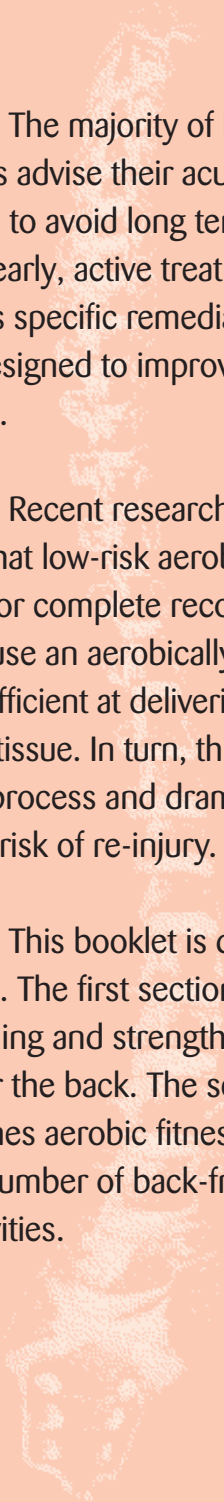


BACK RELIEF

# FITNESS & ACTIVITY

Helping you walk away from back pain.®





● ● ● The majority of health care professionals advise their acute back pain patients to avoid long term bed rest in favour of early, active treatment. This includes specific remedial exercises, which are designed to improve flexibility and strength.

● ● ● Recent research has also concluded that low-risk aerobic exercise is essential for complete recovery. This is because an aerobically-fit body is far more efficient at delivering nutrients to damaged tissue. In turn, this speeds up the healing process and dramatically reduces the risk of re-injury.

● ● ● This booklet is divided into two sections. The first section describes basic stretching and strengthening exercises for the back. The second section defines aerobic fitness and suggests a number of back-friendly aerobic activities.

## Before embarking on any exercise program it is important to keep in mind the following:

- ① It's a good idea to consult your doctor before you begin a back exercise program.
- ② Always warm up before you begin any physical activity. An effective warm up increases your heart rate and your respiratory rate. The increased blood flow prepares the muscles, tendons and joints for more strenuous activity. Warming up minimizes the risk of injury. The easiest way to warm up is to ride an exercise bike, or walk, for five minutes.
- ③ Always wear proper shoes when you exercise – either walking shoes, or running shoes that provide cushioning as well as support.
- ④ When you are finished exercising, it is equally important to cool down. Cooling down after exercise helps your breathing and heart rate return to normal levels; this helps to limit the feeling of dizziness. To cool down, you can walk or ride a stationary bike for 5 to 10 minutes at a moderate pace.





FITNESS & ACTIVITY

# BACK EXERCISES

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A back exercise program includes both stretching and strengthening exercises. Stretching exercises should be done first.

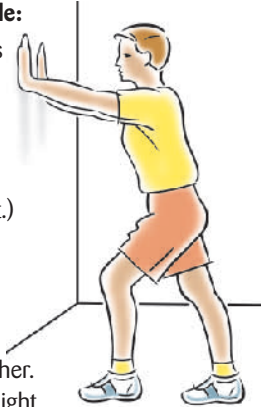
## STRETCHING

### Gastrocs/Soleus Stretch

The gastrocnemius muscles run up the back of the leg, from the heel to just above the knee. The soleus muscles, which are located beneath the gastrocs, start at the ankle and run to mid-calf. Both are important for walking.

#### To stretch your right gastrocs muscle:

1. Stand facing a wall - about an arm's length away.
2. Place your left foot ahead of your right foot, about a shoulder-width apart. (Your right knee should be straight, your left knee slightly bent.)
3. Keeping your arms straight, place your palms against the wall. (If you are outside, a tree will work.)
4. Push forward against the wall, allowing your left knee to bend farther. (Your right knee should remain straight with your right heel flat on the floor.)
5. Continue to push forward until you feel the stretch high up in your right calf.



Hold for 15-20 seconds. Relax. Do a minimum of three repetitions. Change leg positions and repeat.

