



## How effective are exercise and physical therapy for chronic low back pain?

### EVIDENCE-BASED ANSWER

Exercise is more effective for chronic low back pain than treatment with medication plus return to usual activity and as effective as conventional physiotherapy. The evidence is less consistent in showing that any particular exercise format provides greater benefit or that exercise provides a long-term increase in function or a decrease in pain or disability. (Grade of recommendation: A, based on systematic reviews of randomized controlled trials [RCTs].)

### EVIDENCE SUMMARY

The first meta-analysis of 16 chronic low back pain RCTs in 1991 had inconsistent results on the efficacy of exercise and showed little evidence in favor of any specific exercise format.<sup>1</sup> The authors conducted another meta-analysis in 2000, since the quality of original studies had improved a great deal during the intervening decade.<sup>2</sup> This analysis showed strong evidence favoring exercise over “usual care” by primary care physicians (medications and resumption of usual activities). Exercise was found equally efficacious as conventional physiotherapy. Evidence was conflicting in a comparison of exercise with inactive treatment (ice or heat packs, rest). None of the studies showed a particular exercise format as superior. The included studies included a wide variety of structured exercise programs. Exercise demonstrated no benefit in situations of acute back pain.

Several other systematic reviews have supported the role of exercise in patients with chronic low back pain.<sup>3,5</sup> A 1996 review of 13 RCTs examining specific types of exercises found that both intensive dynamic extension exercises and mild isometric flexion and extension exercises were more effective than placebo.<sup>3</sup> Although the intensive exercises were more efficacious than normal exercises at the 3-month follow-up, they were equally efficacious at 12 months. Evidence was conflicting in a comparison of flexion and extension exercises. Another review reported that exercise, back manipulation, and intense back schools were equally efficacious.<sup>4</sup>

Two recent studies were not included in the above reviews. One was an RCT that showed that a progressive intervention program that included cognitive behavioral management was more effective than exercise alone to decrease pain and self-reported disability.<sup>6</sup> The other study was a retrospective chart review that reported improved pain and decreased disability in patients with chronic low back pain after 6 weeks of exercise.<sup>7</sup>

### RECOMMENDATIONS FROM OTHERS

The clinical practice guideline for low back pain from the Agency for Health Care Policy and Research deals mainly with acute pain and does not recommend exercise in acute conditions.<sup>8</sup>

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### CLINICAL COMMENTARY

In my experience, most patients with low back pain share one characteristic: a sedentary lifestyle. My patients who exercise regularly seem to have fewer problems with back pain or to recover faster from acute episodes of back pain. I generally recommend a combination of aerobic exercise, stretching, and strengthening. Patients who subscribe to any of these activities generally get better over time, but those who adhere to the full prescription get better sooner. “Motion is lotion” is my message to patients.

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