

# Can Spinal Adjustments Relieve Lower Back Pain?

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## STORY AT-A-GLANCE

- › Back pain may affect up to 103 million people in the U.S., two-thirds of whom may decide not to get help or treatment
- › Research demonstrates spinal manipulation, commonly performed by physical therapists, chiropractors and osteopaths, may reduce lower back pain and improve function
- › Strategies to help you improve your posture during walking, standing and sitting, as well as simple bodyweight exercises to integrate muscle movement and coordination may also help prevent or reduce back pain

***Editor's Note: This article is a reprint. It was originally published April 26, 2017.***

The American Chiropractic Association states at any one time, nearly 31 million Americans suffer from lower back pain.<sup>1</sup> In 2012, the American Physical Therapy Association surveyed and found more than one-third of adults were affected, but two-thirds of them chose not to seek treatment.<sup>2</sup>

As the population of the U.S. was nearly 313 million at the time of the survey,<sup>3</sup> it is estimated that 103 million had lower back pain, and both national and state level estimates of the prevalence of lower back pain showed it's rising. On any given day, 2% of the U.S. population is disabled by back pain.<sup>4</sup>

Chronic back pain may occur consistently, or you may experience times of remission when the pain dissipates and you move about freely without discomfort. Chronic back

pain, defined as being present for 12 weeks or more,<sup>5</sup> occurs in approximately 20% of people.<sup>6</sup>

Most cases of lower back pain are related to a mechanical issue. In other words, the pain is related to a musculoskeletal condition, and not the result of an underlying medical condition such as kidney stones, **cancer**, arthritis or fracture.<sup>7</sup>

Fortunately, many musculoskeletal issues may be successfully addressed without the use of surgery or dangerous drugs. A 2017 study has demonstrated the average person experienced a one-point reduction in lower back pain following spinal manipulation.<sup>8</sup>

## **Spinal Manipulation May Reduce Lower Back Pain and Improve Function**

The study, published in the Journal of the American Medical Association (JAMA), was a meta-analysis of 26 medical studies involving 1,700 patients with **lower back pain** between 2011 and 2017.<sup>9</sup> The spinal manipulation was performed by a variety of professionals, including chiropractors, physical therapists, osteopaths and massage therapists.<sup>10</sup>

The results from this study demonstrate a modest improvement in pain following a spinal manipulation, which is approximately the same amount of pain relief as over-the-counter pain relievers or nonsteroidal anti-inflammatory drugs (NSAID).

The researchers also found spinal manipulation had an effect on overall function. The average person reported greater ease and comfort in their day-to-day activities, such as walking, sleeping or turning in bed.

These results are not considered "clinically meaningful improvement," according to Dr. Wolf Mehling, from Osher Center for Integrative Medicine.<sup>11</sup> However, while these results appear to be modest in nature, it is important to recognize the results are an average, and that the participants only underwent manipulation.

In other words, they were not given any additional rehabilitative exercises designed to maintain functional movement of the spine gained after manipulation, or to reduce inflammation in the area of pain.

None of the studies found serious side effects from the treatment. Some patients did experience slight muscle stiffness or headache following the adjustment.<sup>12</sup> Dr. Richard Deyo, an internist and professor of evidence-based medicine at the Oregon Health and Science University, wrote an accompanying editorial, saying:<sup>13</sup>

*"Spinal manipulative therapy (SMT) is a controversial treatment option for lower back pain, perhaps in part because it is most frequently administered by chiropractors.*

*Chiropractic therapy is not widely accepted by some traditional health care practitioners. This may be, at least in part, because some early practitioners of chiropractic care rejected the germ theory, immunizations and other scientific advances."*

Early traditional medical practitioners also rejected germ theory, immunizations and other scientific advances.

The controversy may also be, in part, due to the fact that chiropractors often rely on nutrition and exercise to alleviate musculoskeletal issues, rather than prescribing dangerous drugs or surgery that may do more harm than good.

## **What Causes Back Pain?**

Determining the cause of your back pain is as important as the treatment you choose. If you don't treat the underlying cause of the pain, it may simply return. One common cause is an imbalance of muscle contraction and **stretching** that results from long hours of sitting at your job, commuting and relaxing at home in the evening hours.

Sitting shortens the iliopsoas muscles that connect your bones in the lumbar region of the spine to the top of your femur. This may cause severe pain when standing, as the

change in position pulls your lower back forward. Many end up going through medical procedures to "fix" this problem, or taking drugs for long periods of time.

Pain can also be triggered by a simple activity or movement, such as bending over to pick up an object from the floor. However, this type of pain often originates in the prior months from poor posture, obesity or poor physical condition facilitated by inactivity.

