

DISCOVER  STRENGTH

Three Exercises to Reduce Low Back Pain

3 EXERCISES TO REDUCE BACK PAIN

Chronic low back pain is one of the most prevalent afflictions in the general population and is one of the leading causes of workplace absenteeism around the globe. In addition to the economic loss that workplace absenteeism due to back pain is responsible for, low back pain treatment in North America is even more costly with an estimated cost of \$100 to \$200 billion per year in personal medical expenses. This economic burden, on both the individual and society as a whole, highlights the importance of preventing and treating low back pain in a cost-effective manner.

Before we delve into preventative measures, we must first gain an understanding of what mainly causes low back pain from both a chronic and an acute sense.

Why Does Back Pain Happen?

While there are genetic factors that can contribute to low back pain, the main cause (based on the scientific literature) is a lack of muscle support for the lumbar spine. With this lack of support, we are more prone to the development of chronic back pain as well as acute conditions due to injury. Acute conditions like herniated discs can often be pinpointed to specific incidents like a car accident, poor form when exercising, or even bending down to pick up your kids. However, if we do have the strength to support our spine during these incidents, the likelihood of an acute injury is far less.

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The same is true for people experiencing back pain in a chronic sense. When our muscles surrounding the vertebrae are stronger, our connective tissues and intervertebral discs are taking on less work on a day-to-day basis. Pain in the lower back will then dissipate as those muscles handle the rigors of the day with ease and the connective tissues remain safe and without pain.

With all of that being said, the best way to mitigate low back pain is to strengthen the muscles in the lower back. At Discover Strength, we prescribe three exercises that utilize safe programming for clients. Here are the pros and cons of each.

Exercise #1- Superman:

A superman is a simple exercise that you can do at home or in the gym. The muscles that are involved in this exercise are the glutes, hamstrings, some shoulder involvement, the postural muscles of the torso, and most importantly, the muscles surrounding the lumbar spine.



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To perform this exercise, you will lie on your stomach with your hand and arms outstretched in front of you. You will then use your posterior muscles to pull your chest and legs off the floor and into the air. Keep your elbows and knees as straight as possible while arching your back to its fullest extent. You can hold this position for as long as possible or you can hold in 20-30 second increments and rest for 5 seconds in between each hold.

Pros:

- Accessible
- You can perform this exercise anywhere

Cons:

- Does not isolate the muscles of the low back - ie, since the hamstrings and glutes are involved they tend to carry the team.
- Does not work through a full range of motion
- Hard to understand your progress other than time

Exercise #2- Bodyweight Back Extension on the Roman Chair

If you have access to a Roman Chair, this exercise can offer another easy way to involve the low back muscles in your workouts using your body weight. It will narrow down the main muscles involved to three main muscle groups.

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The muscles involved are the hamstrings, glutes, and the low back extensor muscles. When this exercise is done properly, we can lighten the amount of involvement of the glutes and hamstrings, which in turn helps us isolate the low back even more.

When setting this exercise up, you will want to make sure that the seat height is optimal. You want the iliac crest of the pelvis to land just slightly above the top of the chair when you are standing on the platform. This will be your pivot point allowing extension of your torso about the axis of the hip. Additionally, you will want the feet slid back on the platform so that the calves are placed against the rear pads. You will need to point your toes inward so both of your feet make a “V” shape. This positioning helps lessen the involvement of the glutes and hamstrings.

Once the legs are positioned correctly, you will then cross your arms across your chest and, while keeping your back straight, you will flex and extend at the hip. You can perform this exercise in a single set by either stopping at a certain rep number or pushing your low back muscles to where you cannot do another rep in good form.

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Pros:

- Accessible at most gyms
- Works through a full range of motion

Cons:

- Involves glutes and hamstrings which does not isolate the low back muscles
- Does not measure your strength at different ranges of motion

Exercise #3- MedX Medical Lumbar Extension Machine

The MedX Medical Lumbar Extension Machine was designed with the low back musculature in mind. There are several features to this machine that makes it the most effective methodology for alleviating low back pain. Over 75 peer-reviewed articles have been published on the MedX Medical Lumbar Extension Machine demonstrating its effectiveness in increasing strength, decreasing pain, restoring spinal function and range of motion, as well as reducing the need for ongoing care. Additionally, this machine has been used around the globe for decades in a clinical setting and has been very successful in producing great results for patients.

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Pros:

- The hip and thigh restraint in this machine ensures that the glute and hamstring muscles are not able to help with the extension of the torso allowing the focus to be directly on the lower back muscles.
- There is counterweight to counterbalance the weight of the exerciser's torso. Without this counterweight, the last half of the range of motion would mainly be lifted by the weight of the exerciser's torso and would not allow for true isolation of the low back musculature.
- The ability to select weights or range of motion at small increments.
- Isometric testing tracks an individual's strength over time through different parts of the range of motion. This data will be compared to statistical norms but also to your future tests.

Cons:

- It is not very accessible to everyone.

The MedX Medical Lumbar Extension Machine provides a unique opportunity for those who are looking to eliminate their low back pain by not only providing the safest and most effective way to exercise the low back, but also by utilizing advanced technology to track the progression in the strength of the exerciser is exhibiting over time in an accurate manner. No other exercise can give true objective results on one's strength increases in their low back musculature.

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