How Classical Guitarists Can Alleviate, Treat, and Eliminate Low Back Pain

By Douglas Niedt

Some Stats to Get You Started

- Experts estimate that as much as 80% of the population will experience a back problem at some time in their lives. It is the second or third most common reason people go to the doctor (#1 is skin disorders). Unfortunately, one third of those who suffer from pain do not seek professional help for pain relief.
- Only one person in ten finds the primary cause of their pain.
- More than half of Americans who experience low back pain spend the majority of their workday sitting (many classical guitarists fall into this category).
- Most low back pain is not serious; much of the time it is caused by overuse, strain, or injury. Rarely, low back pain is caused by a more serious condition such as a herniated disc or osteoarthritis.
- Effectiveness of treatments (this is "votes by the folks", not scientific testing):

  58% give a thumbs up to prescription medications.

  54% give a thumbs up to chiropractic treatment.

  48% give a thumbs up to physical therapy.

- The good (and bad) news:

  90% of cases are resolved within six weeks.

  But, 60-80% have a recurrence within two years.

  Only 7% develop chronic back pain.

Basic Facts

Fred Cicetti at LiveScience.com tells us:

Back pain is more common among people who are not physically fit. Weak back and abdominal muscles may not properly support the spine. If you're sedentary most of the time and then exert yourself on rare occasions, you are more likely to injure your back than someone who exercises daily.

If you're carrying a big belly, you put added stress on the muscles in your low back and are a candidate for agony.

Your job can be a major influence on back health. If your work requires heavy lifting or sitting all day, you risk hurting your back.

Mechanical problems can cause back pain. Perhaps the most common mechanical cause of back pain is disc degeneration. The cushioning discs between the vertebrae of the spine break down with age. If there is stress on these compromised discs, they press against spinal nerves and you may experience what feels like a toothache in a buttock. At almost any age, an injury can force these discs to bulge or rupture causing the same kind of pain.

Don't Immediately Blame the Guitar

The cause of your pain may have nothing to do with playing the guitar. If you are experiencing low back pain, try to analyze what caused it. Many times, a student has come into a lesson with back pain and told me it was caused by practicing the guitar. After careful questioning, we discover *the pain is being caused by something else*. Common suspects are:

Too much sitting at the computer or desk in general.

Too much driving

Lifting a heavy object.

Sleeping on a bad mattress or pillow.

Other physical exercise or working out.

Gardening

Raking

Carpentry

Cleaning house

Shoveling

Painting

Scrubbing

Tennis

Golf

Skiing

The guitarist may blame the guitar because the back pain is very noticeable or is exacerbated when playing the guitar. Therefore, even though the guitar did not cause the injury, while the injury is being treated you may have to temporarily stop or reduce the time you spend playing the guitar. But, because the guitar was not the cause of the injury, there may be no reason to significantly change your guitar-playing routine in the long-term.

Regardless of the Cause, Known or Unknown of my Low Back Pain, What Can I Do to be More Comfortable when I Play my Guitar?

Use a Good Chair

Selecting a good chair for playing the classical guitar is crucial. Comfort and correct posture will depend largely on the type of chair the guitarist uses. It can reduce or eliminate current pain, prevent future pain, reduce fatigue, and reduce the amount of work the body must expend to sit efficiently.

For the spine to be truly balanced over the "sit bones" that place the hip joint in its least stressful position, the seat needs to be tilted forward. Chairs that tilt forward usually have fixed or adjustable angles between 5 and 30 degrees. However, according to performance trials, angles greater than 15 degrees may feel unstable and difficult to adapt to.

If you cannot find or afford a chair with forward inclination, place a foam wedge or a sloped cushion on the chair to provide the necessary tilt. Or, set the rear legs of a standard chair on a piece of wood one to two inches high. Once you find an angle you like, if the chair is relatively inexpensive, you can saw off an inch or so off the front legs to produce a forward-sloped chair.

The height of the chair is also important. The ideal height will vary with the height and body characteristics of the player.

Another solution is to buy an inexpensive adjustable-height office chair. Don't install the wheels or backrest. If you sit on the chair (backwards) you have a forward-sloping chair. Plus, it is adjustable.

THE BEST GUITAR CHAIR I HAVE FOUND

The Adjustrite Folding Musician's Chair is an excellent chair. The height of all four legs is adjustable in one-inch increments. Therefore, you can use it as a horizontal chair, tilted forward (which is what we want), tilted back (not recommended), PLUS adjust the overall height! The standard model is for players six feet tall or shorter with a front-of-seat height of 15-20 inches. A model is also available for tall players over six feet tall with a front-of-seat-height of 21-26 inches.

The standard model is available on Amazon. Both models are available from Shar Music. Here is the standard version. And here is the tall version. It is 18 lbs and folds up so you take it on gigs. It isn't a

"beautiful" chair but it is sturdy. The standard version is $179 USD and the tall version $209 USD. Not cheap, but well worth it.

I like more padding on my chair so I add a cushion on the seat: the I-PURE ITEMS Coccyx Orthopedic Comfortable Memory Foam Chair and Car Seat Cushion for Lower Back, Tailbone and Sciatica Pain Relief (Black) available on Amazon. I tested a dozen different cushions from Amazon and preferred this one. But there are many others from which to choose that you may like better.

Although the cushion is designed for the "Pure Items" logo to be at the rear of the seat, it is also comfortable the other way and even upside down. I find it very helpful to change the position of the cushion frequently. Your body and back appreciate change rather than a static state.

Sitting Position

If you are experiencing low back pain, it is important to re-evaluate your sitting position. You will find many schools of thought on "correct" sitting position. Guess what? There is no correct sitting position. And everyone has their opinion of what constitutes a good sitting position. Guitarist Renato Bellucci tells the story that one day he told renowned pedagogue Abel Carlevaro that he admired the playing of guitar great John Williams. Carlevaro replied, "He would play a lot better if he used a better sitting position." Although there is no one perfect sitting position and all the famous players sit differently, there are general principles to observe.

Most important, bring the guitar to your body. Don't bring your body to the guitar. Each player has unique body characteristics and the position of the guitar must adapt to these unique characteristics. Put your body in a comfortable position and then position the guitar.

Many teachers speak of "alignment". A better word is "symmetry". It is pretty basic.

1. Place both feet flat on the floor. The use of a footstool prevents this of course. Consider using a guitar support.

2. Keep both feet parallel, about shoulder width, and in front of you. Don't sit with the left foot forward and the right foot back. Don't place the right foot out to the right. Again, the use of a footstool encourages asymmetrical placements. Consider using a guitar support.

Nitin Arora describes a neat trick to find good placement for your feet and thighs: "Sit with your feet touching each other. Do the same with your knees. Now, let go of the tension in your legs. Your knees and thighs will naturally move away from each other and point outward. The result is about the angle and placement you want for your thighs and knees. You can then move your feet under their respective knees/thighs. Point your feet in the same direction as your knees/thighs."

