


# Low Back Pain: Exercises to Reduce Pain

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## Low Back Pain: Exercises to Reduce Pain

- Low back pain is very common among adults and is often caused by overuse and muscle strain or injury. Treatment can help you stay as active as possible. And it will help you understand that some continued or repeated back pain is not surprising or dangerous.
- Most low back pain can get better if you stay active, avoid positions and activities that may increase or cause back pain, use ice, and take nonprescription pain relievers when you need them.

- When you no longer have acute pain, you may be ready for gentle strengthening exercises for your stomach, back, and legs, and perhaps for some stretching exercises. Exercise may not only help decrease low back pain, but it may also help you recover faster, prevent reinjury to your back, and reduce the risk of disability from back pain.
- Exercises to reduce low back pain are not complicated and can be done at home without any special equipment.
- It's important that you don't let fear of pain keep you from trying gentle activity. You should try to be active soon after noticing pain, and gradually increase your activity level. Too little activity can lead to loss of flexibility, strength, and endurance, and then to more pain.



How do I exercise to reduce low back pain?



## How do I exercise to reduce low back pain?

Most people who have back pain naturally feel better by doing certain motions. Some feel better sitting (their back and hips are flexed). Others feel better standing (back and hips are extended). Exercise that moves you toward your more comfortable position is usually more successful in treating your back pain.<sup>1</sup> For example, if you are more comfortable sitting down, exercises that bend you forward—such as partial sit-ups (curl-ups) and knee-to-chest exercises—may help you.

Talk to your doctor before you start an exercise program, and **only do exercises that do not increase your symptoms.**

The most effective exercise programs for chronic low back pain are designed specifically for you and are supervised.<sup>2</sup> For example, a physical therapist might teach you an exercise program that you can use at home. Then you would see the therapist every so often to check on your progress and advance your program.

- Talk to your doctor or physical therapist if you are unsure how to do these exercises or if you feel any pain when you are doing the exercises.
- Try to exercise a little bit every day.
  - Get some type of aerobic exercise, such as walking, every day. Even a couple of minutes will be helpful, and you can gradually increase your time.
  - Choose a couple of stretching and strengthening exercises that you enjoy doing, or vary them from day to day.

Ask your doctor or physical therapist whether there are additional exercises that will work best for you.

### Exercises to try if your back pain is eased by standing or lying down:

- Alternate arm and leg (bird dog) (See figure in appendix)
- Backward bend (See figure in appendix)
- Bridging (See figure in appendix)
- Hip flexor stretch (See figure in appendix)
- Press-up (See figure in appendix)

- Relax and rest (See figure in appendix)

### **Exercises to try if your back pain is eased by sitting down:**

- Double knee-to-chest (See figure in appendix)
- Piriformis stretch (See figure in appendix)
- Single knee-to-chest (See figure in appendix)

### **Exercises to try when no position eases your back pain:**

- Cat-camel (See figure in appendix)
- Clamshell (See figure in appendix)
- Curl-ups (See figure in appendix)
- Front plank (See figure in appendix)
- Hamstring stretch (See figure in appendix)
- Pelvic rock, sitting (See figure in appendix)
- Pelvic rock, standing (See figure in appendix)
- Pelvic tilt (See figure in appendix)
- Side plank, beginner (See figure in appendix)
- Side plank, intermediate (See figure in appendix)
- Walking (See figure in appendix)
- Wall sit (See figure in appendix)

## **References**

### **Citations**

1. Long A, et al. (2004). Does it matter which exercise? *Spine*, 29(23): 2593–2602.
2. Hayden JA, et al. (2005). Systematic review: Strategies for using exercise therapy to improve outcomes in chronic low back pain. *Annals of Internal Medicine*, 142(9): 776–785.

## **Credits for Low Back Pain: Exercises to Reduce Pain**

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**Last Revised** February 15, 2012

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## **Appendix**

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# Topic Images

Figure

## Alternate Arm and Leg (Bird Dog)



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Do this exercise slowly. Try to keep your body straight at all times, and don't let one hip drop lower than the other.

- Start on the floor, on your hands and knees.
- Tighten your stomach muscles.
- Raise one leg off the floor and hold it straight out behind you. Be careful not to let your hip drop down, because that will twist your trunk.
- Hold for about 6 seconds, then lower your leg and switch to the other leg.
- Repeat 8 to 12 times on each leg.
- Over time, work up to holding for 10 to 30 seconds each time.
- If you feel stable and secure with your leg raised, try raising the opposite arm straight out in front of you at the same time.

Figure

## Backward Bend



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- Stand with your feet hip-width apart, toes pointing forward. Do not lock your knees.
- Place your hands on your back, palms at your waist.
- Lengthen up through your spine, all the way through the crown of your head.
- Keeping your legs straight, bend backward over your hands without arching your neck.
- Hold the pose for 1 to 2 seconds.
- Return to standing. Repeat 3 to 10 times.

