

Comparing Physical Therapy, Internet-Based Exercise Training, and No Therapy for Knee Osteoarthritis

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What was the research about?

Knee osteoarthritis is a chronic health problem that causes pain and stiffness in the knee joints. Appropriate exercise may help with these symptoms. One common treatment is physical therapy. But physical therapy services aren't available everywhere. These services may also be costly.

In this study, the research team wanted to help patients get support and instruction for appropriate exercise for knee osteoarthritis. The team assigned patients to one of three groups. Patients in the first group received physical therapy. Patients in the second group could access a website that guided them through knee exercises. It also helped patients track their exercise progress. In the third group, patients didn't receive either treatment.

What were the results?

After one year, patients in all three groups had better function and less pain and stiffness than they did at the start of the study. All three groups improved by a similar amount.

Compared with the group that didn't receive treatment, the physical therapy group

- Reported more physical activity and stretching
- Performed better on a physical ability test
- Had higher satisfaction with their physical function, fewer sleep problems, and less fatigue

- Had a higher overall rating of knee symptom improvement

Compared with the group that didn't receive treatment, the website group

- Reported more minutes of weekly stretching
- Had a higher overall rating of knee symptom improvement

Who was in the study?

The study included 350 patients in North Carolina who had knee osteoarthritis. Of these, 72 percent were white, and 20 percent were black. In addition, 3 percent were Asian, 3 percent were more than one race or didn't report a race, and 1 percent were American Indian or Alaska Native. The average age of patients was 65, and 71 percent were female. All patients had internet access. They weren't receiving physical therapy before the study.

What did the research team do?

Patients who received physical therapy had as many as eight sessions with trained therapists over four months. Therapists tailored the sessions to meet patients' specific needs. For patients who could access the website, the research team encouraged them to do the exercises on the website at least three times a week and to do aerobic exercise daily. Patients who didn't receive treatment during the study received two physical therapy sessions and access to the website after the study.

At the start of the study and again one year later, the research team gave a survey to patients. The survey asked patients about their knee pain, stiffness, and function. The survey also asked about physical activity, mental health, social support, and satisfaction with physical function. The team also tested patients' physical ability at one year.

A group of patients with knee osteoarthritis, doctors, physical therapists, an exercise scientist, and two members of arthritis advocacy organizations worked with the research team. The group helped recruit patients and decide what information to collect.

What were the limits of the study?

In this study, 20 percent of patients in the website group never logged on to the website. Results may

have been different if more patients had used the website.

Future research could look at how to increase patients' use of the website, such as by sending text message reminders.

How can people use the results?

Doctors, patients, and clinic managers can use these results when considering ways to improve function and lessen pain for patients with knee osteoarthritis.

To learn more about this project, visit www.pcori.org/Allen152.