3. Keep the shoulders level. Don't hunch up or drop the left shoulder. Keep the head of the guitar in the neighborhood of a 45-degree angle.

4. Keep the shoulders parallel. Don't move the right shoulder forward. Don't allow the head of the guitar to be too far back.

5. Do not lean the torso forward or backward. Do not twist the torso to the left (or right).

6. Keep the sound hole angled upward. Pointing it straight ahead or downward will cause strain in the lower back.

7. Although it is desirable to maintain a symmetrical position, do not hold the body rigid. Feel free to make minor movements and adjustments as you play.

Those of us classical players who use footstools (I have used one for over 50 years) or flamenco players who sit cross-legged, use asymmetrical sitting positions. If we choose to use a footstool, we accept the asymmetry of the positioning of our legs and feet, but we can still maintain symmetry in the torso and shoulders.

However, if you are experiencing low back pain, it is certainly worth trying a guitar support at least during practice if not during performances. *While it is difficult to achieve perfect symmetry even with a guitar support*, you will get a lot closer than when using a foot stool.

For a detailed discussion of sitting position, have a look at Nitin Arora's humaneguitarist.org.

Other Strategies to Reduce or Eliminate Low Back Pain

Practicing

Do not “binge practice”. Maintain an even practice schedule. Do not practice 3 hours once a week. Do not practice 30 minutes every day and then 6 hours on Sundays. **Play for approximately the same length of time every day.** Binge practice is one of the leading causes of injury and back pain among

amateur players. If you must stop playing for several days or are just getting back into playing after a hiatus, *ease* back into playing over several days or weeks. Start with 15-30 minutes a day and *gradually* increase your playing time.

TAKE BREAKS. Take a break every 10-15 minutes. Stand up, and move about for 1-2 minutes. Take a 10-minute break every hour. Take a short walk outside or walk around inside the house. The important thing is to *get out of the chair and move*! Do some mild stretching, touch your toes, loosen up your neck and shoulder muscles as well. **If you are like me and become so engrossed in your playing that you forget or don't want to stop, set a timer and place it at the other end of the room to force yourself to get up to turn it off.**

Short breaks will not only reduce low back pain. They will also promote relaxation and refresh your mind for better concentration when you return to practice. They will also help to reduce mindless repetition and help you focus on Deliberate Practice.

Music Stand

I always assume my students use a music stand. To my dismay, I discover they are using a desk or coffee table as their music stand. This can cause craning of the neck, leaning the torso forward, and other distortions of the sitting and hand positions causing discomfort or leading to injury. Use a music stand and adjust its position and height so the music is easily viewed without craning or twisting the neck or leaning or twisting the torso.

Guitar Supports

Many physical therapists, physicians, and researchers see the foot stool as a major villain in guitarists' injuries and playing discomfort. The raising of the left foot causes several musculoskeletal adjustments and imbalances affecting numerous parts of the body. Alternative guitar supports are highly recommended by health professionals. It is best to try different models to see which is best for you. They can be expensive, ranging from $25-100, but it will be worth spending a bit of money on a device that just might prevent, eliminate, or reduce your low back pain now and in the years to come.

I have used a foot stool my entire career. However, I think the guitar supports are wonderful. The only reason I continue to use a footstool is that I like the looks of it better on the concert stage.

I should also point out that many pros admit to worrying whether the suction cups on their support are going to hold during a concert performance. This is especially true of supports such as the Gitano which only have one suction cup. That is why some players prefer the magnet solution of the Barnett (Sageworks) guitar support.

Here is a fairly complete list of guitar supports available today:

A-Frame: Made in USA. Suction cup based. Spring steel, Velcro, suction cups, and PVC tubing. Widely available. Strings by Mail has it.

Barnett Guitar Support: Made in USA. Magnet based. Wood, leather. The Barnett support is now manufactured by Sagework Guitar Supports, LLC and has been renamed the Atlas Guitar Support

(wooden model) and the Umbra Guitar Support (molded plastic model). Sagework Guitar Supports.

Boston playing position stand: Guitar Holder, modern version of Aguado's Tripodium. Metal. Available from Maison Casset

Dynarette: Made in Sweden. Cushion. Widely available. Website.

Efel: Made in Czech Republic. Endorsed by Stephen Rak. Suction cup based. Plastic. Widely available. Strings by Mail carries it.

Ergoplay: Made in Germany. Suction cup based. Metal. Widely available. Several models are available at Strings by Mail.

Gitano: Made in Germany. Metal frame with two suckers and slip-resistant material. Widely available. Available at Strings by Mail.

GuitaRest: Made in Canada. Suction cup based. Metal. Available from De Oro Guitar Supports.

König & Meyer Guitar Performer Stand: Guitar Holder. Made in Germany. Metal. Available from manufacturer.

Lap-Strap: This is an alternative to suction-cup based supports. The idea is the brainchild of Thomas F. Heck. Read about it here. For those who don't want to put a strap button on their guitar, one could attach the strap to a 3-inch suction cup with hook attached instead (available on Amazon and in craft stores and some hardware/home supply stores).

Leg rest (Janssen Guitarest): Suction cup based. Stainless steel, wood and brass. See website.

Liikanen Classical Guitar Knee Support, Tukeva: Made in Finland. Suction cup based. Wood. Available at Classical Guitars Plus.

Litchfield Guitar Support: Made in Australia. Suction cup based. Wood. Available from Litchfield Guitars.

Murata GR-1: Made in Japan. Suction cup based. Metal, plastic. Available at Strings by Mail.

Murata GR 2 and GR-2B: Made in Japan. Without suction cups, attaches to the base of the instrument with four rubber feet. Metal, plastic. Available at Strings by Mail.

Neck Up: Made in USA. Suction cup based. Leather. Available at Strings by Mail. Manufacturer's website.

Oasis Guitar Support Cushion: Available at Strings by Mail.

Ponticello: Made in Germany. Suction cup based. Wood. Available from manufacturer.

Sagework Guitar Supports: Previously Barnett Guitar Supports. The Barnett support is now manufactured by Sagework Guitar Supports, LLC and has been renamed the Atlas Guitar Support

(wooden model) and the Umbra Guitar Support (molded plastic model). Made in USA. Magnet based. Wood, leather. Sold under the management of Sagework Guitar Supports. Also, available at Strings by Mail.

Tenuto: Made in Canada. Suction cup based. Metal. Available from manufacturer.

Wolf guitar rest: Made in the Netherlands. No suction cups. Attaches to the base of the instrument with four rubber feet. Metal. Manufacturer website. Available from Strings by Mail.

For more information on guitar supports, see Strings by Mail's Best Guitar Support Guide.

