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Web-Based Strengthening and Exercise for People with Knee Osteoarthritis

A self-directed intervention, supported by text messaging, led to reduced pain and improved function.

Although strengthening exercises for people with knee osteoarthritis (OA) reduce pain and improve function, this therapy is underutilized because of limited access to trainers and lack of specific digital programs. In this randomized trial, Australian researchers evaluated changes in knee pain among 180 OA patients (mean age, 60) who were given access to a custom-built website with information about OA and the importance of exercise and physical activity. Controls had access to the website, but access to the individualized strengthening regimen and physical activity guidance were removed. Intervention patients had access to the entire website plus a prescription for 24 weeks of the individualized self-directed strengthening and physical activity program, supported by automated text messages that encouraged adherence.

After 24 weeks, the intervention group experienced significantly less knee pain (mean difference, 1.6 points on a 0-to-10–point scale) and better function (mean difference, 5.2 points on a 0-to-68–point function scale) than did the control group. Also, significantly greater proportions of intervention participants than control patients experienced clinically important improvement in pain (72% vs. 42%) and function (68% vs. 41%). Similar results were obtained for many secondary outcomes (e.g., physical activity).

COMMENT

In this trial, access to a website about OA and the importance of exercise and physical activity, coupled with an exercise-and-activity prescription supported by automated text messages, improved pain and function in patients with knee OA. Given the increasing numbers of patients with knee OA in our aging society, these results are welcome. This intervention is free, scalable, and doesn't involve drug treatments. ***— Paul S. Mueller, MD, MPH, FACP***

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