**Figure**

## **Bridging**



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The bridging exercise works the muscles around your lower body and hips. Do 8 to 12 repetitions. Do not continue with this exercise if it causes pain.

- Lie on your back with both knees bent. Your knees should be bent about 90 degrees.
- Tighten your belly muscles by pulling in your belly button toward your spine. Then push your heels into the floor, squeeze your buttocks, and lift your hips off the floor until your shoulders, hips, and knees are all in a straight line.
- Hold for about 6 seconds as you continue to breathe normally, and then slowly lower your hips back down to the floor and rest for up to 10 seconds.

Figure

## Hip Flexor Stretch

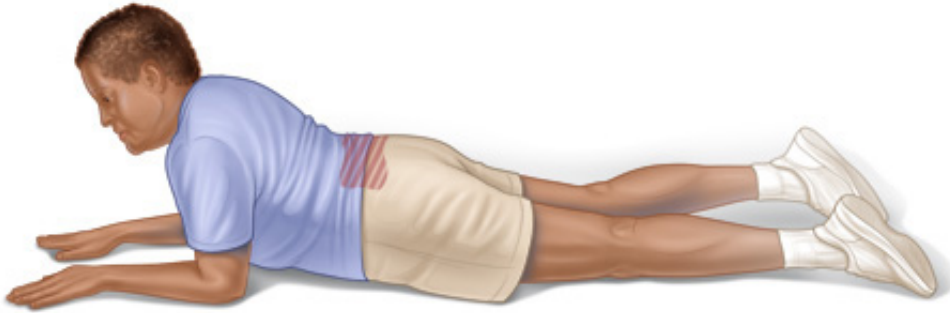


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- Kneel on the floor with one knee bent and one leg behind you. Position your forward knee over your foot. Keep your other knee touching the floor.
- Slowly push your hips forward until you feel the stretch in the upper thigh of your rear leg.
- Hold the stretch for at least 15 to 30 seconds. Repeat with your other leg.
- Do 2 to 4 times on each side.

Figure

## Press-Up Back Extensions



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- Lie on your stomach, supporting your body with your forearms.
- Press your elbows down into the floor to raise your upper back. As you do this, relax your stomach muscles and allow your back to arch without using your back muscles. As you press up, do not let your hips or pelvis come off the floor.
- Hold for 15 to 30 seconds, then relax.
- Repeat 2 to 4 times.

## Figure

### Relax and Rest



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- Lie on your back with a rolled towel under your neck and a pillow under your

knees. Extend your arms comfortably to your sides.

- Relax and breathe normally.
- Remain in this position for about 10 minutes.
- If you can, do this 2 or 3 times each day.

Figure

## Double Knee-to-Chest



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- Lie on your back with your knees bent and your feet flat on the floor.
- Bring one knee to your chest and then the other. Don't raise both legs together.
- Hold for 15 to 30 seconds.
- Relax and lower your legs—one at a time—to the floor.
- Rest for 30 seconds.
- Repeat 2 to 4 times.

Figure

## Piriformis Stretch





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- Lie on your back. Bend your right knee so that your right foot is flat on the floor.
- Cross your left leg over your right so that your left ankle rests on your right knee.
- Use your hands to grab hold of your left knee and pull it gently toward the opposite shoulder. You should feel the stretch in your buttocks and hips.
- Hold for 15 to 30 seconds.
- Relax, and then repeat with the other leg.
- Repeat this cycle 2 to 4 times.