Stand Up and Use a Strap

For those guitarists who are experiencing severe low back pain and sitting is not an option, using a guitar strap is a great solution. **However, it is also a fascinating solution even for players with minimal or no pain. It is a lot of fun to be able to stand and walk around as you play!**

David Stevenson, developer and patent holder of the groundbreaking A-Frame Guitar Support in the early 1990's and now a partner in the manufacture by Sageworks of the Barnett Guitar Support (the one that uses magnets to adhere the support to the guitar), is also the developer of the new X-Strap which he believes is a potential game changer for the classical guitar.

He mentions that he saw a chamber string ensemble where the entire group including the cellos performed standing up. I too, have seen a few baroque chamber ensembles do the same thing. He and I (and many others) share the feeling that these groups project a joyous and energizing expressiveness largely because they are standing, moving about, and can connect with each other and the audience far more effectively than sitting musicians.

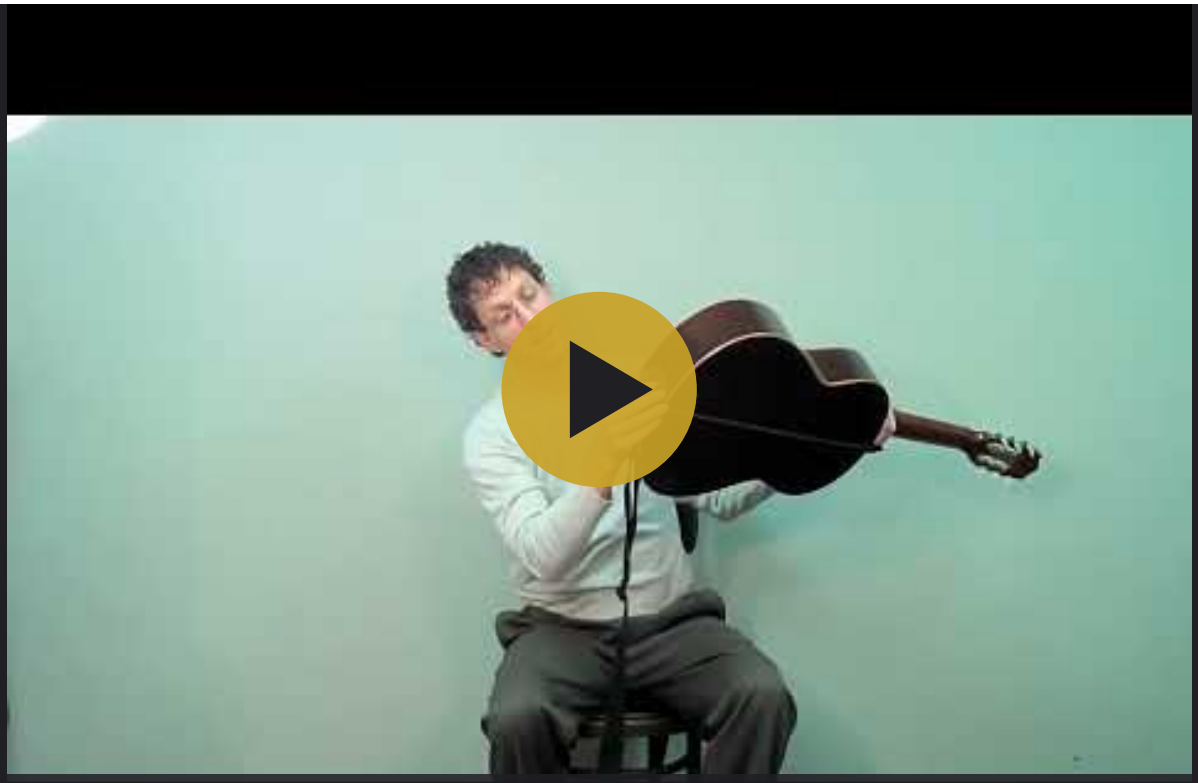
As a solo artist, I have come up against a wall where many performing arts series tend not to book classical guitarists because it is hard for them to sell a guy sitting stationary in a chair playing relatively quietly, for two hours to their audiences. Concert series gravitate towards hiring ensembles (more bodies onstage), dance ensembles (movement on stage), or singers and violinists (again people who move). "Stationary artists" such as pianists and cellists sell, but only if they are very famous, have recently won a major prize, or are very good-looking. Sorry folks, that's showbiz.

Understand, as Stevenson said, we aren't talking about being Eddie Van Halen or the late, great Chuck Berry! But by using a strap, the classical guitarist can move more freely and be more expressive and engaging in their stage presence. Plus, it allows the player to feel free and relieve tension in the body. For some players, that might even have a positive effect on lessening performance anxiety.

But back to our focus on low back pain, famed guitar pedagogue Aaron Shearer explains that "using a strap promotes back and shoulder alignment, avoids lower back pain associated with the elevated left thigh and provides maximum freedom for both hands in playing the guitar."

Guitarist Joseph Pecoraro at the North Carolina School of the Arts has an excellent video explaining the advantages of using a strap and how to use a standard guitar strap and the X-Strap on a classical guitar.

Watch:



Classical Guitar Strap Lesson by Joseph Pecoraro, North Carolina School of the Arts

In my opinion, the best standard straps for a classical guitarist are those made with a suede finish. The suede prevents movement and slippage of the strap and guitar on your shoulders, keeping the instrument in a surprisingly stable position.

As Pecoraro mentions, for those who don't want to put a strap button on their guitar, one could instead attach the strap to a 3-inch suction cup with hook attached (available on Amazon, in craft stores, and some hardware/home supply stores). It is also an easy and inexpensive way to try out a strap solution.

This suction cup has a plastic hook.

They are also available with metal hooks. As shown in Pecoraro's video, two cups may be used, one large and one small. Or, one large one could be used at the bottom of the guitar and the other end of the strap tied to the head of the guitar. The X-Strap is available with its own custom suction-cup adapter (see below).

Here are a few straps for or adaptable to the classical guitar:

BG GCL classical guitar strap: Available on Amazon. Distributor website. These have been used by folk, pop, and mariachi players for many years but in my opinion, are very unstable.

Shearer Classic Guitar Strap: Website. Also see Aaron Shearer Foundation. Download installation guide here.

Standard Guitar Straps: Use with strap buttons or with suction cups with hooks as explained in Pecoraro video. Suede are best. Widely available.

X-Strap. Shown in Pecoraro's video: Available on Amazon. Suction-cup adapter (instead of drilling strap buttons) for the X-Strap also available on Amazon. More info here.

Seek Help, Make Changes

Self-diagnosis and treatment is unwise. If your back pain is ongoing it is important to see a medical professional. Although most cases of back pain are mechanical or non-organic, they can also be caused by serious conditions, such as inflammatory arthritis, infection, fracture or cancer. It's a good idea to have these conditions ruled out.

SEE A DOCTOR. With the help of a professional, try to figure out what is causing your low back pain so you are doing the right things to treat it effectively and quickly.

