

What Is Back Pain?

Back pain is an all-too-familiar problem that can range from a dull, constant ache to a sudden, sharp pain that leaves you incapacitated. It can come on suddenly – from an accident, a fall, or lifting something too heavy – or it can develop slowly, perhaps as the result of age-related changes to the spine. Regardless of how it happens or how it feels, you know it when you have it. And chances are, if you don't have it now, you will eventually.

How Common Is It?

At some point, back pain affects an estimated 8 out of 10 people. It is one of our society's most common medical problems.

What Are the Risk Factors for Back Pain?

Although anyone can have back pain, a number of factors increase your risk. They include:

Age: The first attack of low back pain typically occurs between the ages of 30 and 40. Back pain becomes more common with age.

Fitness level: Back pain is more common among people who are not physically fit. Weak back and abdominal muscles may not properly support the spine. "Weekend warriors" – people who go out and exercise a lot after being inactive all week – are more likely to suffer painful back injuries than people who make moderate physical activity a daily habit. Studies show that low-impact aerobic exercise is good for the discs that cushion the vertebrae, the individual bones that make up the spine.

Diet: A diet high in calories and fat, combined with an inactive lifestyle, can lead to obesity, which can put stress on the back.

Heredity: Some causes of back pain, including disc disease, may have a genetic component.

Race: Race can be a factor in back problems. African American women, for example, are two to three times more likely than white women to develop spondylolisthesis, a condition in which a vertebra of the lower spine – also called the lumbar spine – slips out of place.

The presence of other diseases: Many diseases can cause or contribute to back pain. These include various forms of arthritis, such as osteoarthritis, rheumatoid arthritis, and ankylosing spondylitis, and cancers elsewhere in the body that may spread to the spine.

Occupational risk factors: Having a job that requires heavy lifting, pushing, or pulling, particularly when this involves twisting or vibrating the spine, can lead to injury and back pain. An inactive job or a desk job may also lead to or contribute to pain, especially if you have poor posture or sit all day in an uncomfortable chair.

Cigarette smoking: Although smoking may not directly cause back pain, it increases your risk of developing low back pain and low back pain with sciatica. (Sciatica is back pain that radiates to the hip and/or leg due to pressure on a nerve.) For example, smoking may lead to pain by blocking your body's ability to deliver nutrients to the discs of the lower back. Or, repeated coughing due to heavy smoking may cause back pain. It is also possible that smokers are just less physically fit or less healthy than nonsmokers, which increases the likelihood that they will develop back pain. Furthermore, smoking can slow healing, prolonging pain for people who have had back injuries, back surgery, or broken bones.

What Are the Causes of Back Pain?

It is important to understand that back pain is a symptom of a medical condition, not a diagnosis itself. Medical problems that can cause back pain include the following:

Mechanical problems: A mechanical problem is a problem with the way your spine moves or the way you feel when you move your spine in certain ways. Perhaps the most common mechanical cause of back pain is a condition called intervertebral disc degeneration, which simply means that the discs located between the vertebrae of the spine are breaking down with age. As they deteriorate, they lose their cushioning ability. This problem can lead to pain if the back is stressed. Other mechanical causes of back pain include spasms, muscle tension, and ruptured discs, which are also called herniated discs.

Injuries: Spine injuries such as sprains and fractures can cause either short-lived or chronic pain. Sprains are tears in the ligaments that support the spine, and they can occur from twisting or lifting improperly. Fractured vertebrae are often the result of osteoporosis, a condition that causes weak, porous bones. Less commonly, back pain may be caused by more severe injuries that result from accidents and falls.

Acquired conditions and diseases: Many medical problems can cause or contribute to back pain. They include scoliosis, which causes curvature of the spine and does not usually cause pain until mid-life; spondylolisthesis; various forms of arthritis, including osteoarthritis, rheumatoid arthritis, and ankylosing spondylitis; and spinal stenosis, a narrowing of the spinal column that puts pressure on the spinal cord and nerves. While osteoporosis itself is not painful, it can lead to painful fractures of the vertebrae. Other causes of back pain include pregnancy; kidney stones or infections; endometriosis, which is the buildup of uterine tissue in places outside the uterus; and fibromyalgia, which causes fatigue and widespread muscle pain.

Infections and tumors: Although they are not common causes of back pain, infections can cause pain when they involve the vertebrae, a condition called osteomyelitis, or when they involve the discs that cushion the vertebrae, which is called discitis. Tumors, too, are relatively rare causes of back pain. Occasionally, tumors begin in the back, but more often they appear in the back as a result of cancer that has spread from elsewhere in the body.

Although the causes of back pain are usually physical, it is important to know that emotional stress can play a role in how severe pain is and how long it lasts. Stress can affect the body in many ways, including causing back muscles to become tense and painful.

Can Back Pain Be Prevented?

One of the best things you can do to prevent back pain is to exercise regularly and keep your back muscles strong. Four specific types of exercises are described in [How Is Back Pain Treated?](#) All may help you avoid injury and pain. Exercises that increase balance and strength can decrease your risk of falling and injuring your back or breaking bones. Exercises such as Tai Chi and yoga – or any weight-bearing exercise that challenges your balance – are good ones to try.

