

## New Data About Oldsters Exercising

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June 2018

**Bottom line at the Top:** The only way to maintain or improve circulation to the legs is to use them. Just counting steps isn't enough. It takes sustained, moderately intense lower extremity activity to keep arterial blood flowing freely. The recommendation of at least 30 minutes of exercise daily, even in ten-minute increments, is still valid, but 10 minutes on your feet futzing around the house doesn't count.

A life of inactivity, particularly a high cholesterol, diabetic life of inactivity, often destroys arterial circulation to the legs. If they haven't yet incurred amputation of a dead limb, people with such a poor blood supply suffer from leg pain when walking or otherwise exercising them. The pain mimics angina pectoris, heart attack pain, in that both pains result from a body part not getting enough oxygen from blood. The disease severity determines how long a person can walk before experiencing pain. Usually the pain resolves with rest.

Medicines don't help much. Aspirin and others prevent clotting, but don't reverse arterial narrowing. Some agents help oxygen-carrying red blood cells to more easily slip through tiny vessels, but do nothing to dilate the narrowed sections. Some medicines lower blood pressure by dilating arteries, but only those that aren't already solidly stiff.

Doctors can open a critical narrowing with a balloon (angioplasty) and keep it open with a tube (stent), but can do nothing to help diffusely narrowed arteries. **The only really effective route to improved circulation in peripheral artery disease (PAD) is sustained leg exercise.** The 'demand' for oxygen incurred during exercise stimulates the body to make new vessels, which detour around blockages and supply oxygen to working muscles. This takes time and persistence:

By walking until it hurts, resting until it doesn't and repeating again and again for a long time or distance every day for months until it's better, then years to maintain it.

Simple advice, but people dislike doing something that hurts even if it's healthy, logical and will eventually reduce pain. The challenge is motivation. Clinical guidelines recommend supervised treadmill exercise, but frequent travel to a medical center is difficult for many people and doesn't actually work as well as a home-based walking program with medical visits every one to four weeks.

A recent study published in the Journal of the American Medical Association tried to build on a home-based walking program by adding coaching and an ankle activity monitor. The extra monitoring didn't work any better than did advice about a home walking program and infrequent telephone updates. Apparently ankle-monitor wearers reported more exercise than they actually did, increased their steps without doing the recommended long walk and by the end of nine months weren't walking any more than the non-banded control group.

This likely extrapolates to people without PAD who want to avoid it as they age. Using a step monitor like a Fit-Bit might deceive the wearer into believing that three miles walked over the course of a day guarantees fitness. Unless those miles include sustained, moderately intense activity (like a brisk walk or non-leisurely bike ride) lasting at least 10 minutes at a time, the benefit to heart and circulation is probably minimal.

The 10,000 step goal is a reasonable surrogate, because it's hard to move 10,000 steps in a day without at least one moderately long walk.