When you consider how much time and money you have spent on your guitar, accessories, and lessons, even moderate amounts of money spent on doctor or physical therapy visits may pay off handsomely in the years to come and enable you to continue to experience the joy of making music.

Also experiment: get a good chair, re-examine your sitting position, be mindful of your practice routine, use a properly positioned music stand, try a variety of guitar supports, spend a few bucks on a strap or two. It may be the difference between being able to continue playing the guitar for many years or having to hang it up.

I HAVE LISTS

Following are two lists. One is based on traditional Western medicine, the other on "alternative" treatments.

The first list includes:

1. A general discussion of low back pain
2. Possible causes
3. Risk factors
4. Methods used to diagnose the causes of the pain
5. Treatments and evaluations of the effectiveness of each treatment
6. Basic recommendations for keeping one's back healthy

For those who don't wish to follow traditional Western medicine, the second list is a list of alternative treatments with evaluations of the effectiveness of each treatment.

READ BOTH LISTS! I know this is a lot of information but it is fascinating and both lists may prove very useful.

TRADITIONAL WESTERN MEDICINE:

From the National Institute of Neurological Disorders and Stroke (one of the institutes of the National Institutes of Health):

If you have lower back pain, you are not alone. About 80 percent of adults experience low back pain at some point in their lifetimes. It is the most common cause of job-related disability and a leading contributor to missed work days. In a large survey, more than a quarter of adults reported experiencing low back pain during the past 3 months.

Men and women are equally affected by low back pain, which can range in intensity from a dull, constant ache to a sudden, sharp sensation that leaves the person incapacitated. Pain can begin

abruptly as a result of an accident or by lifting something heavy, or it can develop over time due to age-related changes of the spine. Sedentary lifestyles also can set the stage for low back pain, especially when a weekday routine of getting too little exercise is punctuated by strenuous weekend workout.

Most low back pain is acute, or short term, and lasts a few days to a few weeks. It tends to resolve on its own with self-care and there is no residual loss of function. The majority of acute low back pain is mechanical in nature, meaning that there is a disruption in the way the components of the back (the spine, muscle, intervertebral discs, and nerves) fit together and move.

Subacute low back pain is defined as pain that lasts between 4 and 12 weeks.

Chronic back pain is defined as pain that persists for 12 weeks or longer, even after an initial injury or underlying cause of acute low back pain has been treated. About 20 percent of people affected by acute low back pain develop chronic low back pain with persistent symptoms at one year. In some cases, treatment successfully relieves chronic low back pain, but in other cases pain persists despite medical and surgical treatment.

The magnitude of the burden from low back pain has grown worse in recent years. In 1990, a study ranking the most burdensome conditions in the U.S. in terms of mortality or poor health as a result of disease put low back pain in sixth place; in 2010, low back pain jumped to third place, with only ischemic heart disease and chronic obstructive pulmonary disease ranking higher.

What structures make up the back?

The lower back where most back pain occurs includes the five vertebrae (referred to as L1-L5) in the lumbar region, which supports much of the weight of the upper body. The spaces between the vertebrae are maintained by round, rubbery pads called intervertebral discs that act like shock absorbers throughout the spinal column to cushion the bones as the body moves. Bands of tissue known as ligaments hold the vertebrae in place, and tendons attach the muscles to the spinal column. Thirty-one pairs of nerves are rooted to the spinal cord and they control body movements and transmit signals from the body to the brain.

What causes low back pain?

The vast majority of low back pain is mechanical in nature. In many cases, low back pain is associated with spondylosis, a term that refers to the general degeneration of the spine associated with normal wear and tear that occurs in the joints, discs, and bones of the spine as people get older. Some examples of mechanical causes of low back pain include:

- **Sprains and strains** account for most acute back pain. Sprains are caused by overstretching or tearing ligaments, and strains are tears in tendon or muscle. Both can occur from twisting or lifting something improperly, lifting something too heavy, or overstretching. Such movements may also trigger spasms in back muscles, which can also be painful.
- **Intervertebral disc degeneration** is one of the most common mechanical causes of low back pain, and it occurs when the usually rubbery discs lose integrity as a normal process of aging. In a healthy back, intervertebral discs provide height and allow bending, flexion, and torsion of the lower back. As the discs deteriorate, they lose their cushioning ability.

- **Herniated or ruptured discs** can occur when the intervertebral discs become compressed and bulge outward (herniation) or rupture, causing low back pain.
- **Radiculopathy** is a condition caused by compression, inflammation and/or injury to a spinal nerve root. Pressure on the nerve root results in pain, numbness, or a tingling sensation that travels or radiates to other areas of the body that are served by that nerve. Radiculopathy may occur when spinal stenosis or a herniated or ruptured disc compresses the nerve root.
- **Sciatica** is a form of radiculopathy caused by compression of the sciatic nerve, the large nerve that travels through the buttocks and extends down the back of the leg. This compression causes shock-like or burning low back pain combined with pain through the buttocks and down one leg, occasionally reaching the foot. In the most extreme cases, when the nerve is pinched between the disc and the adjacent bone, the symptoms may involve not only pain, but numbness and muscle weakness in the leg because of interrupted nerve signaling. The condition may also be caused by a tumor or cyst that presses on the sciatic nerve or its roots.
- **Spondylolisthesis** is a condition in which a vertebra of the lower spine slips out of place, pinching the nerves exiting the spinal column.
- **A traumatic injury**, such as from playing sports, car accidents, or a fall can injure tendons, ligaments or muscle resulting in low back pain. Traumatic injury may also cause the spine to become overly compressed, which in turn can cause an intervertebral disc to rupture or herniate, exerting pressure on any of the nerves rooted to the spinal cord. When spinal nerves become compressed and irritated, back pain and sciatica may result.
- **Spinal stenosis** is a narrowing of the spinal column that puts pressure on the spinal cord and nerves that can cause pain or numbness with walking and over time leads to leg weakness and sensory loss.
- **Skeletal irregularities** include scoliosis, a curvature of the spine that does not usually cause pain until middle age; lordosis, an abnormally accentuated arch in the lower back; and other congenital anomalies of the spine.

Low back pain is rarely related to serious underlying conditions, but when these conditions do occur, they require immediate medical attention. Serious underlying conditions include:

- **Infections** are not a common cause of back pain. However, infections can cause pain when they involve the vertebrae, a condition called osteomyelitis; the intervertebral discs, called discitis; or the sacroiliac joints connecting the lower spine to the pelvis, called sacroiliitis.
- **Tumors** are a relatively rare cause 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.
- **Cauda equina syndrome** is a serious but rare complication of a ruptured disc. It occurs when disc material is pushed into the spinal canal and compresses the bundle of lumbar and sacral nerve roots, causing loss of bladder and bowel control. Permanent neurological damage may result if this syndrome is left untreated.