Eating a healthy diet also is important. For one thing, eating to maintain a healthy weight – or to lose weight, if you are overweight – helps you avoid putting unnecessary and injury-causing stress and strain on your back. To keep your spine strong, as with all bones, you need to get enough calcium and vitamin D every day. These nutrients help prevent osteoporosis, which is responsible for a lot of the bone fractures that lead to back pain. Calcium is found in dairy products; green, leafy vegetables; and fortified products, like orange juice. Your skin makes vitamin D when you are in the sun. If you are not outside much, you can obtain vitamin D from your diet: almost all milk and some other foods are fortified with this nutrient. Most adults don't get enough calcium and vitamin D, so talk to your doctor about how much you need per day, and consider taking a nutritional supplement or a multivitamin.

Practicing good posture, supporting your back properly, and avoiding heavy lifting when you can may all help you prevent injury. If you do lift something heavy, keep your back straight. Don't bend over the item; instead, lift it by putting the stress on your legs and hips.

When Should I See a Doctor for Pain?

In most cases, it is not necessary to see a doctor for back pain because pain usually goes away with or without treatment. However, a trip to the doctor is probably a good idea if you have numbness or tingling, if your pain is severe and doesn't improve with medications and rest, or if you have pain after a fall or an injury. It is also important to see your doctor if you have pain along with any of the following problems: trouble urinating; weakness, pain, or numbness in your legs; fever; or unintentional weight loss. Such symptoms could signal a serious problem that requires treatment soon.

Which Type of Doctor Should I See?

Many different types of doctors treat back pain, from family physicians to doctors who specialize in disorders of the nerves and musculoskeletal system. In most cases, it is best to see your primary care physician first. In many cases, he or she can treat the problem. In other cases, your doctor may refer you to an appropriate specialist.

How Is Back Pain Diagnosed?

Diagnosing the cause of back pain requires a medical history and a physical exam. If necessary, your doctor may also order medical tests, which may include x rays.

During the medical history, your doctor will ask questions about the nature of your pain and about any health problems you and close family members have or have had. Questions might include the following:

- Have you fallen or injured your back recently?
- Does your back feel better – or hurt worse – when you lie down?
- Are there any activities or positions that ease or aggravate pain?
- Is your pain worse or better at a certain time of day?
- Do you or any family members have arthritis or other diseases that might affect the spine?
- Have you had back surgery or back pain before?
- Do you have pain, numbness and/or tingling down one or both legs?

During the physical exam, your doctor may

- watch you stand and walk
- check your reflexes to look for slowed or heightened reflexes, either of which might suggest nerve problems
- check for fibromyalgia by examining your back for tender points, which are points on the body that are painful when pressure is applied to them
- check for muscle strength and sensation
- check for signs of nerve root irritation.

Often a doctor can find the cause of your pain with a physical and medical history alone. However, depending on what the history and exam show, your doctor may order medical tests to help find the cause.

Following are some tests your doctor may order:

What Is the Difference Between Acute and Chronic Pain?

Pain that hits you suddenly – after falling from a ladder, being tackled on the football field, or lifting a load that is just too heavy, for example – is acute pain. Acute pain comes on quickly and often leaves just as quickly. To be classified as acute, pain should last no longer than 6 weeks. Acute pain is the most common type of back pain.

Chronic pain, on the other hand, may come on either quickly or slowly, and it lingers a long time. In general, pain that lasts more than 3 months is considered chronic. Chronic pain is much less common than acute pain.

How Is Back Pain Treated?

Treatment for back pain generally depends on what kind of pain you experience: acute or chronic.

Acute Back Pain

Acute back pain usually gets better on its own and without treatment, although you may want to try acetaminophen, aspirin, or ibuprofen to help ease the pain. Perhaps the best advice is to go about your usual activities as much as you can with the assurance that the problem will clear up. Getting up and moving around can help ease stiffness, relieve pain, and have you back doing your regular activities sooner. *Exercises are not usually advisable for acute back pain, nor is surgery.*

Chronic Back Pain

Treatment for chronic back pain falls into two basic categories: the kind that requires an operation and the kind that does not. In the vast majority of cases, back pain does not require surgery. Doctors will almost always try nonsurgical treatments before recommending surgery. In a very small percentage of cases – when back pain is caused by a tumor, an infection, or a nerve root problem called cauda equina syndrome, for example – prompt surgery is necessary to ease the pain and prevent further problems.

Following are some of the more commonly used treatments for chronic back pain.

Nonoperative treatments

Hot or cold: Hot or cold packs – or sometimes a combination of the two – can be soothing to chronically sore, stiff backs. Heat dilates the blood vessels, improving the supply of oxygen that the blood takes to the back and reducing muscle spasms. Heat also alters the sensation of pain. Cold may reduce inflammation by decreasing the size of blood

vessels and the flow of blood to the area. Although cold may feel painful against the skin, it numbs deep pain. Applying heat or cold may relieve pain, but it does not cure the cause of chronic back pain.

