anything" column in [Maxim magazine](#). In this front-of-the-magazine section, Maxim solicits random questions from readers, then consult "real experts for actual, scientific answers." I was asked to answer the question why so many gifted athletes are pigeon-toed? Here's my answer (and a special thanks to [CFKA](#) for the ball analogies):

While there's no real research clearly defining the relationship with being pigeon-toed and being a good athlete, there is quite a bit of anecdotal and indirect research evidence to support the notion. In fact, many coaches in sports like football, basketball, soccer and track actually look for pigeon-toed athletes to join their teams. This is because there seems to be a disproportionate number of fast athletes who are pigeon-toed.

When you run, you land on the outside of your foot and roll toward the inside. People who are pigeon-toed tend to have less of this roll. Consequently, when they contact the ground their foot and ankle joint tends to be stiffer with less 'give.' It is this lack of medial or inward foot roll that causes people who are pigeon-toed to also appear flat-footed. It's also what may give them their advantage. The stiffer the foot is at ground contact the less energy is absorbed and dissipated. This is an important point considering that the impact forces experienced during running are on the order of 3-6x an athlete's bodyweight and an athlete's capacity to handle this impact and quickly accelerate their body in the opposite direction is the key to running speed.

People who are pigeon-toed may be able to contact the ground with less energy dissipation and as a result be able to apply greater propulsive forces to the ground in a shorter period of time. A good analogy would be that pigeon-toed athletes are like super-bouncy balls- they get on the ground and get off the ground quickly without losing much energy. People who are not pigeon-toed are more like a deflated beach ball- their foot lacks the stiffness of pigeon-toed people and as a result the energy return is not as efficient.

There is a flip side to these potential benefits though. There is a growing amount of research that suggests that the very same traits that may cause these athletes to be fast, increases their likelihood of injury. People who are pigeon-toed are often bow-legged and flat-footed. People with these traits often incur ankle, knee and hip injuries both during their playing days and later in life due to the fact that their feet are acting like a very tightly wound spring rather than a cushy crash-pad. As a result, their bodies take a bigger hit from the impact than their non-pigeon-toed friends.

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It would certainly be a good place to start. Throw in small head, short and heavily muscled thigh, long lower leg, broad shoulders, and good neuromuscular system and you've got a world beater.