

High-volume shoulder strengthening does not improve subacromial impingement outcomes

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Video Abstract

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Abstract

A new study published in *The American Journal of Sports Medicine* suggests that adding more shoulder-strengthening exercise to current nonoperative care protocols for subacromial impingement does *not* improve outcomes. Nonoperative care including physical therapy is the first-line treatment for subacromial impingement, also known as shoulder impingement. Although shoulder strengthening is important for recovery, the current exercise protocols don't always provide sufficient relief. In addition, decompression surgery is no longer recommended for refractory cases, leaving patients with fewer options and increasing the need for better nonoperative care. To determine whether more shoulder-strengthening exercise might help patients achieve relief, the study's authors randomly divided 200 patients with chronic shoulder pain due to impingement into a control group and an intervention group. The patients in the control group received normal nonoperative care. The patients in the intervention group received the same nonoperative care but were *also* prescribed an additional shoulder-strengthening regimen. This regimen was intended to at least double the "dose" of shoulder strengthening compared to that in the control patients. Outcomes were assessed after 4 months. The primary outcome, the patient-reported Shoulder Pain and Disability Index, improved in both groups. However, the *degree* of improvement didn't differ between groups. Secondary outcomes related to shoulder pain and function didn't markedly improve in either group or differ between the groups. Only about half of the patients in each group achieved a Patient Acceptable Symptom State, meaning that half still considered their symptoms unacceptable. Notably, outcome data were missing for over one-fifth of patients because of missed follow-up appointments or censorship due to a revised diagnosis or surgery. In addition, despite completing their add-on exercises, the patients in the intervention group tended to spend less time on their usual-care exercises than the patients in the control group. However, statistical analysis indicated that this likely did not affect the study outcome. Overall, the study suggests that adding a large amount of shoulder strengthening to current nonoperative care over four months does not improve chronic shoulder pain caused by subacromial impingement. Moreover, increasing the exercise burden can reduce patient adherence, confirming that it isn't a viable strategy. Nevertheless, the low rate of symptom acceptability achieved by the patients in both groups emphasizes the need for continued research to help bring relief to patients with chronic shoulder pain related to subacromial impingement.