

Most people with knee OA meet physical function level to walk recommended 6,000 steps a day

November 13 2016

People with knee osteoarthritis (OA) often have difficulty with physical function, such as getting out of a chair and walking, which limits the ability to be physically active. According to new research findings presented this week at the 2016 ACR/ARHP Annual Meeting in Washington, most people with knee OA actually already have the physical function necessary to walk at least 6,000 steps a day, the minimum amount needed to improve their arthritis and prevent disability.

Osteoarthritis, or OA, is the most common joint disease affecting middle-age and older people. It is characterized by progressive damage to the joint cartilage—the cushioning material at the end of long bones—and causes changes in the structures around the joint.

People with knee OA need to adopt a physically active lifestyle, or at least a goal of 6,000 steps a day, to get major health benefits. Yet most people with this condition are sedentary and struggle to engage in physical functions like stair climbing and walking. Researchers at the University of Delaware's Department of Physical Therapy analyzed publicly available data from the Osteoarthritis Initiative to measure physical activity and physical function among OA patients.

"We were interested in understanding what minimal level of functional ability was necessary to be physically active," said Daniel K. White, PT,

ScD, MSc, Assistant Professor and the study's lead author. "For instance, how far does one need to be able to walk in order to be active in the community?"

Establishing minimum physical function thresholds a day helps clinicians prioritize when to prescribe interventions like physical therapy. Physical function was measured according to timed, five-repetition sit-to-stand (STS) tests, timed 400-meter walks, and walking speed on a 20-meter walk. To establish a minimum threshold for both physical function and activity, they calculated cut points at 80 percent and 95 percent specificity for walking 6,000 steps per day.

There were 1,790 participants who wore their monitors for three or more days and moved $6,319 \pm 2,920$ steps a day, with 47 percent walking more than 6,000 steps a day. The mean STS test results for these participants was 10.2 ± 3.2 seconds, and their 400-meter walk speed was 305.3 ± 51.4 seconds. Their walking speed was 1.3 ± 0.2 meters per second. Physical function at or below these thresholds may be a barrier to people with OA getting the minimum level of physical activity they need, said White.

The good news is that most people with knee OA already meet these physical function thresholds. For those patients who are below these thresholds, interventions that target improvement of physical function may help them achieve the target of 6,000 steps a day, he said.

"Our findings are important to both patients and providers. They are important to patients to realize that most people with knee OA are able to live a physically active lifestyle. They are important to providers to understand when someone may need help with their [functional ability](#) to become [physically active](#), such as receiving a referral for [physical therapy](#)," he said.

In the future, White hopes to utilize this research and conduct even more studies to promote [physical activity](#) to [people](#) with knee OA.

"Now that we have an idea of how much ability is necessary to be active, we can better develop intervention strategies that are personalized to patients' individualized needs so we can get them to be more active," he said.

Provided by American College of Rheumatology

Citation: Most people with knee OA meet physical function level to walk recommended 6,000 steps a day (2016, November 13) retrieved 27 April 2024 from <https://medicalxpress.com/news/2016-11-people-knee-oa-physical-function.html>

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