- **Abdominal aortic aneurysms** occur when the large blood vessel that supplies blood to the abdomen, pelvis, and legs becomes abnormally enlarged. Back pain can be a sign that the aneurysm is becoming larger and that the risk of rupture should be assessed.
- **Kidney stones** can cause sharp pain in the lower back, usually on one side.

Other underlying conditions that predispose people to low back pain include:

- **Inflammatory diseases of the joints** such as arthritis, including osteoarthritis and rheumatoid arthritis as well as spondylitis, an inflammation of the vertebrae, can also cause low back pain. Spondylitis is also called spondyloarthritis or spondyloarthropathy.
- **Osteoporosis** is a metabolic bone disease marked by a progressive decrease in bone density and strength, which can lead to painful fractures of the vertebrae.
- **Endometriosis** is the buildup of uterine tissue in places outside the uterus.
- **Fibromyalgia**, a chronic pain syndrome involving widespread muscle pain and fatigue.

What are the risk factors for developing low back pain?

Beyond underlying diseases, certain other risk factors may elevate one's risk for low back pain, including:

Age: The first attack of low back pain typically occurs between the ages of 30 and 50, and back pain becomes more common with advancing age. As people grow older, loss of bone strength from osteoporosis can lead to fractures, and at the same time, muscle elasticity and tone decrease. The intervertebral discs begin to lose fluid and flexibility with age, which decreases their ability to cushion the vertebrae. The risk of spinal stenosis also increases 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 beneficial for the maintaining the integrity of intervertebral discs.

Pregnancy is commonly accompanied by low back pain, which results from pelvic changes and alterations in weight loading. Back symptoms almost always resolve postpartum.

Weight gain: Being overweight, obese, or quickly gaining significant amounts of weight can put stress on the back and lead to low back pain.

Genetics: Some causes of back pain, such as ankylosing spondylitis, a form of arthritis that involves fusion of the spinal joints leading to some immobility of the spine, have a genetic component.

Occupational risk factors: Having a job that requires heavy lifting, pushing, or pulling, particularly when it 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 a chair with inadequate back support.

Mental health factors: Pre-existing mental health issues such as anxiety and depression can influence how closely one focuses on their pain as well as their perception of its severity. Pain that becomes chronic also can contribute to the development of such psychological factors. Stress can affect the body in numerous ways, including causing muscle tension.

Backpack overload in children: Low back pain unrelated to injury or other known cause is unusual in pre-teen children. However, a backpack overloaded with schoolbooks and supplies can strain the back and cause muscle fatigue. The American Academy of Orthopaedic Surgeons recommends that a child's backpack should weigh no more than 15 to 20 percent of the child's body weight.

How is low back pain diagnosed?

A complete medical history and physical exam can usually identify any serious conditions that may be causing the pain. During the exam, a health care provider will ask about the onset, site, and severity of the pain; duration of symptoms and any limitations in movement; and history of previous episodes or any health conditions that might be related to the pain. Along with a thorough back examination, neurologic tests are conducted to determine the cause of pain and appropriate treatment. The cause of chronic lower back pain is often difficult to determine even after a thorough examination.

Imaging tests are not warranted in most cases. Under certain circumstances, however, imaging may be ordered to rule out specific causes of pain, including tumors and spinal stenosis. Imaging and other types of tests include:

X-ray is often the first imaging technique used to look for broken bones or an injured vertebra. X-rays show the bony structures and any vertebral misalignment or fractures. Soft tissues such as muscles, ligaments, or bulging discs are not visible on conventional x-rays.

Computerized tomography (CT) is used to see spinal structures that cannot be seen on conventional x-rays, such as disc rupture, spinal stenosis, or tumors. Using a computer, the CT scan creates a three-dimensional image from a series of two dimensional pictures.

Myelograms enhance the diagnostic imaging of x-rays and CT scans. In this procedure, a contrast dye is injected into the spinal canal, allowing spinal cord and nerve compression caused by herniated discs or fractures to be seen on an x-ray or CT scans.

Discography may be used when other diagnostic procedures fail to identify the cause of pain. This procedure involves the injection of a contrast dye into a spinal disc thought to be causing low back pain. The fluid's pressure in the disc will reproduce the person's symptoms if the disc is the cause. The dye helps to show the damaged areas on CT scans taken following the injection. Discography may provide useful information in cases where people are considering lumbar surgery or when their pain has not responded to conventional treatments.

Magnetic resonance imaging (MRI) uses a magnetic force instead of radiation to create a computer-generated image. Unlike x-ray, which shows only bony structures, MRI scans also produce images of soft tissues such as muscles, ligaments, tendons, and blood vessels. An MRI may be ordered if a problem such as infection, tumor, inflammation, disc herniation or rupture, or pressure on a nerve is suspected. MRI is a noninvasive way to identify a condition requiring prompt surgical treatment. However, in most

instances, unless there are “red flags” in the history or physical exam, an MRI scan is not necessary during the early phases of low back pain.

Electrodiagnostics are procedures that, in the setting of low back pain, are primarily used to confirm whether a person has lumbar radiculopathy. The procedures include electromyography (EMG), nerve conduction studies (NCS), and evoked potential (EP) studies. EMG assesses the electrical activity in a muscle and can detect if muscle weakness results from a problem with the nerves that control the muscles. Very fine needles are inserted in muscles to measure electrical activity transmitted from the brain or spinal cord to a particular area of the body. NCSs are often performed along with EMG to exclude conditions that can mimic radiculopathy. In NCSs, two sets of electrodes are placed on the skin over the muscles. The first set provides a mild shock to stimulate the nerve that runs to a particular muscle. The second set records the nerve’s electrical signals, and from this information nerve damage that slows conduction of the nerve signal can be detected. EP tests also involve two sets of electrodes—one set to stimulate a sensory nerve, and the other placed on the scalp to record the speed of nerve signal transmissions to the brain.

Bone scans are used to detect and monitor infection, fracture, or disorders in the bone. A small amount of radioactive material is injected into the bloodstream and will collect in the bones, particularly in areas with some abnormality. Scanner-generated images can be used to identify specific areas of irregular bone metabolism or abnormal blood flow, as well as to measure levels of joint disease.

Ultrasound imaging, also called ultrasound scanning or sonography, uses high-frequency sound waves to obtain images inside the body. The sound wave echoes are recorded and displayed as a real-time visual image. Ultrasound imaging can show tears in ligaments, muscles, tendons, and other soft tissue masses in the back.

Blood tests are not routinely used to diagnose the cause of back pain; however, in some cases they may be ordered to look for indications of inflammation, infection, and/or the presence of arthritis. Potential tests include complete blood count, erythrocyte sedimentation rate, and C-reactive protein. Blood tests may also detect HLA-B27, a genetic marker in the blood that is more common in people with ankylosing spondylitis or reactive arthritis (a form of arthritis that occurs following infection in another part of the body, usually the genitourinary tract).

