How to Overcome Lower Back Pain – The Lumbar Spine Explained
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Lower back pain is one of most common disorders among adults which affects around 40% of the total population. It is said that 8 out of every 10 people have suffered from back pain at some point in their lives. Low back pain, also abbreviated as LBP can be categorised according to the duration of the pain. It can be acute if the pain lasts for less than 6 weeks, sub-chronic if the pain lasts between 6 to 12 weeks and chronic if the pain lasts for more than 12 weeks. Although, a prevalent disorder, it is also one of the most ignored disorders as well. In most cases, no effort is made to identify the specific cause of the pain and patients are treated for muscle and joint strain.

But, there are several other back pain causes that can develop from spine problems such as lumbar stenosis, sciatica, disc injury and etc. Most of the times acute low back pain is treated with simple measures such as pain killers and pain medication along with acetaminophen or paracetamol. But as per the expert suggestions, it is always to go with a surgery when the disc-related chronic pain and spinal stenosis are on an extreme end.

The Anatomy of the Lumbar Spine

The lower back or lumbar spine is the spinal curve near the abdomen that starts six inches below the shoulder blades and extends to the sacral spine. The lumber spine is the seat of power and flexibility and plays the central role in the functions of lifting, bending and twisting. There are five vertebrae in the lumbar spine (L1, L2, L3, L4 and L5) that supports the entire weight of the torso.
The last the spinal segments L4 and L5 that also connects with the discs carry maximum weight and are more prone to injury. Fibrocartilaginous discs are present between each of these vertebrae that act as soft cushions and prevent the vertebrae from rubbing against each other and also protect the spinal cord. Nerves that provide sensation and transfer messages to the skin and muscles run through specific opening between the vertebrae. Stability of the spine is achieved through the structure of muscles and ligaments of the abdomen and the back.

Main Causes of Back Pain

Back pain is more of a complaint than a specific disease and lower back pain causes are numerous, which vary according to levels of seriousness and underlying problems. While majority of lower back pains are due to sprains or strains, other causes such as excessive body weight, stress and poor posture can also cause lower back pain. Here we have listed a few common causes of spine pain.
Muscle Strains

Over-activity or lifting heavy weights can stretch and even tear the muscles and ligaments of the back which can lead to agonising back pain along with muscle spasms and stiffness of the lower back. The symptoms of lower back pain can be relieved through yoga, physical therapy and rest.

Disc Injury

The discs present in the spine are prone to injury and the risk of injury multiplies with age. Herniated disc or slipped disc is a common disorder of the spine where the outer cartilage of the disc becomes torn or herniated. The cartilage of the disc can push against the nerve roots or spinal cord and cause back pain. Disc injury is caused by sudden twisting of the back.

Spinal Stenosis

Lumbar spinal stenosis occurs when the spinal column narrows down, putting pressure on the spinal nerves and spinal cord. The most common reason of spinal stenosis is degeneration of the discs present between the vertebrae. It leads to pressing of the nerve roots by bone spurs.

Abnormal Spine Curvature

Abnormal spine curvature and structure can lead to disorders such as lordosis, scoliosis and kyphosis. The abnormal structures exert pressure on the ligaments and muscles and lead to lower back pain.
Sciatica

Sciatica occurs when the herniated disc presses against the sciatic nerve. Sciatica can cause pain in feet and legs because the sciatic nerve connects the spine to the legs.

Other Conditions

There are numerous other medical conditions that can cause lower back pain such as arthritis, spondylitis, spondylosis, endometriosis, kidney and bladder problems, ovarian cysts, cancer.

Diagnosis of Low Back Pain

In the case of chronic low back pain, it is important to know the underlying cause of the pain through a series of tests and X-rays in order to administer suitable treatment.

- Doctors usually start with the physical examination in order to determine the location of the pain and how it influences the range of motion.
- The doctor may also check the reflexes and response to sensations in order to determine whether the nerves have been damaged.
- In the case of other symptoms such as weakness, fever, lack of bowel control and rapid weight loss, the doctor may send for other tests.
Imaging tests such as CT scan, X-rays, Ultrasound and Magnetic Resonance Imaging (MRI) can be done to assess any disc problem, bone problem or a problem in tendons and ligaments of the back.

Doctors can opt for nerve conduction tests if they suspect any nerve disorder.

Bone scan or bone density test may be done if there is any problem with the bones.

