

# Physical Therapy Exercises & Stretches for Chronic Lower Back Pain

Chronic lower back pain (LBP) is the leading cause of chronic pain and disability not only in America, but across nearly every developed nation. Because of this, lots of research is focused on trying to identify the causes of chronic LBP and the best treatments for it.

## Wait, what about my MRI findings?

Patients with chronic back pain have nearly the same findings on MRI as patients who are pain-free. Degenerative findings on MRI are extremely common, found in ~60-80% of adults and they begin appearing on imaging in your 20s. There is no consistent, established MRI finding that is currently known to cause chronic back pain. Most imaging findings are “age-related degenerative changes” that are also in people without pain. Pain goes up & down but MRI findings remain stable.

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## What can I do to get some relief?

Because chronic back pain is so common and debilitating there is a ton of research. These are the established treatments that have been found to be the most helpful:

1. **Movement is critical!** Simply increasing your activity level and avoiding sitting is good. This also decreases the stresses that sitting puts on the joints and discs in your low back and SI joint.
2. **Core and back strengthening** has been found to be effective at improving pain & function and has been found to decrease the risk of future episodes of back pain. There is no compensation for weak muscles. Weak muscles are known to ache and hurt more at rest than strong muscles and they fatigue easily during activity.
3. **Yoga & Pilates** have been found to be about equal to core & back strengthening in benefiting patients with chronic back pain after about 3-6 months. Everyone needs a basic level of flexibility and improving your hip and spinal mobility may help reduce back pain.

**Having a positive outlook** is actually the most important indicator of whether you will improve or not. You must be optimistic! Living with chronic pain is depressing and wears you down. But there is hope if you consistently do the right things over a long-enough period of time. If you feel that you lack optimism, speak to your provider about seeing a Behavioral Health provider that specializes in chronic pain management.



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Unfortunately, these common treatments lack evidence, and are not reliable treatments for patients with chronic back pain:

1. **Massage** provides very short-term relief and no overall improvement in patients with chronic pain.
2. **Spinal manipulation therapy** (chiropractic adjustment, OMT) provides short-term relief and no overall improvement in patients with chronic pain.
3. **Treatments such as TENS, electrical stimulation, ultrasound** and other modalities have not been found to be helpful.
4. **Traction** for back pain has not been found to reduce pain, increase function or expedite a return to work.

**The 1<sup>st</sup> goal of treating chronic back pain is to ensure you have adequate spinal and hip mobility and flexibility.**

**The 2<sup>nd</sup> goal is to regularly do some type of core and back strengthening exercises, whether yoga or a strength circuit like the ones on the next page.**

What about exercising with back pain? People with chronic back pain are used to pain that tends to drift up and back down, but never go away. Because of this, it's 100% normal and expected that you will feel some level of pain and discomfort as you exercise. That is both safe and OK.

**Research shows that the people who push themselves to do the exercises are the ones who experience the greatest reduction in pain and improvement in function over time.**

In fact, high intensity cardio workouts and progressive full body strengthening exercises have been found to reduce chronic back pain more than regular cardio or only stretching or doing easy exercises.

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**Instructions:** Do these circuits 3-4 times a week for 12-16 weeks. Spend 4 weeks on each circuit and do more reps or hold the position for longer if able. Research studies say it takes a long time to get meaningful, permanent improvement, so keep going!

Begin with 3 rounds of this circuit and increase to 4 and 5 rounds, as able, in the coming weeks.

Set a timer for 1 minute and do as many reps as possible with good form for the first 30-40 seconds of the minute, then rest for the remainder of the minute and prepare for the next exercise. This keeps you on track and prevents you from wasting time.



# Beginner Strength Circuit for Chronic Lower Back Pain

## Exercise #1 - Prone Locust Holds

**Goal:** Hold Position x 1 minute  
(rest x 5-10 sec as needed)



## Exercise #2 - Childs Pose Stretch

**Goal:** Hold Stretch x 1 minute



## Exercise #3 - Crunches

**Goal:** 20-50 reps



## Exercise #4 - Prone Press Ups

**Goal:** 10-15 reps of 2-3 sec pauses in the top position (progressively push yourself up as high as possible until elbow are straight)



## Exercise #5 - Back Bridges

**Goal:** Do 10-30 reps



## Exercise #6 - Dead Bug Holds

**Goal:** Hold Position x 1 minute  
(Keep back flat on floor, no arch)



Do this circuit 3 days per week.

As you get stronger and develop better endurance, do more reps or hold for slightly longer.