TREATMENTS, SOLUTIONS (with evaluations of the effectiveness of each)

How is back pain treated?

Treatment for low back pain generally depends on whether the pain is acute or chronic. In general, surgery is recommended only if there is evidence of worsening nerve damage and when diagnostic tests indicate structural changes for which corrective surgical procedures have been developed.

Conventionally used treatments and their level of supportive evidence include:

Hot or cold packs have never been proven to quickly resolve low back injury; however, they may help ease pain and reduce inflammation for people with acute, subacute, or chronic pain, allowing for greater mobility among some individuals.

Activity: Bed rest should be limited. Individuals should begin stretching exercises and resume normal daily activities as soon as possible, while avoiding movements that aggravate pain. Strong evidence shows that persons who continue their activities without bed rest following onset of low back pain appeared to have better back flexibility than those who rested in bed for a week. Other studies suggest that bed rest alone may make back pain worse and can lead to secondary complications such as depression, decreased muscle tone, and blood clots in the legs.

Strengthening exercises, beyond general daily activities, are not advised for acute low back pain, but may be an effective way to speed recovery from chronic or subacute low back pain. Maintaining and building muscle strength is particularly important for persons with skeletal irregularities. Health care providers can provide a list of beneficial exercises that will help improve coordination and develop proper posture and muscle balance. Evidence supports short- and long-term benefits of yoga to ease chronic low back pain.

Physical therapy programs to strengthen core muscle groups that support the low back, improve mobility and flexibility, and promote proper positioning and posture are often used in combinations with other interventions.

Medications: A wide range of medications are used to treat acute and chronic low back pain. Some are available over the counter (OTC); others require a physician's prescription. Certain drugs, even those available OTC, may be unsafe during pregnancy, may interact with other medications, cause side effects, or lead to serious adverse effects such as liver damage or gastrointestinal ulcers and bleeding. Consultation with a health care provider is advised before use. The following are the main types of medications used for low back pain:

- **Analgesic medications** are those specifically designed to relieve pain. They include OTC acetaminophen and aspirin, as well as prescription opioids such as codeine, oxycodone, hydrocodone, and morphine. Opioids should be used only for a short period of time and under a physician's supervision. People can develop a tolerance to opioids and require increasingly higher dosages to achieve the same effect. Opioids can also be addictive. Their side effects can include drowsiness, constipation, decreased reaction time, and impaired judgment. Some specialists are concerned that chronic use of opioids is detrimental to people with back pain because they can aggravate depression, leading to a worsening of the pain.
- **Nonsteroidal anti-inflammatory drugs (NSAIDS)** relieve pain and inflammation and include OTC formulations (ibuprofen, ketoprofen, and naproxen sodium). Several others, including a type of NSAID called COX-2 inhibitors, are available only by prescription. Long-term use of NSAIDs has been associated with stomach irritation, ulcers, heartburn, diarrhea, fluid retention, and in rare cases, kidney dysfunction and cardiovascular disease. The longer a person uses NSAIDs the more likely they are to develop side effects. Many other drugs cannot be taken at the same time a person is treated with NSAIDs because they alter the way the body processes or eliminates other medications.

- **Anticonvulsants**—drugs primarily used to treat seizures—may be useful in treating people with radiculopathy and radicular pain.
- **Antidepressants** such as tricyclics and serotonin and norepinephrine reuptake inhibitors have been commonly prescribed for chronic low back pain, but their benefit for nonspecific low back pain is unproven, according to a review of studies assessing their benefit.
- **Counter-irritants** such as creams or sprays applied topically stimulate the nerves in the skin to provide feelings of warmth or cold in order to dull the sensation of pain. Topical analgesics reduce inflammation and stimulate blood flow.

Spinal manipulation and spinal mobilization are approaches in which professionally licensed specialists (doctors of chiropractic care) use their hands to mobilize, adjust, massage, or stimulate the spine and the surrounding tissues. Manipulation involves a rapid movement over which the individual has no control; mobilization involves slower adjustment movements. The techniques have been shown to provide small to moderate short-term benefits in people with chronic low back pain. Evidence supporting their use for acute or subacute low back pain is generally of low quality. Neither technique is appropriate when a person has an underlying medical cause for the back pain such as osteoporosis, spinal cord compression, or arthritis.

Traction involves the use of weights and pulleys to apply constant or intermittent force to gradually "pull" the skeletal structure into better alignment. Some people experience pain relief while in traction, but that relief is usually temporary. Once traction is released the back pain tends to return. There is no evidence that traction provides any long-term benefits for people with low back pain.

Acupuncture is moderately effective for chronic low back pain. It involves the insertion of thin needles into precise points throughout the body. Some practitioners believe this process helps clear away blockages in the body's life force known as Qi (pronounced chee). Others who may not believe in the concept of Qi theorize that when the needles are inserted and then stimulated (by twisting or passing a low-voltage electrical current through them) naturally occurring painkilling chemicals such as endorphins, serotonin, and acetylcholine are released. Evidence of acupuncture's benefit for acute low back pain is conflicting and clinical studies continue to investigate its benefits.

Biofeedback is used to treat many acute pain problems, most notably back pain and headache. The therapy involves the attachment of electrodes to the skin and the use of an electromyography machine that allows people to become aware of and self-regulate their breathing, muscle tension, heart rate, and skin temperature. People regulate their response to pain by using relaxation techniques. Biofeedback is often used in combination with other treatment methods, generally without side effects. Evidence is lacking that biofeedback provides a clear benefit for low back pain.

Nerve block therapies aim to relieve chronic pain by blocking nerve conduction from specific areas of the body. Nerve block approaches range from injections of local anesthetics, botulinum toxin, or steroids into affected soft tissues or joints to more complex nerve root blocks and spinal cord stimulation. When extreme pain is involved, low doses of drugs may be administered by catheter directly into the spinal cord. The success of a nerve block approach depends on the ability of a practitioner to locate and inject precisely the correct nerve. Chronic use of steroid injections may lead to increased functional impairment.

Epidural steroid injections are a commonly used short-term option for treating low back pain and sciatica associated with inflammation. Pain relief associated with the injections, however, tends to be temporary and the injections are not advised for long-term use. An NIH-funded randomized controlled trial assessing the benefit of epidural steroid injections for the treatment of chronic low back pain associated with spinal stenosis showed that long-term outcomes were worse among those people who received the injections compared with those who did not.

Transcutaneous electrical nerve stimulation (TENS) involves wearing a battery-powered device consisting of electrodes placed on the skin over the painful area that generate electrical impulses designed to block incoming pain signals from the peripheral nerves. The theory is that stimulating the nervous system can modify the perception of pain. Early studies of TENS suggested that it elevated levels of endorphins, the body's natural pain-numbing chemicals. More recent studies, however, have produced mixed results on its effectiveness for providing relief from low back pain.