#### To stretch the right soleus muscle:

1. Repeat steps 1-3 from gastrocs stretch.
2. With this exercise, instead of keeping your right leg straight, both knees should be bent.
3. Push forward against the wall while squatting downward.
4. As your right knee bends farther, you will feel the stretch at mid-calf.



Hold for 15-20 seconds. Relax. Do a minimum of three repetitions. Switch leg positions and repeat.

## Quadricep Stretch ● ● ●

The quadriceps run from just above the hip, down the front of the thigh to just below the knee. You use them when you kick a ball, climb stairs or move from a sitting to a standing position. If your quads are tight, you will have a tendency to overextend (arch) your back, which can put strain on the muscles and joints.

### To stretch the right quads:

1. Stand sideways to a wall with your back straight.
2. Place the palm of your left hand against the wall for balance.
3. Bend your right knee to lift right leg.
4. Reach back with your right hand and grab your right foot (above the ankle) and bring your heel near your buttocks.
5. Stand tall, pulling in your stomach muscles.
6. Continue until you feel the stretch along the front of your thigh.



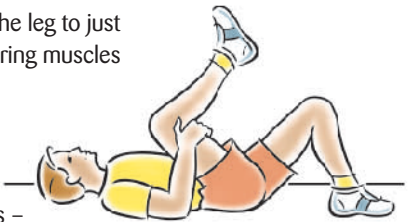
Hold for 15-20 seconds. Relax. Do a minimum of three repetitions. Switch legs and repeat.

## Knee-to-Chest Hamstring Stretch ● ● ●

The hamstrings start at the hip and run down the back of the leg to just below the knee. Hamstring muscles are prone to tightness.

Tight hamstrings can reduce hip flexibility and can put strain on the lower back muscles – causing them to work harder than necessary.

The knee-to-chest hamstring stretch stretches the hamstring, lower back and hips. It also puts less strain on the hips and spine than other versions.



1. Lie flat on the floor with your knees bent and stomach muscles tight.

2. Using both hands, grasp the back of your right thigh, just behind the knee.
3. Pull your leg gently towards your chest and hold it there. You should feel a stretch in the back of your thigh.
4. Slowly straighten your right leg as much as possible. (It's not essential to straighten your right leg completely but it is important to keep the knee pressed tightly against your chest.)
5. As you straighten your right leg, you will feel the stretch down the back of your right leg. If your hamstrings are very tight, you will feel it into your buttocks as well.

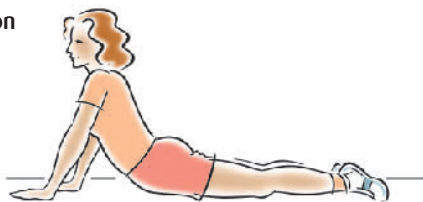
Hold for 5 seconds. Lower knees to the starting position and relax for 3-5 seconds. Do a minimum of three repetitions. Switch legs and repeat.

## Low Back Extension Stretch ● ● ● ———

If your back pain is caused by either facet joint syndrome or spinal stenosis, the extension stretch exercise may increase your pain. In this case, try the modified version. If you still experience pain, consult your health care professional; he or she may recommend that you eliminate extension stretches from your exercise program altogether.

The Low Back Extension Stretch exercises the abdominal muscles as well as some of the muscles that run across the front of the hip.

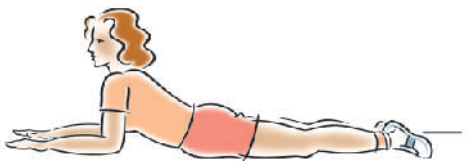
### Normal Version



1. Lie on your stomach.
2. Place your hands next to your shoulders with your elbows bent and your palms flat on the floor.
3. Using only your arms, push up onto your hands and arch your lower back. Your arms should be as straight as possible. Your elbows should be close to your body rather than pointing out to the side. Do not allow your pelvis to come up off the floor.

Hold for 10-15 seconds, then relax. Repeat three times, eventually working your way up to six repetitions of 20 seconds each.

## Modified Version



If the normal extension stretch causes back pain – or leg pain – try the modified version. Repeat steps 1 and 2 from previous exercise, but:

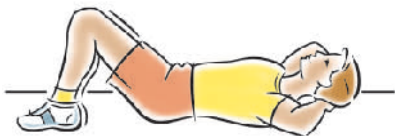
- Instead of pushing yourself up onto your hands, push up onto your forearms only.