It is OK (and safe!) to work through back pain during these exercises. When your back hurts and you use it, you'll feel it. But that does NOT mean that you're damaging your back or making it worse. It's completely normal for people to experience a new or increased soreness/resting pain for 2-3 weeks after beginning a new workout like this. Be consistent and it will go away quickly.

As you continue to progress through the circuits you'll eventually get strong enough to be able to do more throughout the day.

The first realistic goals for people with chronic LBP to achieve are:

- 1) To have your pain worsen later in the day than it currently does
- 2) To feel slightly less pain at the end of the day
- 3) To be able to do more physical activity with either the same amount or less pain than you currently experience

After the circuit, stretch out with some of the Recovery stretches (last page) for 5-10 minutes.



# Intermediate Strength Circuit for Chronic Lower Back Pain

## Exercise #1 - Hip Thrusts

**Goal:** 15—25 reps (place a weight on your hips as able)



## Exercise #2 - Modified Pigeon Pose / Back & Glute Stretch

**Goal:** Hold stretch x 30 sec on each leg



## Exercise #3 - Side Planks

**Goal:** 30 sec on each side



## Exercise #4 - Prone Press Ups

**Goal:** 10-15 reps of 2-3 sec pauses in the top position (progressively push yourself up as high as possible until elbow are



## Exercise #5 - Prone Hip Extensions

**Goal:** 15 reps on each leg (lean over edge of bed or armrest of couch)



## Exercise #6 - Prone Planks

**Goal:** Hold Position x 1 minute (Keep abs tight—you should NOT have any back pain if you do the plank right!!)



After the circuit, stretch out with some of the Recovery stretches (last page) for 5-10 minutes.



# Advanced Strength Circuit for Chronic Lower Back Pain

## Exercise #1 - Goblet Squats

**Goal:** 12—25 reps (hold 15-45 lbs about 6" in front of chest, keep back slightly arched )



## Exercise #2 - Modified Pigeon / Pose Back & Glute Stretch

**Goal:** Hold stretch x 30 sec on each leg



## Exercise #3 - Hollow-body Holds

**Goal:** Hold x 30-60 seconds (tighten your abs so that your back always touches the floor, no arching!)



## Exercise #4 - Prone Press Ups

**Goal:** 10-15 reps of 2-3 sec pauses in the top position (progressively push yourself up as high as possible until elbow are straight)



## Exercise #5 - Reverse Hyperextensions (Double Leg Hip Extensions)

**Goal:** 10-20 reps (lay off the edge of your bed or over the armrest of a couch, keeping back slightly arched as you raise your legs up & down from the floor)



## Exercise #6 - Childs Pose Stretch

**Goal:** Hold Stretch x 1 minute



After the circuit, stretch out with some of the Recovery stretches (last page) for 5-10 minutes.



# Weight Lifting with Chronic Lower Back Pain

## Romanian Deadlifts (RDLs)

An EXCELLENT exercise for all weightlifters, regardless of back pain.

Effectively strengthens the lower back, glutes, and hamstrings while also quickly improving hamstring flexibility.

(Note: this exercise will make you sore for the first couple of weeks!)

Do 1-2 sets of 10-12 reps with just the bar as a warm-up before deadlifting and squatting.

As a strengthening exercise, **do 3-4 sets of 8-12 reps** with a weight that's challenging to complete the 12th rep of while keeping the back arched and core tight. Keep your shoulder blades squeezed together too!

**RDLs are one of the best supplemental exercises for ALL WEIGHTLIFTERS!**



## Low-Bar Back Squats

The "Low bar" back squat position places less strain on the lumbar spine than the more commonly performed "high-bar" back squat technique. Work on shoulder mobility if your shoulders are too tight.

Do 1-2 sets of 10-12 reps with just the bar as a warm-up before squatting.

As a strengthening exercise, **do 3-5 sets of 6 - 12 reps** with a weight that's challenging to complete the 12th rep of while keeping the back arched

## Conventional (Barbell) Deadlift

The Deadlift is a great posterior chain (back, glute, hamstring) strengthening exercise. When performed with good form, research has found that around 40% of patients with chronic LBP improve.

Do 1-2 sets of 10-12 reps with just the bar as a warm-up before deadlifting.

As a strengthening exercise, **do 3-5 sets of 6 - 12 reps** with a weight that's challenging to complete the 12th rep of while keeping the back arched



# Recovery Stretches—do 5-10 min of stretching EVERY DAY!

Pick 3-5 stretches and do them every day after you get home or when your pain increases. Hold the stretch for 30-60 seconds and slowly push yourself further.

