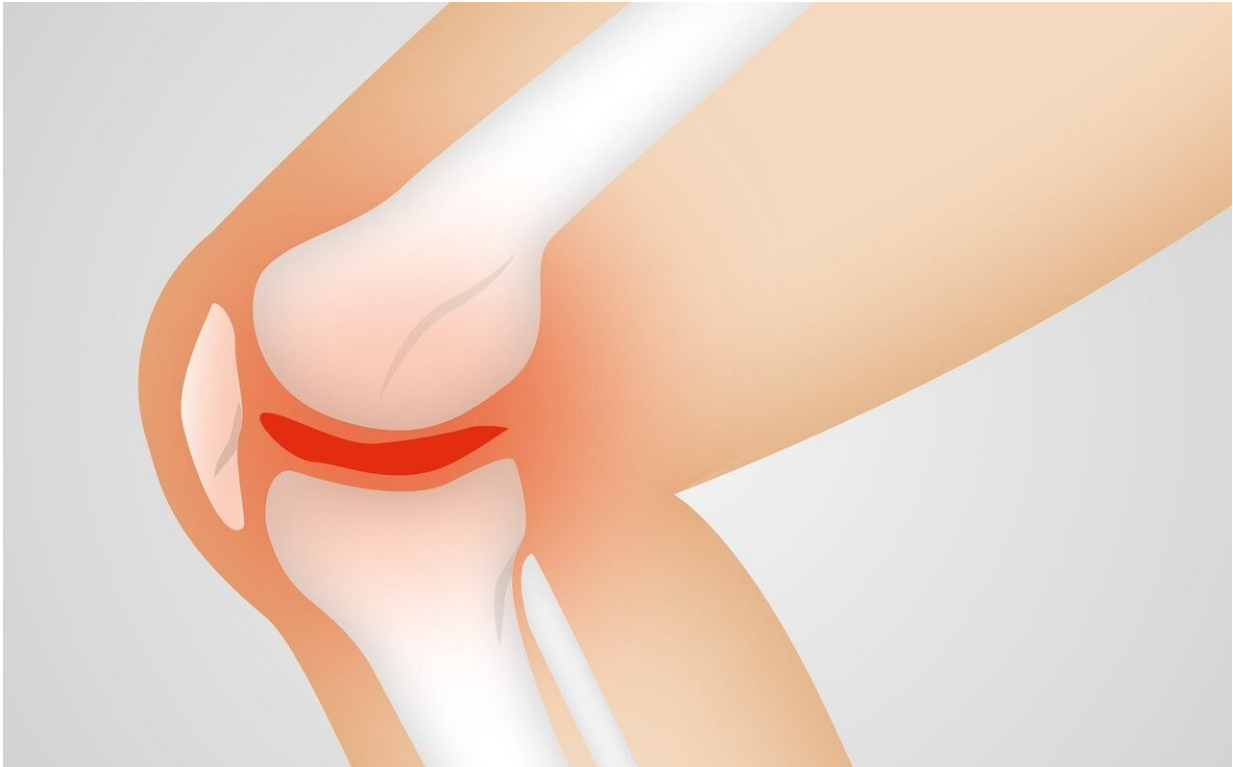


## App helps reduce osteoarthritis pain

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By performing a few simple physical exercises daily, and receiving information about their disease regularly, 500 osteoarthritis patients were able to on average halve their pain in 6 months—and improve their physical function. The participants in the study from Lund University in Sweden used a newly developed mobile app to help them keep track.

"We expected patients to see an improvement, but these results exceeded our expectations. This demonstrates that using [digital tools](#) when treating [chronic illnesses](#) such as osteoarthritis can work very well," says researcher and physiotherapist Håkan Nero at Lund University.

The study is published in the scientific journal *PLOS ONE*, and is somewhat unique in that the researchers followed the patients over a longer time period, in some cases for up to a year.

"As far as we are aware, no study has previously followed osteoarthritis patients who engaged consistently in self-treatment, and reported their results for up to a year. There are similar studies from the US, but they involved patients with type 2 diabetes," explains Håkan Nero.

The study included 500 patients from all over Sweden with osteoarthritis of the hip or the knee, with a majority of slightly overweight women around the age of 60 (an average BMI of 28 for those with knee osteoarthritis and 27 for those with hip osteoarthritis). At the beginning of the study, they filled out a health form, something they then had to repeat every three months. They received new exercises and lessons on osteoarthritis daily for the entire period.

"The exercises were designed to strengthen the muscles in the affected area. It was no more than two to three exercises daily, and took only five to ten minutes," says Håkan Nero.

Each week, the patients reported their pain levels in the app, and tested their [physical ability](#) every two weeks.

"After six months, the group averaged almost half the amount of pain, and their physical mobility had improved by an average of 43 percent. The results were equally good for those who continued the program for up to a year. Normally, [hip osteoarthritis](#) is more difficult to treat, but in

our study we saw no difference between knee and hip, and the same applied to gender and age," says Håkan Nero.

Osteoarthritis is a common disease that causes joint pain. It can affect anyone, but the prevalence increases with age. In Sweden, one in four people over 45 is estimated to have osteoarthritis. Physical therapy, information and daily physical activity is recommended to relieve the symptoms.

"Some patients with [osteoarthritis](#) may prefer conventional therapy at a clinic, but the results of the study show that it is possible to use digital technology as well. A [mobile app](#) is easily accessible regardless of where you are in the world," concludes Håkan Nero.

**More information:** Leif E. Dahlberg et al. Improving osteoarthritis care by digital means - Effects of a digital self-management program after 24- or 48-weeks of treatment, *PLOS ONE* (2020). [DOI: 10.1371/journal.pone.0229783](#)

Provided by Lund University

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