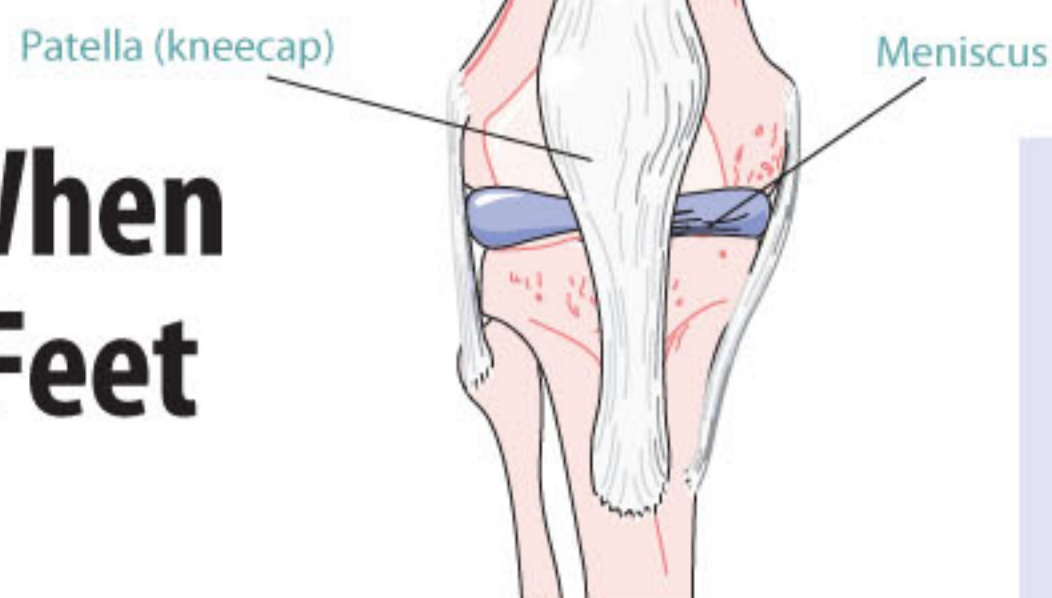


Think About Your Knees When You're Shopping for Your Feet

Some shoes may benefit the foot at the expense of the knee.



THE VIEW FROM DUKE



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Wrong Shoe Choice Can Lead to Problems

"Just as the article suggests that you keep knee strain in mind when choosing walking shoes, the same applies when choosing running shoes. Previous studies have shown that runners adjust their running form and foot impact based on shoe wear. Shoes with more shock absorption lead to a heavier impact. Similarly, barefoot runners adjust their style for a light impact. Recreational runners do not seem to be any more at risk for knee osteoarthritis, but this may be different for those with existing arthritis. It is more common in an orthopaedic practice to see problems with the running shoes that do not match with foot shape and flexibility. Better running shoes add control features to help people with flat feet or high arches, for example. The wrong shoe choice can lead to problems in the foot and ankle, shin splints, and knee pain. When purchasing shoes runners should be careful to seek out stores known for their expertise rather than for their fancy mall location!"

The shoes you purchase to keep your feet in tip-top form may be wreaking havoc on your knees if you have knee osteoarthritis (OA), according to new study results presented at the annual meeting of the American College of Rheumatology, held in Boston, MA, in November.

It appears that foot-friendly clogs and shock-absorbing stability shoes may place excessive loads on the knees of people with knee OA, report researchers led by Najia Shakoor, MD, an assistant professor of internal medicine in the section of Rheumatology at Rush Medical College in Chicago.

"What may be good for our feet may not be good for our knees," Dr. Shakoor says.

"Shoes have traditionally been engineered to provide foot comfort, and little previous attention has been directed to the effects that shoes may have on loading of osteoarthritic knees," she says. Increasing knee loads plays an important role in the progression of knee OA, she explains.

"Results from this study suggest that shoes can significantly affect the amount of load on osteoarthritic knees—with flat, flexible shoes providing the greatest degree of benefit in terms of knee loading," she says (think flip-flops).

WALK THIS WAY. Dr. Shakoor and colleagues studied how various types of shoes affected 13 women and three men with knee OA. Each participant walked in the lab while barefoot, wearing a Dansko clog, a Brooks Addiction stability shoe, a Puma H-Street (a flat, flexible walking shoe), and flip-flops.

After taking time to adjust to his or her new footwear, each participant walked at normal



speed. Researchers then calculated the load on the knee. People with knee OA who have abnormally high loading knees—or high amounts of stress on part or all of the knee joint—are at increased risk of both injury and OA progression.

The stability shoes and the clogs placed a significantly higher—16 percent—load on the knees than walking barefoot, the study showed.

By contrast, the Puma walking shoes and the flip-flops resulted in lower knee loads, which were comparable to walking barefoot. "Shoes that allowed natural foot motion and flexibility appeared to be more beneficial in terms of knee loading," Dr. Shakoor says.



BAREFOOT WINS. The same team of researchers previously showed that walking barefoot significantly decreased the knee load compared with wearing walking shoes.



In the earlier study, walking barefoot resulted in significantly decreased loads at the knees and hips. Certain sneaker companies are taking this lesson to heart: Nike, for example, has a line of running shoes called Nike Free that are designed to emulate the feel of running barefoot. While Dr. Shakoor has no specific recommendations for what type of shoes arthritis patients should wear, "shoes that provide natural foot mobility with arch support may be beneficial for some patients."



One thing is for sure, she says: "These results highlight the importance of re-evaluating the design of modern day shoes in terms of their effects on knee loads and knee OA." **DM**

