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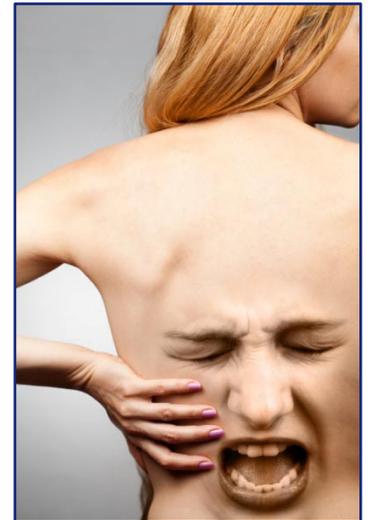
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Back Pain Patients Managed Passively Experience 280% Higher Recurrence

- The Role of the Multifidus in Chronicity -

It is commonly held that low back pain (LBP) resolves spontaneously in the majority of cases,¹⁻³ but the passive treatment this statement would suggest results in 280% higher recurrence or greater.⁴ In a randomized, controlled trial published in *Spine*, Julie Hides, PhD, and colleagues demonstrated with unusual specificity that LBP cases that would commonly be labeled as "resolved" have in fact not resolved.^{4,5}

Hides, Richardson, and Gwendolen made specific measurements of the multifidus muscle a measured outcome. The multifidus muscle alone provides 2/3 of spinal stability in the L4-L5 proximity,⁶ and multifidus atrophy had been associated with poor functional outcomes of back surgery.^{7,8} They recruited patients from a hospital emergency department who presented with their first episode of low back pain, and who experienced unilateral, mechanical LBP for less than three weeks. Pain was between T12 and the gluteal fold. Using ultrasound, researchers measured the multifidus muscle on both sides of the spine. **In every case, they found that the multifidus muscle was atrophied in the proximity of and ipsilateral to the pain complaint.**



Researchers randomized 20 patients into a passive, medical management group and 21 patients into an exercise therapy group.

The passive management group received analgesics and medical advice. The exercise therapy group received medical management plus a very specific exercise intervention. For the exercise intervention, patients were trained to activate their multifidus in a stabilizing manner while in a standing position. At four week follow-up, 100% of the exercise therapy group and 80% of the passive group reported no pain and return to normal activities. Because this study was designed to measure so-called "spontaneous resolvers," the non-resolvers in the passive group were omitted from the data and given physical therapy. **At both 4 and 10 week follow-up, the multifidus symmetry had returned in the exercise therapy group, but the multifidus atrophy remained in the passively managed group.** In the passively managed group, the atrophied multifidus remained roughly 15% smaller than their contralateral comparisons. This was true despite the fact that the passive group (minus the 20% non-resolvers) had returned to full activity for six weeks. **At one year follow-up, the exercise therapy group had a recurrence rate of 30% while the passively managed group experienced a recurrence rate of 84%.**

The exercise intervention used for this study was very specific. It is possible that a full physical therapy program focused not just on neurologic activation of the multifidus but also on improving the condition and training of the entire system related to spinal stability would have created even lower recurrence rates. The study authors speculate that *reflex inhibition* contributes to the multifidus atrophy and the persistence of the atrophy. Reflex inhibition can occur in the absence of pain, and its persistence after injury has been demonstrated using electromyography.⁹⁻¹¹ This randomized controlled trial demonstrates that even patients who quickly resolve their pain complaints likely have persistent muscle deficits that predispose patients for high rates of recurrence if they do not receive active treatment.

Please refer your physical therapy to Enfield Health & Wellness Center
Doctor Recommended, Patient Preferred

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