

## Barefoot Running Can Be Great, but Tread Carefully

You may be able to run faster if you take off your shoes. But you also risk injury, new studies show. Your legs and feet move differently when you run barefoot. This can make you more efficient. But the unfamiliar movements can strain your muscles and tendons.

“If you do make this change, do so slowly and carefully,” warns Paul DeVita, PhD, who studies biomechanics at East Carolina University.

### Barefoot Running Picking Up Speed

Barefoot running is becoming increasingly popular. Advocates say it is more natural. And many shoe companies are making “minimalist” footwear that is lighter and less restrictive.

Researchers are investigating these claims. They presented a dozen studies at the Annual Meeting of the American College of Sports Medicine now being held here.

In one study, 12 people ran on a treadmill for six minutes barefoot and for six minutes with shoes. They got plenty of rest in between. The runners did not breathe as hard when they were barefoot. Their male runners’ hearts did not beat as fast (although the female runners’ hearts beat faster.) And they didn’t feel as tired. Joel R. De Paoli, MS, led this experiment when he was an exercise physiologist at San

Francisco State University. He tells WebMD that runners may move less efficiently when they wear shoes because their heels strike the ground first. That blocks their movement forward.

“There is a likelihood that you land more on the forefoot when you run barefoot,” he says. In another study at Adrian College in Adrian, Mich., competitive runners tried Vibram Five Finger Bikilas shoes. These shoes resemble gloves for feet. They are supposed to simulate running barefoot while providing some protection.

The runners ran a mile in 7.17 minutes wearing the Vibram Five Finger shoes, but 7.36 minutes wearing traditional running shoes. The researchers calculated that the weight of the shoe only accounted for 18% of the difference in speed.

### Be Careful of Injury

A third study showed that some runners may get hurt while they are first practicing their sport without shoes. Surveyed on the Internet, 18 out of 109 runners who were making the change reported a muscle or bone injury. Sixteen reported an injury on the bottom of the foot.

“I saw a lot of calf pain and tendinitis,” researcher Allison Altman, PhD, tells WebMD. She also documented a lot of blisters, but was surprised by how few people cut their feet.

Overall the number of injuries was low considering that up to 70% of runners have some kind of injury every year, she says.

Still, not everyone should assume they will run better without shoes, Christel Kippenhan, PhD, who studies biomechanics at Benmidji State University in Minnesota, tells WebMD. “You should not make everybody a forefoot runner,” says Kippenhan. She was not involved in any of these studies.

Different running styles may work better for different people, she says. It could depend on the runners’ weight, the size of their frame, and other factors that scientists have not pinpointed. “I think we need more research to say one way or the other,” says Kippenhan.