Surgery

When other therapies fail, surgery may be considered an option to relieve pain caused by serious musculoskeletal injuries or nerve compression. It may be months following surgery before the patient is fully healed, and he or she may suffer permanent loss of flexibility.

Surgical procedures are not always successful, and there is little evidence to show which procedures work best for their particular indications. Patients considering surgical approaches should be fully informed of all related risks. Surgical options include:

- **Vertebroplasty and kyphoplasty** are minimally invasive treatments to repair compression fractures of the vertebrae caused by osteoporosis. Vertebroplasty uses three-dimensional imaging to assist in guiding a fine needle through the skin into the vertebral body, the largest part of the vertebrae. A glue-like bone cement is then injected into the vertebral body space, which quickly hardens to stabilize and strengthen the bone and provide pain relief. In kyphoplasty, prior to injecting the bone cement, a special balloon is inserted and gently inflated to restore height to the vertebral structure and reduce spinal deformity.
- **Spinal laminectomy** (also known as spinal decompression) is performed when spinal stenosis causes a narrowing of the spinal canal that causes pain, numbness, or weakness. During the procedure, the lamina or bony walls of the vertebrae, along with any bone spurs, are removed. The aim of the procedure is to open up the spinal column to remove pressure on the nerves.
- **Discectomy or microdiscectomy** may be recommended to remove a disc, in cases where it has herniated and presses on a nerve root or the spinal cord, which may cause intense and enduring pain. Microdiscectomy is similar to a conventional discectomy; however, this procedure involves removing the herniated disc through a much smaller incision in the back and a more rapid recovery. Laminectomy and discectomy are frequently performed together and the combination is one of the more common ways to remove pressure on a nerve root from a herniated disc or bone spur.
- **Foraminotomy** is an operation that "cleans out" or enlarges the bony hole (foramen) where a nerve root exits the spinal canal. Bulging discs or joints thickened with age can cause narrowing of the space through which the spinal nerve exits and can press on the nerve, resulting in pain,

numbness, and weakness in an arm or leg. Small pieces of bone over the nerve are removed through a small slit, allowing the surgeon to cut away the blockage and relieve pressure on the nerve.

- **Intradiscal electrothermal therapy (IDET)** is a treatment for discs that are cracked or bulging as a result of degenerative disc disease. The procedure involves inserting a catheter through a small incision at the site of the disc in the back. A special wire is passed through the catheter and an electrical current is applied to heat the disc, which helps strengthen the collagen fibers of the disc wall, reducing the bulging and the related irritation of the spinal nerve. IDET is of questionable benefit.
- **Nucleoplasty, also called plasma disc decompression (PDD)**, is a type of laser surgery that uses radiofrequency energy to treat people with low back pain associated with mildly herniated discs. Under x-ray guidance, a needle is inserted into the disc. A plasma laser device is then inserted into the needle and the tip is heated to 40-70 degrees Celsius, creating a field that vaporizes the tissue in the disc, reducing its size and relieving pressure on the nerves. Several channels may be made depending on how tissue needs to be removed to decompress the disc and nerve root.
- **Radiofrequency denervation** is a procedure using electrical impulses to interrupt nerve conduction (including the conduction of pain signals). Using x-ray guidance, a needle is inserted into a target area of nerves and a local anesthetic is introduced as a way of confirming the involvement of the nerves in the person's back pain. Next, the region is heated, resulting in localized destruction of the target nerves. Pain relief associated with the technique is temporary and the evidence supporting this technique is limited.
- **Spinal fusion** is used to strengthen the spine and prevent painful movements in people with degenerative disc disease or spondylolisthesis (following laminectomy). The spinal disc between two or more vertebrae is removed and the adjacent vertebrae are "fused" by bone grafts and/or metal devices secured by screws. The fusion can be performed through the abdomen, a procedure known as an anterior lumbar interbody fusion, or through the back, called posterior fusion. Spinal fusion may result in some loss of flexibility in the spine and requires a long recovery period to allow the bone grafts to grow and fuse the vertebrae together. Spinal fusion has been associated with an acceleration of disc degeneration at adjacent levels of the spine.
- **Artificial disc replacement** is considered an alternative to spinal fusion for the treatment of people with severely damaged discs. The procedure involves removal of the disc and its replacement by a synthetic disc that helps restore height and movement between the vertebrae.

Can back pain be prevented?

Recurring back pain resulting from improper body mechanics is often preventable by avoiding movements that jolt or strain the back, maintaining correct posture, and lifting objects properly. Many work-related injuries are caused or aggravated by stressors such as heavy lifting, contact stress (repeated or constant contact between soft body tissue and a hard or sharp object), vibration, repetitive

motion, and awkward posture. Using ergonomically designed furniture and equipment to protect the body from injury at home and in the workplace may reduce the risk of back injury.

The use of lumbar supports in the form of wide elastic bands that can be tightened to provide support to the lower back and abdominal muscles to prevent low back pain remains controversial. Such supports are widely used despite a lack of evidence showing that they actually prevent pain. Multiple studies have determined that the use of lumbar supports provides no benefit in terms of the prevention and treatment of back pain. Although there have been anecdotal case reports of injury reduction among workers using lumbar support belts, many companies that have back belt programs also have training and ergonomic awareness programs. The reported injury reduction may be related to a combination of these or other factors. Furthermore, some caution is advised given that wearing supportive belts may actually lead to or aggravate back pain by causing back muscles to weaken from lack of use.

Recommendations for keeping one's back healthy

Following any period of prolonged inactivity, a regimen of low-impact exercises is advised. Speed walking, swimming, or stationary bike riding 30 minutes daily can increase muscle strength and flexibility. Yoga also can help stretch and strengthen muscles and improve posture. Consult a physician for a list of low-impact, age-appropriate exercises that are specifically targeted to strengthening lower back and abdominal muscles.

- Always stretch before exercise or other strenuous physical activity.
- Don't slouch when standing or sitting. The lower back can support a person's weight most easily when the curvature is reduced. When standing, keep your weight balanced on your feet.
- At home or work, make sure work surfaces are at a comfortable height.
- Sit in a chair with good lumbar support and proper position and height for the task. Keep shoulders back. Switch sitting positions often and periodically walk around the office or gently stretch muscles to relieve tension. A pillow or rolled-up towel placed behind the small of the back can provide some lumbar support. During prolonged periods of sitting, elevate feet on a low stool or a stack of books.
- Wear comfortable, low-heeled shoes.
- Sleeping on one's side with the knees drawn up in a fetal position can help open up the joints in the spine and relieve pressure by reducing the curvature of the spine. Always sleep on a firm surface.
- Don't try to lift objects that are too heavy. Lift from the knees, pull the stomach muscles in, and keep the head down and in line with a straight back. When lifting, keep objects close to the body. Do not twist when lifting.
- Maintain proper nutrition and diet to reduce and prevent excessive weight gain, especially weight around the waistline that taxes lower back muscles. A diet with sufficient daily intake of calcium, phosphorus, and vitamin D helps to promote new bone growth.

