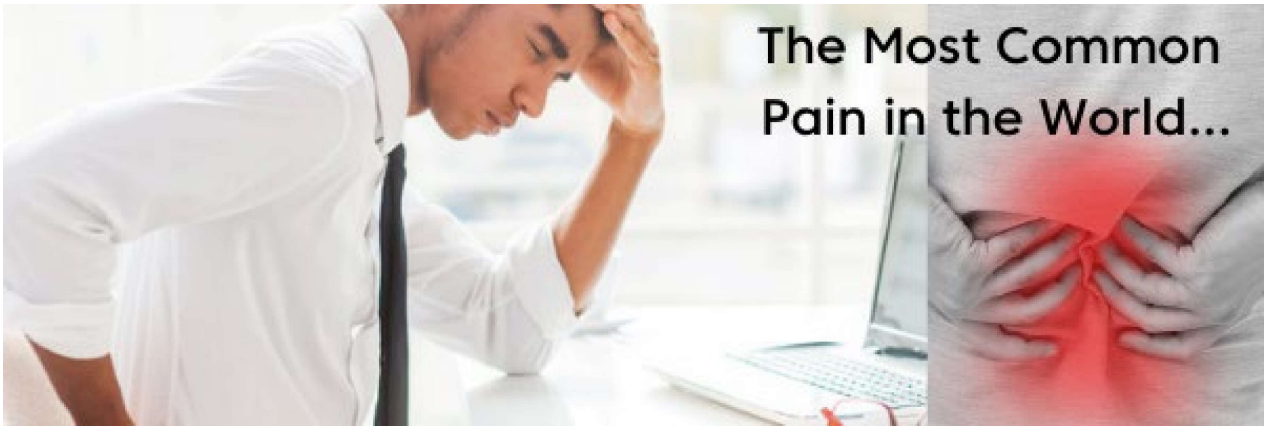

Cryotherapy for Back and Neck Pain

Will the Relief be Immediate or Lasting?

Low back pain and neck pain affect up to 80% of the population at some time in their lives, from adolescents to the elderly. It is among the most common reasons for health care visits and the number one cause of job-related disability, as well as a leading contributor to missed workdays. At the same time, there can be so many different underlying causes that there will never be one general advice to be given or one winning treatment regimen to be recommended. Back pain is not a disease, it's a symptom of a damaging habit, a physical injury, or an illness.

This article briefly addresses the different reasons that may cause the pain, stresses the importance of paying attention to other symptoms and seeking timely help if they persist. In many cases, cryotherapy may provide at least a short-term symptom relief – the recommendation shall depend on the condition.

The Statistics – It's Serious

- Worldwide, back pain is the single leading cause of disability, preventing many people from engaging in work as well as other everyday activities
- Back pain is the 3rd most common reason for visits to the doctor's office, behind skin disorders and osteoarthritis/joint disorders
- 50% of all working Americans admit to having back pain symptoms each year
- Low-back pain costs Americans at least $50 billion in health care costs each year. In lost wages and decreased productivity, that figure easily rises to more than $100 billion
- Back pain accounts for more than 264 million lost workdays each year - that's two workdays for every full-time worker in the country

- Worldwide, years lived with disability caused by low back pain have increased by 54% between 1990 and 2015

Types of Pain and What they May Suggest

Common types of back pain include local, radiating, and referred pain. It is important to be able to describe the type of pain in order to understand it better and to come to the best treatment option.

Local pain occurs in a specific area of the lower back. It is the most common type of back pain. The cause is usually an injury - muscle sprain, a strain, or a disk damage, yet it could also be arthritis of joints. The pain may be constant and aching or, at times, intermittent and sharp. The lower back may be sore when touched. Muscle spasms may occur. Local pain can be aggravated or relieved by changes in position. Sudden pain is more often felt when an injury is the cause.

Radiating pain is usually a dull, aching pain that travels from the lower back down the leg, but the pain may also be sharp and intense at times. It typically involves only the side or back of the leg rather than the entire leg. The pain may travel all the way to the foot or only to the knee. Coughing, sneezing, straining, or bending over while keeping the legs straight may trigger the pain. Radiating pain typically indicates compression of a nerve root caused by disorders such as a herniated disk, osteoarthritis, or spinal stenosis. If pressure on the nerve root is great or if the spinal cord is also compressed, the pain may be accompanied by muscle weakness in the leg, a pins-and-needles sensation, or even loss of sensation.

