

## How To Prevent Back Pain

Four out of five adults will experience significant low back pain sometime during their life. Work-related back injuries are the nation's number one occupational hazard, but you could suffer back pain from activities at home and at play, too.

### Are You At Risk?

You are most at risk for back pain if:

- your job requires frequent bending and lifting.
- you must twist your body when lifting or carrying an object.
- you must lift and carry in a hurry.
- you are overweight.
- you do not exercise regularly or do not engage in recreational activities.
- you smoke.

If you are a caregiver for an ill or injured family member, you are at greatest risk for back pain when:

- pulling a person who is reclining in bed to a sitting position.
- transferring the person from bed to a chair.
- leaning over the person for long periods of time.

The American Academy of Orthopedic Surgeons has developed tips to help you reduce your risk of back pain. Whether you are lifting and moving a person or a heavy object, the guidelines are the same.

- Plan ahead what you want to do and don't do it in a hurry.
- Spread your feet shoulder width apart to give yourself a solid base of support.
- Bend your knees.
- Tighten your stomach muscles.
- Position the person or object close to your body before lifting.
- Lift with your leg muscles. Never lift an object by keeping your legs stiff, while bending over.
- Avoid twisting your body. Instead, point your toes in the direction you want to move and pivot in that direction.
- When placing an object on a high shelf, move close to the shelf. Don't stand far away and extend your arms with the object in your hands.
- Maintain the natural curve of your spine, don't bend at your waist.
- When appropriate, use an assistive device such as transfer belt, sliding board, or draw sheet to move a person.
- Do not try to lift by yourself something that is too heavy or an awkward shape. Get help.

### How To Prevent Back Pain

- Use the correct lifting and moving techniques.
- Exercise regularly to keep the muscles that support your back strong and flexible.
- Don't slouch; poor posture puts strain on your lower back.
- Maintain your proper body weight to avoid straining your lower back muscles.
- Keep a positive attitude about your job and home life; studies show that persons who are unhappy at work or home tend to have more back problems and take longer to recover from injury than persons who have a positive attitude.

### **Hamstring Stretch**

1. Lie on your back with legs bent.
2. Hold one thigh behind knee.
3. Slowly straighten knee until a stretch is felt in back of thigh.
4. Hold 20 seconds.
5. Relax.
6. Repeat 5 times on each side.

### **Hip Flexor Stretch**

1. Lie on your back near edge of bed, holding knees to chest.
2. Slowly lower one leg down, keeping knee bent, until a stretch is felt across top of hip/thigh.
3. Hold 20 seconds.
4. Relax.
5. Repeat 5 times on each side.



### **Piriformis Stretch**

1. Lie on back with both knees bent.
2. Cross one leg on top of the other.
3. Pull opposite knee to chest until a stretch is felt in the buttock/hip area.
4. Hold 20 seconds.
5. Relax.
6. Repeat 5 times each side.



### **Strengthening exercises to build muscle support**

Developing strong core muscles in the abdomen, lower back and gluteus is critical to decreasing the stress placed upon the lower back. Many different exercises can contribute to overall strengthening of these core muscles, and two types of exercise programs are often recommended for back pain patients are:

- **Dynamic lumbar stabilization.** This back exercise is designed to help patients find their "neutral" spine, which is the position that allows the patient to feel the least discomfort. The back muscles are then exercised to teach the spine how to stay in this position and help the patient be aware of the position.
- **McKenzie extension exercises.** These back exercises focus on extending the spine to reduce the pressure on, and the pain generated from, a herniated or degenerating disc. Pain relief can be felt in both the back and the leg, and when the pain is very acute the exercises may be done several times a day.

**Practical point**  
The spinal column and its contiguous muscles, ligaments and tendons are all designed to move, and reduced motion can accentuate back pain.

Both of these types of exercises are best learned working with a trained physical therapist, although with practice patients can do the exercises by themselves. Things you can do at home include:

### **Abdominal Contraction**

1. Lie on your back with both knees bent and hands resting below ribs.
2. Tighten abdominal muscles to squeeze ribs down toward back.
3. Be sure **NOT** to hold your breath.
4. Hold 5 seconds.
5. Relax.
6. Repeat 10 times.

### **Back Swing**

1. Stand behind a chair with both hands on the back.
2. Lift one leg back and up while keeping knee straight.
3. Return to floor slowly.
4. Relax.
5. Repeat 5 times.
6. Repeat with opposite leg.

### **Wall Squats**

1. Stand with back leaning against wall.
2. Walk feet 12 inches in front of body.
3. Keep abdominal muscles tight while slowly bending both knees 45 degrees.



4. Hold 5 seconds.
5. Slowly return to upright position.
6. Repeat 10 times.

#### **Heel Raises**

1. Stand with weight even on both feet.
2. Slowly raise heels up and down,
3. Repeat 10 times.

#### **Straight Leg Raises** (may be done from chair, see picture)

1. Lie with your back with one leg straight and one knee bent.
2. Tighten abdominal muscles to stabilize lower back.
3. Slowly lift leg straight up about 6-12 inches and hold 1-5 seconds.
4. Lower leg slowly.
5. Repeat 10 times each leg.



#### **Back leg Raises**

1. Lie on your stomach.
2. Tighten muscles in one leg and raise it 6-12 inches from the floor.
3. Hold for 5 seconds and return to floor.
4. Relax.
5. Repeat with opposite leg.
6. Repeat above 5 times.



#### **Low impact aerobic exercise**

Engaging in a low-impact cardio exercise program will aid rehabilitation and maintain everyday functionality. While some back pain patients can engage in running and other types of cardio exercise, for many with serious back pain it is more realistic and comfortable to engage in low impact cardio conditioning that is easy on the joints and gentle on the back.

There are several types of aerobic exercise that are gentle on the back and, when done on a regular basis, highly effective in providing conditioning:

- **Walking.** In general, walking is very gentle on the back, and walking two to three miles three times per week is very helpful for patients.
- **Biking or cross-training.** Bicycling or using an elliptical cross-trainer are also effective ways to exercise without putting stress on the back.
- **Water therapy.** Exercising in the water provides weightless conditioning, which minimizes stress on the back and joints throughout the body.

Most physicians recommend at least 20 to 30 minutes of cardio exercise every other day to keep in shape. Patients could alternate days of cardio and strength conditioning to get a daily dose of exercise and allow muscle groups time to rest.