

Video-assisted hand therapy is effective after thumb arthritis surgery

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For patients undergoing carpometacarpal (CMC) joint surgery for

treatment of thumb osteoarthritis, the use of online video instruction for postoperative hand therapy is associated with outcomes similar to in-person therapy visits—while substantially reducing travel time and distance, [reports a clinical trial](#) in in the *Journal of Bone & Joint Surgery*.

Video-administered hand therapy provides an "efficient and effective" alternative to in-person therapy after CMC arthroplasty, according to the new research by Peter J. Apel, MD, Ph.D., and colleagues of Virginia Tech Carilion School of Medicine and Carilion Clinic, Roanoke.

Potential benefits of 'video-only' hand therapy after CMC surgery

Thumb CMC arthroplasty is a common surgical procedure for [patients](#) with painful osteoarthritis of the thumb. Although the benefits of hand therapy remain open to debate, most hand surgeons prescribe in-person therapy visits for patients undergoing CMC arthroplasty.

"While supervised in-person therapy may help to enhance postoperative hand function for [daily activities](#), it can be burdensome to complete, especially for patients in rural or [remote areas](#)," the researchers write. Asynchronous or "video-only" [physical therapy](#) is being explored as an alternative to in-person visits in a wide range of medical settings, including other orthopaedic surgery procedures.

Dr. Apel and colleagues designed a randomized trial evaluating hand therapy visits in 58 patients undergoing CMC arthroplasty. One group was assigned to video-only therapy, consisting of online videos demonstrating hand therapy exercises to be performed at home. Patients in the comparison group received an average of five in-person visits with

a hand therapist.

The two approaches yielded similar significant improvement, as measured with use of patient-reported ratings of hand function after 12 weeks. Objective measures of pinch strength and grip strength were also comparable between groups. All outcomes remained similar at one-year postoperatively.

Video-only may offer a 'more patient-driven approach' to hand rehabilitation

A geospatial analysis suggested that video-only therapy reduced travel distance by an average of 278 miles and [travel time](#) by five hours—even more for patients living in sparsely populated areas. On a nationwide basis, switching from in-person visits to video-only hand therapy could save over 7 million miles of patient travel per year, the researchers estimated.

Patients were enthusiastic about video-only hand therapy, with six potential participants dropping out of the study on learning that they had been assigned to the in-person control group. Two patients initially assigned to the video intervention were switched to in-person visits.

The authors acknowledge some study limitations, including a lack of data on whether or how patients used the videos. The researchers also note the potential for selection bias, as the study excluded patients who lacked home internet access or were not comfortable using the video technology.

"This trial yields evidence that a more patient-driven approach with provision of videos is an acceptable alternative to traditional in-person therapy after thumb CMC arthroplasty and has the added benefit of

reducing the potential travel burden for patients," Dr. Apel and co-authors conclude. They add that video-only therapy may offer "an efficient and effective method of delivering education and care with flexible scheduling and self-pacing."

More information: Provision of a home-based video-assisted therapy program is non-inferior to in-person hand therapy after thumb CMC arthroplasty, *Journal of Bone and Joint Surgery* (2024).

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