- Quit smoking. Smoking reduces blood flow to the lower spine, which can contribute to spinal disc degeneration. Smoking also increases the risk of osteoporosis and impedes healing. Coughing due to heavy smoking also may cause back pain.

I HATE DOCTORS

I know, I know. Many of you hate going to the doctor or don't trust traditional Western medicine. For you, the University of Maryland Medical Center provides these alternative recommendations and evaluations of the effectiveness of each treatment:

Complementary and Alternative Therapies

Alternative therapies can help ease muscle tension, correct posture, relieve pain, and prevent long-term back problems by improving muscle strength and joint stability. Many people find pain relief by using hot and cold packs on the sore area. Special exercises, such as ones designed for your specific problem by a physical therapist, can help strengthen your core abdominal muscles and your back muscles, reducing pain and making your back stronger.

Nutrition and Dietary Supplements

There is no special diet for back pain, but you can help keep your body in good shape by eating a healthy diet with lots of fruits, vegetables, and whole grains. Choose foods that are low in saturated fat and sugar. Drink plenty of water.

Foods that are high in antioxidants (such as green leafy vegetables and berries) may help fight inflammation.

Avoid caffeine and other stimulants, alcohol, and tobacco.

Exercise moderately at least 30 minutes daily, 5 days a week. Get your health care provider's approval before starting an exercise regimen.

These supplements may help fight inflammation and pain:

- **Omega-3 fatty acids**, such as flaxseed and fish oils, to help reduce inflammation. Omega-3 fatty acids can increase the risk of bleeding and potentially interfere with blood-thinning medications such as warfarin (Coumadin) and aspirin.
- **Methylsulfonylmethane (MSM)**, to help prevent joint and connective tissue breakdown. In some studies, MSM has been shown to help relieve arthritis pain.
- **Bromelain.** This enzyme that comes from pineapples reduces inflammation. Bromelain may increase the risk of bleeding, so people who take anticoagulants (blood thinners) should not take bromelain without first talking to their health care provider. People with peptic ulcers should avoid bromelain. Turmeric is sometimes combined with bromelain, because it makes the effects of bromelain stronger. Bromelain may interact with some antibiotic medications.

Herbs

Herbs are generally available as standardized, dried extracts (pills, capsules, or tablets), teas, or tinctures/liquid extracts (alcohol extraction, unless otherwise noted). Mix liquid extracts with favorite beverage.

- **Turmeric (*Curcuma longa*)** standardized extract, for pain and inflammation. Turmeric is sometimes combined with bromelain because it makes the effects of bromelain stronger. Turmeric can increase the risk of bleeding, especially for people who take blood-thinning medication. Ask your doctor before taking turmeric.
- **Devil's claw (*Harpagophytum procumbens*)** standardized extract. Devil's claw has been used traditionally to relieve pain. One study found that more than 50% of people with osteoarthritis of the knee or hip, or low back pain, who took devil's claw reported less pain and better mobility after 8 weeks. Devil's claw may increase the risk of bleeding and interact with diabetes medications, as well as potentially several types of medications. Tell your health care provider before taking it if you also take blood-thinning medication, or if you have diabetes. Devil's claw can affect the heart, and may not be right for people with certain heart problems. It can also potentially be problematic for people with gallstones.
- **Willow bark (*Salix alba*)** standardized extract, to relieve pain. Willow acts similar to aspirin. DO NOT take white willow if you are also taking aspirin or blood-thinning medications. Check with your provider if you are allergic to aspirin or salicylates before taking white willow. DO NOT give Willow to children under the age of 18.
- **Capsaicin (*Capsicum frutescens*)** cream, applied to the skin (topically). Capsaicin is the main component in hot chili peppers (also known as cayenne). Applied to the skin, it may temporarily reduce amounts of "Substance P," a chemical that contributes to inflammation and pain. One found a topical capsaicin cream relieved pain better than placebo in 320 people with low back pain. Pain reduction generally starts 3 to 7 days after applying the capsaicin cream to the skin. DO NOT use internally.

Homeopathy

Although few studies have examined the effectiveness of specific homeopathic therapies, professional homeopaths may consider the following treatments to relieve low back pain based on their knowledge and experience. Before prescribing a remedy, homeopaths take into account a person's constitutional type, includes your physical, emotional, and psychological makeup. An experienced homeopath assesses all of these factors when determining the most appropriate treatment for each individual.

Some of the most common remedies for this condition are listed below:

- **Aesculus.** For dull pain with muscle weakness.
- **Arnica Montana.** Especially with pain as a result of trauma.
- **Colocynthis.** For weakness and cramping in the small of the back.
- **Gnaphalium.** For sciatica that alternates with numbness.
- **Lycopodium.** For burning pain, especially with gas or bloating.

- **Rhus toxicodendron.** For stiffness and pain in the small of the back.

Hydrotherapy

Contrast hydrotherapy, alternating hot and cold, may help. Alternate 3 minutes hot with 1 minute cold. Repeat 3 times to complete 1 set. Do 2 to 3 sets per day.

Castor Oil Packs

Apply oil directly to skin, cover with a clean soft cloth and plastic wrap. Place a heat source over the pack and let sit for 30 to 60 minutes. Repeat this procedure for 3 consecutive days.

Acupuncture

Research suggests that acupuncture may be effective for low back pain. In addition, acupuncturists frequently report success in treating low back pain, and the National Institutes of Health recommend acupuncture as a reasonable treatment option. An acupuncturist may use a comprehensive approach, including specialized massage, warming herbal oils, and patient education.

Treating low back pain with acupuncture can be complex because many meridians (including the kidney, bladder, liver, and gallbladder) affect this area of the body. Treatment of the painful areas and related sore points is often done as well, with needles or moxibustion (burning the herb mugwort over specific acupuncture points).

A study of 1,162 people with a history of chronic low back pain found that at 6 months of acupuncture treatments relieved low back pain, almost twice as much as from conventional therapy. People had 10, 30-minute acupuncture sessions, generally 2 sessions per week.

Chiropractic

According to a comprehensive review conducted by the Agency for Healthcare Research and Quality, spinal manipulation and NSAIDs are the 2 most effective treatments for acute low back pain. Of these, only spinal manipulation relieves pain and restores function. Spinal manipulation also appears to be effective for chronic low back pain, but the evidence is less conclusive. Some studies even suggest that spinal manipulation is no more effective than other recommended therapies.

Massage

Massage may help treat and prevent short and long-term back problems.

Yoga and Tai Chi

Evidence suggests that the mind-body practices of yoga and tai chi offer significant relief of the symptoms of low back pain. In one study of 300 people with low back pain, those who participated in a 12-week yoga program experienced greater improvements in back function than did usual care. Gigong appears to be similarly effective.