

# Low Back Pain Prevention Guide for Runners

This general exercise guide is intended to help you maintain adequate lower extremity and lumbar range of motion. It will help you specifically target and strengthen the muscles of the inner core as part of your low back pain prevention strategy. Focusing on mobility and lumbar strength on a regular basis has been proven to help prevent episodes of low back pain. These exercises should be used in conjunction with the prevention and treatment strategies outlined in **Low Back Pain Prevention for Runners**. These exercises should also be utilized in conjunction with maintaining a generally healthy lifestyle, including a cross training program.

## 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 a day.



## Standing Back Extension

After prolonged 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 backward for an additional stretch.

Perform at least 10 repetitions, multiple times a day.



### Hip Flexor Stretch

Stand with good 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.



## Core Strengthening Exercises – Lumbar Extensors

The exercises below are listed from easy to difficult. The exercises should be performed as part of a prevention program in combination with press-ups as well as the leg and pelvic stretches. If you experience a repeat bout of pain, start over with your progression. I recommend starting with the superman and bridge exercises. As you progress, you may increase to an additional set of 10 repetitions (for a total of 30 repetitions).

### Superman Exercise - Starting Position

Lay 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 lay 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, 1-2 times a day.



### **Bridge Exercise - Starting Position**

Lay 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. As your strength improves, place a weight on your pelvis.

Perform 2 sets of 10 repetitions, 1-2 times a day.



### **Ball Extension - Starting Position**

Position your feet against a wall to assist you with your balance. Your legs stay straight. 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).



### Ball Extension

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

Perform 2 sets of 15-20 repetitions, 1-2 times a day.



### Plank Exercise

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

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



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