

Low back pain

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What is it?

Pain in the lower back is very common among both inactive and active people. It can stem from problems in the structure and function of the back (for example the joint, a disc, or connective tissue), or it can come from a condition unrelated to the back (pregnancy, head injuries, or diseased organs).

The lower spine consists of five bones called the *lumbar vertebrae*. The vertebrae support the body and protect the spinal cord and nerves. Between each vertebra is a disc filled with a jelly-like material. The discs act as shock absorbers for the vertebrae. Along the spine are many nerves which may be injured.

What causes it?

Many things can cause low back pain - muscle strain or spasm, sprains of *ligaments* (which attach muscle to bone), joint problems, or a "slipped disc". A slipped disc happens when the disc between the vertebrae bulges and presses on nerves. This is often caused by a twisting movement while lifting. However, the majority of patients will have an unknown or unidentifiable cause for their low back pain.

The most common trigger of low back pain is using your back muscles in activities you're not used to, like lifting heavy furniture or doing yard work. Back pain can also follow normal activities such as bending over the sink to brush your teeth. Back pain may be made worse by stress, inactivity, or being in an unusual position for a long period.

Who gets it?

Four out of five Americans will experience lower back pain at one time or another. Recent studies indicate that fewer than 15% of cases are caused by defects, such as ruptured discs, arthritis, or tumors. In most cases, the pain arises from weakness of the musculature surrounding the spine or abnormal positions or posture. In about 90% of all cases, lower back pain resolves within 2 months.

What are the symptoms?

Typically, acute lower back pain comes on suddenly without apparent reason. Symptoms such as twinges, numbness, burning, and weakness may also be present. However, the vast majority of patients experience mild to moderate pain which is located in the lower curve of your back often with some pain on either side of the central area.

However there are several warning signs which may indicate a more serious injury. This includes pain that goes down your leg below your knee, or numbness in your leg, foot, groin, and/or rectal areas. In addition if you have fever, nausea or vomiting, stomach ache, weakness, sweating, or you lose control of going to the bathroom, it may be a sign of more severe injury. Finally if your pain doesn't seem to be getting better after 4 - 6 weeks, further investigation may be necessary.

How do you prevent it?

Prevention of ongoing back problems must be directed at the cause. This may mean losing weight, getting your muscles into better shape, and improving your posture when you're are standing, sitting, and sleeping.

Tips for preventing back pain

- Don't lift by bending over. Lift an object by bending your hips and knees, and then squatting to pick up the object. Keep your back straight and hold the object close to you body. Avoid twisting your body while lifting
- Push rather than pull when you must move heavy objects
- If you must sit at your desk or at the wheel of a car or truck, break up the time with stops to stretch and walk
- Wear flat shoes or low heels (1 inch or lower)

Can it be treated?

Acute, short term low back pain usually improves without any special treatment. In fact, a recent study showed that people who immediately returned to normal daily activity had less overall pain, missed less time from work, and had better flexibility when compared to people who had prolonged bed rest (greater than 2 days) or people who did specific back exercises. However, treatment for severe lower back pain may consist of several of the following:

- **Bed rest** may be necessary for severe back problems. The best position for relief when your back hurts is to lie with pillows under your knees with you hips and knees bent and your feet on a chair. This takes the pressure and weight off your back.

If you're resting a hurt back, you may need a day or two of this sort of rest (staying in one of these positions for 5 - 25 minutes at a time). Resting longer than this is unnecessary and can cause your muscles to weaken, which can slow down your recovery period. Even if it hurts, walk around a few minutes every couple of hours.

- **Ice, heat, and massage** can help to relax painful muscle spasms. Ice packs are usually most helpful in the first 24 hours after injury. After this time use moist heat for 20 - 30 minutes at a time and massage periodically to give relief. Moist heat is usually most effective in reducing stiffness several days after injury (baths or whirlpools).

- **Anti-inflammatories (aspirin, ibuprofen, naproxen)** can reduce the pain and swelling which usually occur with low back pain.

- **Muscle relaxants** can also be helpful for extreme cases of low back muscle spasm. They are usually not needed longer than 2-3 days.

- **Avoid sitting** and prolonged traveling if at all possible. Sitting puts more pressure on your back than any other position, even more than standing. If you must sit, sit in chairs with straight backs or low back support. Keep the knees a little higher than the hips. Adjust the seat or use a little stool to prop feet on. Turn by moving your whole body rather than by twisting at the waist.

Use a swivel chair to help reduce twisting. Put a small pillow or a rolled towel behind your lower back if you must drive or sit for long periods.

- **Sleep on your side** with your knees bent. You may put a pillow under your head to support your neck and between your knees.

Use a firm mattress. If your mattress is too soft, use a board of 1/2 inch thick plywood under the mattress to provide support.

- **Exercises** can help your back. One is to gently stretch your back muscles. Lie on your back with your knees bent and slowly raise your left knee to your chest. Press your lower back against the floor. Hold for five seconds. Relax and repeat the exercise with your right knee. Do ten of these exercises for each leg, switching legs.

While some exercises are specific for your back, it is also important to stay active in general. Bicycling, swimming and walking are good exercises to improve fitness. These should be done at least three times per week for the most benefit.

Are there complications?

Most people who have acute low back pain feel much better within a few weeks. Serious problems are rare. However a small percentage of people will have arthritis, tumors, and structural or neurological defects. All of these causes require treatment to avoid complications.

In summary

- Low back pain is extremely common.
- Most patients are well within 2 months.
- The most important element of treatment often involves strengthening the muscles and maintaining correct posture.
- For more information contact your doctor or the American Academy of Family Physicians at familydoctor.org