Hold for five seconds. If this version does not cause pain, increase the holding time gradually to five minutes. (This version often helps reduce the pain of an acute disc problem. It may be repeated once every two hours.)

## STRENGTHENING EXERCISES

### Pelvic Tilt ● ● ●

When you think of strengthening the abdominal muscles, most back pain sufferers think of sit-ups. You can, however, strengthen your abdominal muscles with pelvic tilt exercises alone. They are an excellent alternative to sit-ups during, or just after, an acute phase of back pain.



1. Lie on your back with your knees comfortably bent and your feet flat on the floor.
2. Place your arms at your sides or place your hands behind your head.
3. Relax your leg muscles and breathe normally.
4. Tighten your stomach and buttock muscles.
5. Press your lower back into the floor (you will feel your hip joints move toward your face).
6. Hold this position for 10 seconds. Repeat this exercise a minimum of 10 times.

## Half Sit-Ups ● ● ●

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1. Assume the pelvic tilt position.
2. Place your arms at your sides with your palms flat against the floor.
3. Tighten the muscles of your buttocks and lower back.
4. Slowly raise your head and shoulders 2-4 inches from the floor. Do not arch your neck.

Hold this position for six seconds, then relax for 3-5 seconds. Repeat 5 times. Over the course of two weeks, work up to between 15 and 20 repetitions.

**To strengthen the other two sets of abdominal muscles, the obliques, do the following exercise:**



1. Repeat steps 1-4 from previous exercise.
2. Once your head and shoulders come up off the floor, move your right shoulder toward your left knee.
3. Hold this position for six seconds, then relax for 3-5 seconds. Repeat 5 times.
4. Repeat, moving your left shoulder toward your right knee.



FITNESS & ACTIVITY

# BACK FRIENDLY AEROBIC ACTIVITIES

Any activity that uses more than half of your muscle mass is considered to be an aerobic activity. Aerobic activities which do not require jarring movements, or extreme ranges of motion, are considered to be back-friendly.

## Walking ● ● ●

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Walking is the most popular aerobic exercise for back pain sufferers because it is virtually risk-free.

- Wear good walking shoes that also provide arch support and good shock absorption.
- Start slowly – 12 to 20 minutes for each kilometre – building your speed up gradually to approximately eight kilometres-per-hour.
- Four, 45-minute sessions of brisk walking per week is optimal.

## Bicycling ● ● ●

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Some back pain sufferers prefer bicycling, which puts less strain on the body's joints than walking.

- Set up your bicycle so that you can sit in a normal, erect posture rather than hunched forward. (Handlebar extenders can help.)
- Adjust your seat height properly; when your left foot rests on the lower pedal, your left knee should be bent slightly.
- To improve your aerobic fitness, 45 minutes of brisk (rather than leisurely) bicycling, three times a week, is the minimum.

## Swimming ● ● ●

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Swimming is an excellent aerobic activity for soft tissue: muscles, ligaments and discs. However, it is not a weight-bearing exercise and will not, therefore, increase bone density. For this reason, people concerned about osteoporosis should add a weight-bearing aerobic activity to their exercise program.

- Choose the right stroke. For example, if arching your back causes discomfort, the sidestroke (rather than the breast stroke) is probably a better choice. (Change sides every few lengths.)
- To improve your aerobic fitness, 20 minutes of swimming, three or four times a week is the minimum. Many people opt to swim a couple of times a week and do another activity once or twice a week.

## Gardening ● ● ●

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Gardening is a recommended form of activity because it involves the use of major muscle groups and incorporates all three aspects of fitness: endurance, strength and flexibility.

- Pace yourself, alternate activities and take breaks. For example, shovel for five minutes, rake for five minutes, weed for five minutes and then rest before you repeat your regimen.
- Invest in ergonomically-designed gardening tools such as: a kneeling bench with push-up handles, long-handled shears and shovels, and a swan-necked watering can.

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Visit: [www.backrelief.com](http://www.backrelief.com)



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