Each of these factors places stress on the lower back that it was not designed to withstand. Over time, like any other overuse injury, the area becomes weakened and the muscles inflamed, triggering pain and discomfort.

One way to help prevent lower back pain triggered by weak muscles or poor posture is to develop firm abdominal muscles that act like a built-in corset, holding your gut and stabilizing your spine and discs.

This is an effective method of treating the cause of lower back pain, instead of just the symptom of pain. Using drugs to mask pain, or muscle relaxers to mask an inflammatory response, will not change the cause and it's likely you'll experience recurring pain.

## **Spinal Fusion Is Not the Answer**

Spinal fusion surgery rarely cures chronic back pain. In the past 15 years, the number of spinal fusions performed has exploded by nearly 600%, while the rate of success has actually plummeted.<sup>14</sup> Insurance reimbursement for procedures and the rising cost of surgical hardware have contributed to the financial growth.

A case study in Florida demonstrated how fees for this procedure grew from \$47 million a year to \$2 billion, adjusted for inflation.<sup>15</sup> Originally, fusions were used to treat an unstable spine after a catastrophic accident that left the spine fractured, so patients were not bedridden for two months while the vertebrae healed.

At some point in the 1980s, the surgery was also used for degenerative disc disease, to stabilize the area through a period of instability. Lower back pain associated with

degenerative disc disease is often linked to excessive stress on the spinal discs, resulting in tearing or bulging and pain.

Triggers include excess weight, poor posture and cigarette smoking.<sup>16</sup> However, eliminating motion in the area of disc degeneration does not affect the original cause and therefore you remain at risk for continued damage to your spine.

## **Dangers of Using Drugs to Mask Back Trouble**

Traditional health practitioners are often quick to prescribe pain medications, including NSAIDs and even opioids, for chronic back pain. While the drugs may provide immediate pain relief, the effect is temporary.

Unfortunately, the pain relief may tempt you to overexert inflamed muscles and, in some cases, you may suffer hyperalgesia, or an increased sensitivity to the pain. Drugs and **opioids** mask the pain, but do not address the cause of the problem, leaving you in worse shape than before you took the medication.

While there is reason to use a short-term course of medication in severe cases, the best form of treatment is to address the cause and change the way you use your body to affect long-term improvement.

Moreover, drugs come with severe side effects, even those dispensed over-the-counter. NSAIDs may increase your risk of heart attack, stroke and other cardiovascular problems, as well as severe gastrointestinal bleeding, increased blood pressure and kidney damage.<sup>17</sup>

As significant as those side effects are, opioid prescriptions come at an even higher cost. Opioid painkillers, like OxyContin, commonly prescribed for back pain, are highly addictive and one of the most commonly abused prescription drugs today. Back pain has actually become one of the primary triggers for the growing **opioid addiction epidemic**.

The bottom line is that painkillers come with severe health risks, especially when combined with other medications, such as muscle relaxers and antiseizure medication. Using pain medications also potentially sets up a vicious cycle, during which you may overexert yourself while the pain is masked, causing more injury to inflamed muscles.

## **Effective Strategies to Help Reduce Back Pain Without Drugs**

There are effective strategies to help reduce your risk of developing lower back pain, or preventing further damage, all without using drugs. Your physician may recommend painkillers to dull the ache in your lower back, but without making permanent changes to the way you use your back, you'll likely not get rid of the underlying problem.

Spinal manipulation has been a safe and effective practice used for the last century.<sup>18</sup> While it is an effective means of reducing pain in your lower back, a full evaluation and follow-up exercises may also help lower the risk for lower back pain as you learn how to use your back and lower extremities properly, including lifting, walking, sitting and standing.

Even if you aren't currently experiencing back pain, I would advise you to consider the following treatment strategies to prevent an occurrence or recurrence of lower back pain:

**Regular stretching** — I strongly advise you to engage in a regular stretching program. My favorite is **active isolated stretching (AIS)**, developed by Aaron Mattes. It's completely different from the traditional type of stretching, and is a great way to get flexibility back into your system.

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**Stop smoking** — Smoking reduces blood flow to your lower spine, increasing the risk of disc degeneration.

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**Optimize your vitamin D level** — Get enough vitamin D from sun exposure daily, as **vitamin D** helps keep your bones, including your spine, strong.

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**Maintain optimal weight** – Carrying extra weight, especially around your middle, increases stress on the lower back and changes your center of gravity, also changing your posture.

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**Protect your back** – You use your back muscles with most body movements, so it is important to protect your spine, especially while lifting. Do not bend forward to lift, but rather lower your body to the ground by bending your hips and knees while keeping your back straight. Use the muscles in your thighs and hips to rise again, holding the object close to your body to distribute the weight more evenly.