**Figure**

## **Knee-to-Chest Exercise**



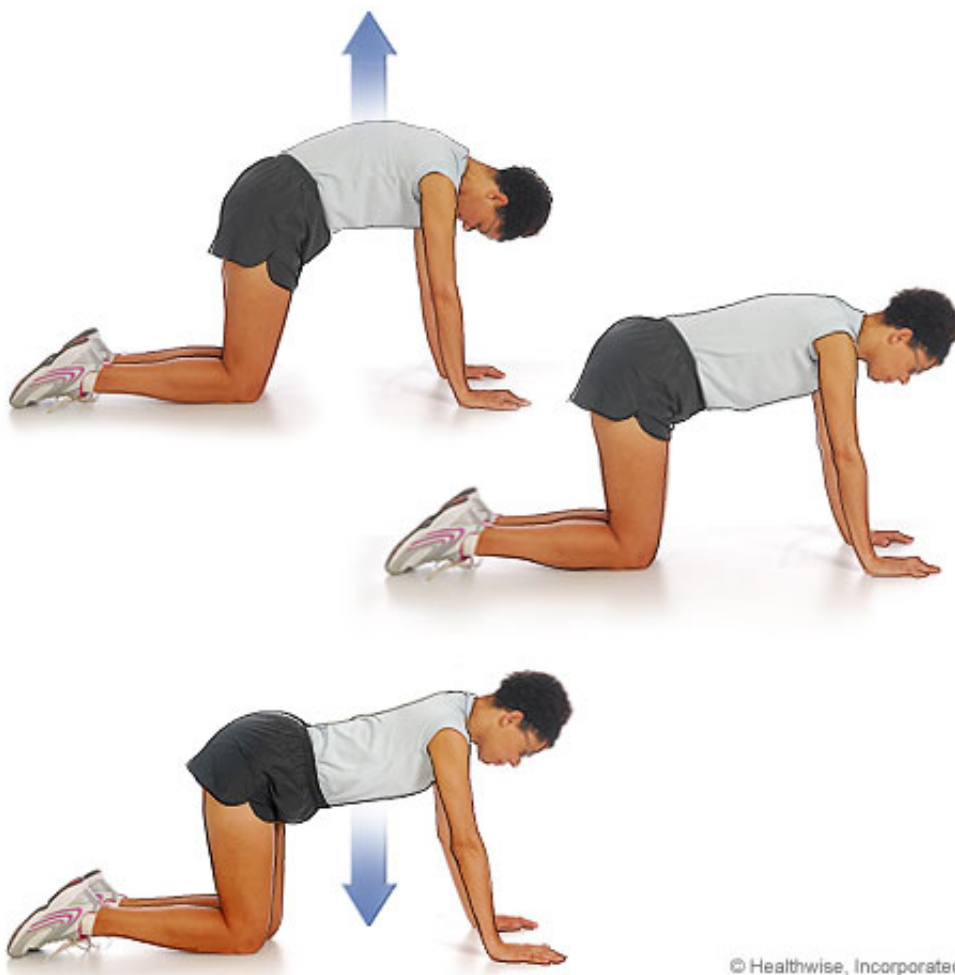
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Do not do the knee-to-chest exercise if it causes or increases back or leg pain.

- Lie on your back with your knees bent and your feet flat on the floor.
- Bring one knee to your chest, keeping the other foot flat on the floor (or the other leg straight, whichever feels better on your lower back). Keep your lower back pressed to the floor. Hold for at least 15 to 30 seconds.
- Relax and lower the knee to the starting position. Repeat with the other leg.
- Repeat 2 to 4 times with each leg.
- To get more stretch, put your other leg flat on the floor while pulling your knee to your chest.

Figure

## Cat-Camel



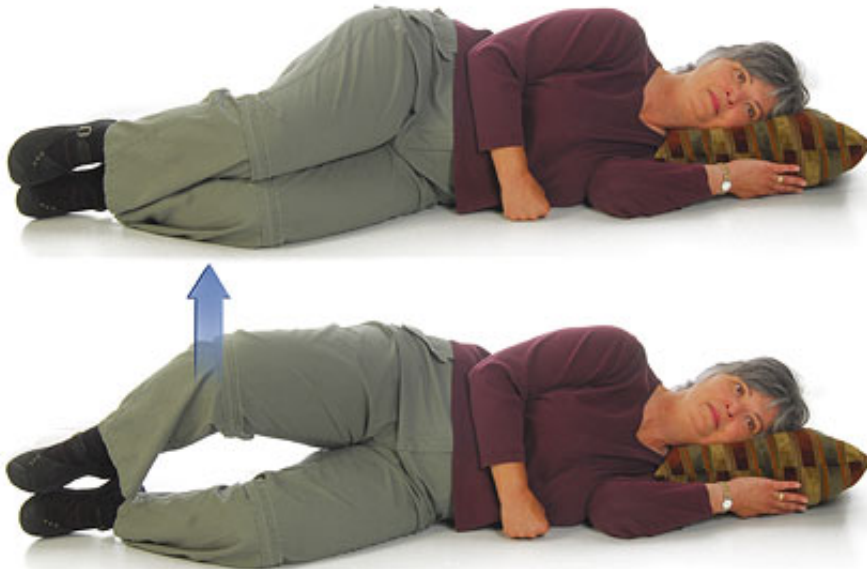
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- Get down on your hands and knees on the floor.
- Relax your head, and allow it to droop.
- Round your back up toward the ceiling until you feel a nice stretch in your upper, middle, and lower back.
- Hold this stretch for as long as it feels comfortable, or about 15 to 30 seconds.
- Return to the starting position with a flat back while you are on all fours.
- Let your back sway by pressing your stomach toward the floor. Lift your buttocks toward the ceiling.

- Hold this position for 15 to 30 seconds.
- Repeat 2 to 4 times.