Referred pain is felt in a different location from the actual cause of the pain. For example, some people who have a heart attack feel pain in their left arm. Referred pain from internal organs to the lower back tends to be deep and aching, and its exact location is hard to pinpoint. Typically, movement does not worsen it, unlike pain from a musculoskeletal disorder.

The Duration of Pain

Most low back pain is **acute, or short term**, and lasts from 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. Most 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. **Local cryotherapy may provide the desired immediate relief from such pain**.

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

Chronic back pain 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 that often signal about underlying chronic inflammation. In some cases, **treatments such as cryotherapy successfully relieve chronic low back pain**, while sometimes pain persists despite medical treatment and even surgical intervention.

Understanding the Cause, Determining the Treatment

Back pain usually results from problems with the musculoskeletal system - most notably the spine, including the bones of the spine (vertebrae), disks, and the muscles and ligaments that support it. Occasionally, low back pain can be a side effect of a disorder that does not involve the musculoskeletal system at all.

Most low back pain is mechanical in nature. It can be caused simply by overuse such as working out or lifting too much, prolonged sitting and lying down, sleeping in an uncomfortable position, or wearing a poorly fitting backpack. It can also come from an injury or a disorder that involves degeneration of the spine, like ankylosing spondylitis.

Some examples of **mechanical causes** of low back pain include:

- **Sprains and strains**. 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**. It is one of the most common mechanical causes of low back pain which occurs when the usually rubbery discs lose integrity in a 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** that occur when the intervertebral discs become compressed and bulge outward or rupture, causing low back pain
- **Radiculopathy**. It 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**, 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** - 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. The event 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** - 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,** including 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**. This is not a common cause of back pain, but can cause pain when the infection involves 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.** Another 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** - 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**. The problem occurs 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.** In this case, sharp pain in the lower back, usually on one side, can occur.

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
- **Osteoporosis** - a metabolic bone disease marked by a progressive decrease in bone density and strength, which can lead to painful fractures of the vertebrae
- **Endometriosis** - a buildup of uterine tissue in places outside the uterus
- **Fibromyalgia**, a chronic pain syndrome involving widespread muscle pain and fatigue

Because of the above complexity and the fact that low back pain is **often caused by several problems**, diagnosing a single cause may be very difficult. Doctors may only be able to determine that the cause is a musculoskeletal disorder and how serious it is likely to be. Nevertheless, one should seek doctor's help every time when back pain returns on regular basis or persists beyond the acute or subacute pain threshold.

Prevention

The most effective way to prevent low back pain is to exercise regularly. Aerobic exercise and specific muscle-strengthening and stretching exercises can help.

Aerobic exercise, such as swimming and walking, improves general fitness and generally strengthens muscles.

Specific exercises to strengthen and stretch the muscles in the abdomen, buttocks, and back (core muscles) can help stabilize the spine and decrease strain on the disks that cushion the spine and the ligaments that hold it in place. These exercises should be repeated until the muscles feel mildly but not completely fatigued and breathing during each exercise is important.

At the same time, it should be mentioned that stretching exercises and even yoga can increase back pain in some people and therefore should be done carefully. ANY exercise that causes or increases back pain should be stopped, and people who have back pain should consult a doctor before beginning to exercise.

Cryotherapy as a Treatment for Back Pain

In case of a painful mechanical injury, especially if it involves swelling, local cryotherapy may be the fastest way to relief, as it has soothing impact on the swollen tissue and decreases pain sensitivity. Whole body cryotherapy, on the other hand, has proven to help the body recover and heal itself faster.

All conditions that are inflammation related and involve back pain can have whole body cryotherapy as a supportive treatment, due to its anti-inflammatory properties. CryoProsUnited has already published research data and articles discussing applications of whole-body cryotherapy for ankylosing spondylitis, osteoporosis, arthritis, and fibromyalgia. The best treatment regimen to achieve apparent improvement involves minimum 10, better 20 once-a-day procedures.

Numerous success stories have been witnessed and countless testimonials like the one below have been received by cryotherapy providers around the world: *"I suffer from chronic back pain and have dealt with it for years. Since I began doing cryo treatments on a regular basis, the inflammation in my body has significantly decreased which is playing a major role in keeping me pain free. Instead of taking prescription medicines to ease the pain (which only band aids the problem and does not help your body heal) I have found relief and healing through cryotherapy." JJ*

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