

FROM THE FAMILY PRACTICE INQUIRIES NETWORK

# Does physical therapy improve symptoms of fibromyalgia?

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## ■ EVIDENCE-BASED ANSWER

Physical therapy is minimally effective in the treatment of fibromyalgia, with immediate post-treatment improvement in pain and tender points, and both short- and longer-term improved self-efficacy (confidence in performing tasks) (strength of recommendation [SOR]: **B**, 1 small, high-quality randomized controlled trial, 4 additional small randomized controlled trials).

Multidisciplinary rehabilitation is probably not effective for this disorder but warrants future research, as trial quality is poor (SOR: **B**, systematic review of 4 small or low-quality and 3 additional randomized controlled trials on widespread pain conditions).

## ■ EVIDENCE SUMMARY

The goal of physical therapy is to maximize function and reduce impairment to limit disability in patients with musculoskeletal conditions.<sup>1</sup> Based on a British study, physical therapists most commonly use exercise, education about correct posture and functional activity, relaxation, and energy conservation and fatigue management.<sup>2</sup> For this review, physical therapy is defined as a treatment program that includes patient education and supervised exercise.

In the highest-quality trial, Buckelew and colleagues<sup>3</sup> randomized 119 subjects to 1 of 4 groups: biofeedback and relaxation training, exercise training, combination treatment, and an education and attention control program. Individuals were evaluated on measures of pain, function, disease impact, and self-efficacy. Evaluators were blinded to treatment group. Patients were followed for 2 years, and follow-up information was available on 85% of patients.

At immediate postintervention follow-up, all treatment groups were significantly improved on tender-point index score compared with the control group, but this was due to a modest deterioration for the control group rather than improvements in the treatment groups. In addition, all groups showed improvements in self-efficacy for function compared with the control group but not for other self-efficacy measures. While within-group improvements in the treatment groups were seen, no significant differences were seen from the control group.

Another trial randomized 99 patients to 3 groups: education and cognitive behavioral therapy; education, cognitive behavioral therapy and exercise; or a wait-list control group.<sup>4</sup> At the 6-month follow-up, the education group scored significantly higher than the others—but only on self-reported measures of daily functioning and self-efficacy.

In another study, 45 patients with fibromyalgia were randomly assigned to a 6-week program combining exercise and multidisciplinary education or to a control group.<sup>5</sup> The treatment group had significant improvements in walking distance and for 2 measures on the Fibromyalgia Impact Questionnaire (feeling bad and morning fatigue). Keel and colleagues<sup>6</sup> found no immediate treatment benefit following 15 weeks of education, cognitive behavioral therapy, and exercise vs relaxation training in their small randomized controlled trial.<sup>6</sup>

In contrast, another study reported significant and immediate improvements in 2 groups— exercise and education; exercise, education, and cognitive behavioral therapy—when compared with control patients on self-reported symptoms and knowledge.<sup>#</sup> The exercise and education group was also better than the control patients in self-reported daily functioning.

We identified 2 additional trials examining different types of physical therapy for fibromyalgia that did not include control groups. In a trial of muscle strengthening vs flexibility training, investigators found no difference between groups on measures including tender points and disease and symptom severity.<sup>8</sup> They did find benefits in symptoms and self-efficacy over baseline, but it is not known whether these were sustained.

In a trial comparing 2 physical therapies— body awareness therapy and the Mensendieck system—Kendall and colleagues<sup>9</sup> found greater improvements at 18-month follow-up in the Mensendieck group.<sup>9</sup> Benefits were seen on the Fibromyalgia Impact Questionnaire, self-efficacy measures, and pain at worst site. The Mensendieck system uses individual interview, analysis of movement patterns, a discussion of possible corrections followed by practice, and relaxation exercises.

Multidisciplinary rehabilitation, often including physical therapy, has also been studied in a limited way. In a systematic review of 7 studies fulfilling inclusion criteria (a total of 1050 patients), Karjalainen and colleagues<sup>10</sup> concluded that although education combined with physical training seemed to have some positive results at long-term follow-up, the level of scientific evidence required for recommending these programs for fibromyalgia was lacking.<sup>10</sup>

Because exercise is believed to be an essential component of physical therapy, we examined the results of a systematic review of exercise for treating fibromyalgia. The authors found 7 high-quality studies, 4 of aerobic training, and concluded that supervised aerobic exercise training had beneficial effects on physical capacity, tender-point threshold, and pain.<sup>11</sup> Other investigators have questioned the usefulness of aerobic exercise

because long-term benefit remains unclear and compliance is poor.

## ■ RECOMMENDATIONS FROM OTHERS

We were unable to find any guidelines for the treatment of fibromyalgia. Patient information sheets from both the American College of Rheumatology ([www.rheumatology.org](http://www.rheumatology.org)) and American Academy of Orthopaedic Surgeons ([orthoinfo.aaos.org](http://orthoinfo.aaos.org)) recommend physical modalities such as heat application, massage, and exercise, including fitness training.

Authors of chapters on fibromyalgia in both *Kelly's Textbook of Rheumatology* and *Harrison's Principles of Internal Medicine* suggest that patients may benefit from regular low-impact aerobic exercise.<sup>12,13</sup>

### CLINICAL COMMENTARY

## Exercise, physical therapy ease pain, “helplessness”

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Fibromyalgia is a disease of chronic pain. It engenders feelings of helplessness, depression, and loss of control in many patients. In my experience, both physical therapy and exercise can help alleviate these feelings. Physical therapy helps motivated patients perform body movements that they believe may be painful. In this sense, it demonstrates to them the possibility of exercising without excruciating pain. As the evidence suggests, patients who exercise have less pain and feel better in general. Thus, physical therapy can teach patients to actively participate in the management of their disease.

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