Figure

## Clamshell



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- Lie on your side with your feet and knees together and your knees bent.
- Raise your upper leg while keeping your feet together. Don't let your hips roll back.
- Hold for 6 seconds.
- Slowly lower your leg back down. Rest for up to 10 seconds.
- Repeat 8 to 12 times.

Figure

## Curl-Ups



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- Lie on the floor on your back with your knees bent at a 90-degree angle. Your feet should be flat on the floor, about 12 in. (32 cm) from your buttocks.
- Cross your arms over your chest.
- Slowly contract your abdominal muscles and raise your shoulder blades off the floor.
- Keep your head in line with your body—don't press your chin to your chest.
- Hold this position for 1 or 2 seconds, then slowly lower yourself back down to the floor. Repeat 8 to 12 times.

**Figure**

## **Front Plank**

- Get down on your knees and elbows.
- Now straighten your legs, one at a time, so that you are supporting your body on your elbows and toes.
- Hold for 6 seconds. Over time, build up to 30 seconds.
- Rest for 10 seconds.
- Repeat 3 to 5 times.

Figure

## Hamstring Stretch in Doorway



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- Lie on your back in a doorway, with one leg through the open door.
- Slide your leg up the wall to straighten your knee. You should feel a gentle stretch down the back of your leg. Hold the stretch for at least 1 minute. As the days go by, add a little more time until you can relax and let these muscles stretch for as much as 6 minutes for each leg.
  - Do not arch your back.
  - Do not bend either knee.
  - Keep one heel touching the floor and the other heel touching the wall. Do not point your toes.
- Repeat with your other leg.
- Do 2 to 4 times for each leg.

If you do not have a place to do this exercise in a doorway, there is another way to do it:

- Lie on your back and bend the knee of the leg you want to stretch.
- Loop a towel under the ball and toes of that foot, and hold the ends of the towel in your hands.
- Straighten your knee and slowly pull back on the towel. You should feel a

gentle stretch down the back of your leg. It is hard to hold this stretch with a towel for a long time, but hold the stretch for at least 15 to 30 seconds. One minute or more is even better.

- Repeat with your other leg.
- Do 2 to 4 times for each leg.

**Figure**

## **Pelvic Rock, Sitting**



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- Sit in a comfortable, neutral position, with your feet flat on the floor and your buttocks near the front of the seat.
- Gently roll your shoulders forward. Feel the weight move backward on your "sit" bones.
- Now straighten up slowly, rolling your hips and lower spine forward while your shoulders move back up.
- Repeat 8 to 12 times, gently rocking your pelvis backward and forward.

**Figure**

## **Pelvic Rock, Standing**



- Stand in a comfortable, neutral position with your hands on your hips.
- Gently rock the top of your hips backward, flattening your back. Your thumbs will turn down slightly.
- Return to neutral position.
- Now gently rock the top of your hips forward, arching your back. Your thumbs will turn up slightly.
- Return to neutral position.
- Repeat this gentle rocking motion 8 to 12 times.

**Figure**

## **Pelvic Tilt Exercise**



- Lie on your back with your knees bent.
- "Brace" your stomach—tighten your muscles by pulling in and imagining your belly button moving toward your spine. You should feel like your back is pressing to the floor and your hips and pelvis are rocking back.
- Hold for about 6 seconds while breathing smoothly.
- Repeat 8 to 12 times.

Figure

## Side Plank, Beginner



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- Lie on your side with your knees bent, and prop your upper body up on your elbow.
- Raise your hips off the floor, and hold for 6 seconds.
- Rest for 10 seconds.
- Repeat 3 to 5 times.

Figure

## Side Plank, Intermediate





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- Lie on your side, and prop your upper body up on your elbow.
- Keeping your legs straight, lift your hips off the floor and hold for 6 seconds. Build up to at least 30 seconds over time.
- Rest for 30 seconds.
- Repeat 3 to 5 times.

## Figure

## Walking



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Walking is one of the best things you can do for your back. Many people find that their backs hurt less when they walk.

Practice good posture as you walk:

- Stand tall. Leaning forward or backward as you walk can put strain on your back.
- Keep your head up and your eyes forward.
- Every once in a while, shrug your shoulders and then relax them. This will remind you not to keep your shoulders tense as you walk.

If it hurts to walk or doesn't feel right, don't do it. Talk to your doctor.

## Figure

### Wall Sit



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The wall sit exercise strengthens your back, trunk, and thigh muscles, helping you maintain a healthy lower back.

- Stand with your back 10 in. (25 cm) to 12 in. (30 cm) away from a wall.
- Lean into the wall until your back is flat against it.
- Slowly slide down until your knees are slightly bent, pressing your lower back into the wall.
- Hold for a count of about 6 seconds. Then slide back up the wall.
- Repeat 8 to 12 times.

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