### 10 Effective Ways to Relieve Lower Back Pain

Lumber spine pain is a common problem that is experienced by almost all of us at some point in our lives. Strenuous activities, lifting heavy objects or even a simple act of bending down to pick up a thing can trigger back pains. Here are 10 simple ways in which you can relieve low back pain.

#### Exercise

Keeping your body active through light physical activities is the best way to reduce the sharpness of lower back pain. Easy, low-impact exercises such as walking, yoga, swimming and light stretching are very helpful in this case.

It not only helps in putting the body back into a neutral and upright position, but also aids in relieving the stressed joints and muscles. But it is important to do these activities in moderation because overdoing it can exaggerate the pain.

#### Limit Rest

Although resting is an important part of healing, but it has been found that in case of short-term lower back pain, people who have complete bed rest experience more pain compared to those who try to stay moderately active. Therefore, it is best to avoid bed rest for more than three days and get moving as fast as possible.
Maintain Good Posture

Spine problems can spring from faulty posture like hours of slouching in front of the computer or sitting on the couch watching T.V. A sprain or strain in the back muscles while working out in the gym may also cause back pain.

Therefore, it is important to maintain correct back posture, stand and sit in an upright position and perform back stretching exercises on a daily basis to reduce back pain.

Heat and Cold Therapy

Home remedies such as applying hot pads and cool packs alternately can help in comforting tender muscles and tissues of the back. It is suggested to opt for cold therapy for the first 48 hours after the pains start and then switch to heat therapy. The benefits of ice and heat vary from person to person and it you best to use the one that suits and best and provide soothing comfort.
Empower your Core Muscles

For people suffering from chronic back pain, strengthening the abdominal muscles through core training can help in relieving lumbar spine pain. The torso is a combination of a large group of muscles and if the abdominal muscles are weak then the risk of muscle damage and tearing increases during strenuous exercises and resistance training. Therefore, it is important to strengthen the abdominals in order to reduce the strain on lower back muscles.

Increase Flexibility

Stretching and balancing exercises help in enhancing flexibility of the body so that there is an increase in the range of motion. These exercises also reduce the tension and tightness in the back muscles that is another reason for back pain. By increasing flexibility, it becomes possible to put load equally throughout the body – from head to feet. Back stretching by bending backwards and hamstring stretching by leaning forward can help in increasing flexibility.
Sleep in the Correct Way

Back pain and lack of sleep form a vicious circle. Back pain is one of the major causes of sleep deprivation and insomnia and inadequate sleep aggravates the pain. Therefore, it is important to have restorative sleep through relaxation techniques and daily exercises. Sleeping in the wrong position or on a mattress that does not support the back properly can cause back pain.

In order to maintain the spine in a neutral position back sleepers should place a pillow under their knees and side sleepers should put a pillow between their knees. Sleeping on the stomach should be avoided because this posture twists the head and neck and puts stress on the spine.

Stop Smoking

Smoking not only destroys the lungs, but also causes spinal pain. Smoking is one of the common back pain causes that we tend to ignore. It has been seen that the complaint of back pain is more common among smokers and former smokers compared to non-smokers.
This is because, the compound nicotine, present in tobacco smoke constrict the tiny blood vessels and reduces blood flow to the soft tissues and muscles. Therefore, doctors often suggest patients to quit smoking in order to reduce back pain.

Herbal Remedies

There is a wide variety of herbs that have shown promising results for the treatment of lower back pain. Ginger is one of the most effective home remedies in this case that helps in reducing pain by the virtue of its potent anti-inflammatory properties.

Boiling a few slices of fresh ginger root in water for 15 minutes and drinking the ginger tea can help in relieving muscle cramps and sprains. The active compound capsaicin present in chillies has also shown promise in reducing back pain and joint pain and it is a common ingredient in topical creams, ointments and oral supplements.
See a Specialist

Other than simple stretching and cardio exercises, some specially designed and individualized exercise plan might also be required in order to treat chronic back pain through physical therapy. The requirement of each and every person varies and because there is no magic medicine to cure back pain, doctors develop exercise regimes that combine core training and stretching exercises.

Physical therapists and exercise physiologists specialize in such routines and therefore, the assistance of specialists is essential for proper treatment of low back pain.

A combination of a few of these remedies are effective enough you give you long lasting relief from spine problems so that you can lead a pain-free and active life.

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