Don't lift a heavy object above your shoulder level and avoid twisting your body while carrying a heavy object.

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**Mind your posture** – You also protect your back by using good body mechanics to sit, stand, walk and sleep. It may feel like it is second nature to perform these daily activities, but when done incorrectly, you may be increasing chronic stress to your lower back.

Practice proper posture while sitting and standing every hour. Pay careful attention to consciously suck in your belly and rotate your pelvis slightly up.

At the same time, keep your head back, with your ears over your shoulders and your shoulder blades pinched. This posture will keep your spine in proper alignment. Do this every hour while sitting and standing, holding muscles tight, for several minutes.

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**Stay hydrated** – Your muscles and spinal discs depend on water to maintain good health and reduce inflammation.

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**Wear low-heeled shoes** – High heels may make a fashion statement, but you'll likely pay the price after just a short time as high heels put your hips and lower back into poor alignment, placing stress on your lower back.

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**Switch positions** – Remaining in place for long periods of time can increase the experience of stiffness in your muscles and reduce flexibility in your joints. Switch

positions in your chair frequently; check your posture and don't stay standing in one position for very long.

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## **Two Highly Effective Treatment and Preventive Strategies**

Two highly effective means of preventing lower back pain are closely related – staying active and practicing interrupted sitting may help to improve muscle strength and coordination, reduce stiffness and improve blood flow. Exercise and movement are two ends of the same spectrum. Exercise is important to raise your heart rate and improve muscle strength, while non-exercise movement is important for overall health.

Both are also important to your back health. The benefits of exercising for 30 minutes or more each day may actually be counteracted by sitting for long periods of time. While you may not be able to avoid sitting at your desk at work, it is important to make accommodations to improve your cardiovascular and musculoskeletal health. At this time I believe it is important to be standing as much as possible during the day.

Consider a modified desk at work where you can stand to work 50 minutes and sit for 10 minutes an hour, instead of standing 10 minutes and sitting 50. Balance boards can increase the amount of work your muscles do and increase circulation while standing. The benefits of standing and walking as much as possible during the day, using good posture, cannot be overstated. In fact, using these strategies was exactly how I eliminated my own back pain.

## **Foundation Training Hits Back Pain Where It Starts**

I am convinced that non-exercise movement, or the way you move your body when doing everyday activities, may be the most important component of exercise. Dr. Eric Goodman is an expert in structural biomechanics. He developed Foundation Training, based on exercises that teach you how to optimize posture and reduce body pain. In this interview, he discusses the importance of body position to your overall health.



The secret to the program is simplicity – you don't need a gym or specialized equipment. By incorporating this series of powerful movements into your daily routine, you learn how to move better and use your body the way it was designed to be used. This reduces pain and discomfort, and significantly reduces your risk of overuse injuries.

A major contributor to back pain is sitting for eight to 10 hours each day. Walking with good posture can maximize the benefits of movement and is foundational for optimal health. Using simple bodyweight exercises, you integrate muscle movement and elongate your core and posterior chain. These are the muscles that connect your pelvis through your lower back and up to the trapezius muscles in your upper back.

By improving the power, coordination and integration of these muscles, you may alleviate many chronic musculoskeletal pain issues, including your lower back. This means **Foundation Training** will not only help lower back pain, but also train your muscles to work functionally and may help reduce other pain that results from poor posture or improper use. In the video below, Goodman walks you through three simple Foundation exercises to improve your posture.

## Sources and References

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- <sup>1, 7, 18</sup> [ACA Hands Down Better, Back Pain Facts and Statistics](#)
- <sup>2</sup> [American Physical Therapy Association, April 4, 2012 \(Archived\)](#)
- <sup>3</sup> [United States Census Bureau, Population Clock](#)
- <sup>4</sup> [Cleveland Clinic, Back Pain](#)
- <sup>5, 6</sup> [National Institute of Neurological Disorders and Stroke, Low Back Pain Fact Sheet](#)
- <sup>8, 9</sup> [Journal of the American Medical Association 2017;317\(14\):1451-1460](#)
- <sup>10</sup> [NPR, April 11, 2017](#)
- <sup>11</sup> [CNN, April 11, 2017](#)
- <sup>12</sup> [Reuters April 11, 2017](#)
- <sup>13</sup> [Journal of the American Medical Association 2017;317\(14\):1418-1419](#)
- <sup>14</sup> [Regenex October 29, 2013](#)
- <sup>15</sup> [Washington Post, October 27, 2013](#)
- <sup>16</sup> [WebMD Degenerative Disc Disease – Topic Overview](#)
- <sup>17</sup> [Drugs.com, Aleve Side Effects](#)