

# 10 Minutes per Day Low Back Pain Prevention Guide

Did you know that an estimated \$50 billion dollars is spent annually on back pain related issues? Low back pain (LBP) is one of the most prevalent medical conditions treated in the United States and throughout the western world. It affects nearly 80% of the U.S. population at one time or another. It is one of the top reasons for physician visits and one of the most common reasons for missed work days. It is also responsible for many missed workouts and training sessions.

The purpose of this prevention guide is to help you maintain adequate lower extremity and lumbar range-of-motion. As part of your low back pain prevention strategy, the following exercises specifically target and strengthen the muscles of the inner core. Focusing on mobility and lumbar strength on a regular basis has been shown to help prevent episodes of low back pain. Research indicates that as little as ten minutes per week can lower your risk of low back pain.

These exercises should be utilized in conjunction with maintaining a healthy lifestyle including: getting regular exercise; avoiding prolonged sitting; and maintaining proper posture when standing and sitting.

## Press-ups

Perform press-ups before and after running or exercise as part of a thorough warm up and cool down. I also recommend performing press-ups as needed for LBP prevention frequently throughout the day. Lie on your stomach and perform 10 to 20 press-ups. Move slow and easy, but work your way up to full motion.

Perform 2 sets of 10-20 repetitions, 5-10 times per day.



## Standing Back Extension

After sitting, stand up, and perform standing back extensions. I encourage performing at least 10 repetitions each time you stand. You can lean your buttock against a counter top and extend backwards for an added stretch.

Perform at least 10 repetitions, multiple times per day.



### Hip Flexor Stretch

Stand with proper posture with your back leg straight. Keep your back heel on the ground with your toes pointed straight ahead. Flex your front knee until you feel a stretch in the front of your hip. You will also likely feel a stretch in the back of your calf. You should feel a mild to moderate stretching sensation and no increase in pain.

Hold for 30 seconds, and repeat 3 times on each side.



### Hamstring Stretch in Doorway

Find a doorway and place one leg on the frame and stretch the opposite leg through the doorway. Try to keep your back with a neutral arch. As your hamstring relaxes, slowly move closer to the wall or doorframe.

Hold for at least 1 minute per side, and preferably 2 repetitions per side.



### Figure 4 Stretch

Cross one leg over the other into a figure 4 position. Push your leg away from your head (as shown).

Hold for 30 seconds, and 3 repetitions per side.



### Figure 4 Stretch for the Piriformis Muscle

Cross one leg over the other into a figure 4 position. Grab your crossed leg with your opposite hand (while maintaining the figure 4 position). Pull your bent leg toward your opposite shoulder until you feel a stretch in your buttock area.

Hold for 30 seconds, and 3 repetitions per side.



## Core Strengthening Exercises – Lumbar Extensors

Adequate lumbar extension strength is critical to the prevention of and treatment for low back pain. Without specific training, these muscles will not regain their prior level of function. With each occurrence of low back pain, you have to specifically work these muscles in order to function properly again.

The exercises below are listed easiest to hardest. Begin with the easier exercises (involving just the arm raise or just a leg raise) and progress to the more advanced exercises as you are able. (I recommend starting with the superman and bridge exercises.) If you have a repeat occurrence of pain, then start over with your progression.

As you progress, perform an additional set of 10-15 repetitions (thereby completing 30 repetitions total). I also recommend adding weight to increase the resistance when performing a back extension with the ball. Typically, 5 to 25 pounds is adequate.

### Superman Exercise - Starting Position

Lie on the ground with your arms stretched out in a “V” position. Support your head with a small rolled up towel to maintain a neutral spine, and keep your chin slightly tucked.

You can lie on the floor or a bed. If you are on a bed, you may need a pillow under your stomach for extra support and comfort.



### Superman Exercise - Arms and Legs (Same Time)

Raise your arms and legs. Be sure to keep your abdominal muscles active. Don't over arch your back. Raise your legs up 4-6 inches if you can. As your head elevates, be sure to keep your chin slightly tucked and in a neutral position. Keep your shoulder blades back and down.

Perform 1 set of 5 repetitions. Hold each repetition for 30 seconds, once per day.





### Bridge Exercise - Starting Position

Lie on your back with your knees bent to prepare for the bridge exercise.



### Bridge Exercise

Keep your pelvis level as you lift your hips/pelvis and buttocks into the air. Pause, and then return back down to the ground. Do not let your pelvis wobble as you move up and down. Add a weight to your pelvis to increase the difficulty level.

Perform 2 sets of 15 repetitions, once per day.



### Ball Bridge

Keep your pelvis level as you lift your hips/pelvis and buttocks into the air. Pause. Then move slowly back down. Try not to let your pelvis wobble.

Perform 2 sets of 10 repetitions, once per day.



### Ball Extension - Starting Position

Position your feet against a wall to assist you with your balance. Keep your chin down in a neutral position and your hands crossed behind your head. You can cross your arms over your chest to make it easier. For more of a challenge, stretch both of your arms into the "V" position (as shown in the superman exercise) or add a weight across the chest.



### Ball Extension

From your starting position, slowly raise your upper body until you have a slight arch in your back. Your legs stay straight. Keep the movement pain free.

Perform 2 sets of 20 repetitions, once per day.



### Plank Exercise

Keep your chin tucked down so you're looking straight into the ground. Your thighs, buttocks, stomach and back muscles are all engaged. Your elbows should be directly under your shoulders. Keep your body straight, do not tilt.

Perform 2 sets of 30-60 seconds once per day.



For more information on Low Back Pain, Physical Fitness and Performance, Health and Nutrition, Injury Prevention and Rehabilitation Strategies, and advice on Successful Aging and Elder Care, please visit [www.thePhysicalTherapyAdvisor.com](http://www.thePhysicalTherapyAdvisor.com). Be sure to join our growing community on Facebook by liking **The Physical Therapy Advisor!**

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