Exercise: Although exercise is usually not advisable for acute back pain, proper exercise can help ease chronic pain and perhaps reduce its risk of returning. The following four types of exercise are important to general physical fitness and may be helpful for certain specific causes of back pain:

Flexion: The purposes of flexion exercises, which are exercises in which you bend forward, are to 1) widen the spaces between the vertebrae, thereby reducing pressure on the nerves; 2) stretch muscles of the back and hips; and 3) strengthen abdominal and buttock muscles. Many doctors think that strengthening the muscles of the abdomen will reduce the load on the spine. *One word of caution: If your back pain is caused by a herniated disc, check with your doctor before performing flexion exercises because they may increase pressure within the discs, making the problem worse.*

Extension: With extension exercises, you bend backward. They may minimize radiating pain, which is pain you can feel in other parts of the body besides where it originates. Examples of extension exercises are leg lifting while lying prone and raising the trunk while lying prone. The theory behind these exercises is that they open up the spinal canal in places and develop muscles that support the spine.

Stretching: The goal of stretching exercises, as their name suggests, is to stretch and improve the extension of muscles and other soft tissues of the back. This can reduce back stiffness and improve range of motion.

Aerobic: Aerobic exercise is the type that gets your heart pumping faster and keeps your heart rate elevated for a while. For fitness, it is important to get at least 30 minutes of aerobic (also called cardiovascular) exercise three times a week. Aerobic exercises work the large muscles of the body and include brisk walking, jogging, and swimming. For back problems, you should avoid exercise that requires twisting or vigorous forward flexion, such as aerobic dancing and rowing, because these actions may raise pressure in the discs and actually do more harm than good. In addition, avoid high-impact activities if you have disc disease. If back pain or your fitness level makes it impossible to exercise 30 minutes at a time, try three 10-minute sessions to start with and work up to your goal. But first, speak with your doctor or physical therapist about the safest aerobic exercise for you.

Complementary and alternative treatments: When back pain becomes chronic or when medications and other conventional therapies do not relieve it, many people try complementary and alternative treatments. While such therapies won't cure diseases or repair the injuries that cause pain, some people find them useful for managing or relieving pain. Following are some of the most commonly used complementary therapies.

Manipulation: Spinal manipulation refers to procedures in which professionals use their hands to mobilize, adjust, massage, or stimulate the spine or surrounding tissues. This type of therapy is often performed by osteopathic doctors and chiropractors. It tends to be most effective in people with uncomplicated pain and when used with other therapies. *Spinal manipulation is not appropriate if you have a medical problem such as osteoporosis, spinal cord compression, or inflammatory arthritis (such as rheumatoid arthritis) or if you are taking blood-thinning medications such as warfarin (Coumadin) or heparin (Calciparine, Liquaemin).*

Transcutaneous Electrical Nerve Stimulation (TENS): TENS involves wearing a small box over the painful area that directs mild electrical impulses to nerves there. The theory is that stimulating the nervous system can modify the perception of pain. Early studies of TENS suggested it could elevate the levels of endorphins, the body's natural pain-numbing chemicals, in the spinal fluid. *But subsequent studies of its effectiveness against pain have produced mixed results.*

Acupuncture: This ancient Chinese practice has been gaining increasing acceptance and popularity in the United States. It is based on the theory that a life force called Qi (pronounced chee) flows through the body along certain channels, which if blocked can cause illness. According to the theory, the insertion of thin needles at precise locations along these channels by practitioners can unblock the flow of Qi, relieving pain and restoring health.

Although few Western-trained doctors would agree with the concept of blocked Qi, some believe that inserting and then stimulating needles (by twisting or passing a low-voltage electrical current through them) may foster the production of the body's natural pain-numbing chemicals, such as endorphins, serotonin, and acetylcholine.

A consensus panel convened by the National Institutes of Health (NIH) in 1997 concluded that there is clear evidence this treatment is effective for some pain conditions, including postoperative dental pain. Although there is less convincing evidence to support using acupuncture for back pain and some other pain conditions, the panel concluded that acupuncture may be effective when used as part of a comprehensive treatment plan for low back pain, fibromyalgia, and several other conditions.

Acupressure: As with acupuncture, the theory behind acupressure is that it unblocks the flow of Qi. The difference between acupuncture and acupressure is that no needles are used in acupressure. Instead, a therapist applies pressure to points along the channels with his or her hands, elbows, or even feet. (In some cases, patients are taught to do their own acupressure.) *Acupressure has not been well studied for back pain.*

Rolfing: A type of massage, rolfing involves using strong pressure on deep tissues in the back to relieve tightness of the fascia, a sheath of tissue that covers the muscles, that can cause or contribute to back pain. The theory behind rolfing is that releasing muscles and tissues from the fascia enables the back to properly align itself. *So far, the usefulness of rolfing for back pain has not been scientifically proven.*