

Inversion Benefits

So you think hanging upside down to relieve back pain is some wacky, new-age idea? Think again. It's documented that Inversion was used as early as 400 B.C., when Hippocrates, the father of medicine, first watched a patient have his knees bound and ankles tied to a ladder to be hoisted upside down for a dose of what's come to be known as spinal traction.

The Greek theories on inversion are still valid, but today there is a much easier way to relieve the back pains most people experience from time to time. The process is called Inversion therapy, and it can be the natural way to a better back and a better body.

Not only can inversion therapy be used to treat back pain, but it also can be used as a method to reverse other negative effects that gravity has on your body. Inversion represents the Quiet Side of Fitness, helping your body to recover from the compressive effects of gravity and daily activities. Doctors, physical therapists and sports trainers recognize inversion as a safe and effective form of therapy for the spine and weight-bearing joints. In fact, the US Army is writing Inversion into its worldwide physical training manual that will be adopted for the new millennium.

Whatever your reason for inverting, the [Motion Gravity Table](#) provides a safe and easy method to turn your world upside down.

Inversion Can Help to Relieve Many Forms of Back Pain

There are many causes of back pain, including poor posture, weak back and stomach muscles, and muscles spasms to name a few. Many of these causes can actually be attributed to one force we must all battle: gravity.

So how can Inversion help you to relieve your back pain? Quite simply, inversion therapy puts gravity to work for you by placing your body in line with the downward force of gravity. Inversion elongates the spine, increasing the space between the vertebrae, which relieves the pressure on discs, ligaments and nerve roots. Less pressure means less back pain.

Every nerve root leaves the spine through an opening between the vertebrae-the size of this opening is largely controlled by the height of the intravertebral disc. Discs that are plump and contained in their ligament "wrappers" are necessary to keep the nerve roots free of pressure and your body free from pain.

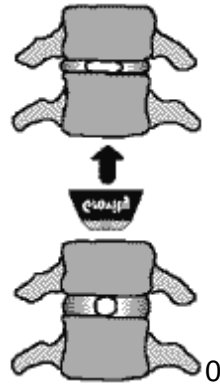
Stress and tension can cause muscle spasms in the back, neck and shoulders, as well as headaches and other problems. Tense muscles produce spasms and pain by reducing the supply of oxygen and by reducing blood and lymph flow, allowing the accumulation of waste chemicals in the muscles.

Inverting yourself to as little as 25° for even a few minutes can help relax tense muscles and speed the flow of lymphatic fluids which flush out the body's wastes and carry them to the blood stream. The faster this waste is cleared, and fresh supplies of oxygen are introduced, the faster stiffness and pain in the muscles can disappear. A study conducted by physiotherapist L.J. Nosse found that, "EMG (electromyographic) activity, an indicator of muscle pain, declined over 35% within ten seconds of assuming the inverted position.

Inversion can also help to encourage good posture. When inverted, your body is in line with gravity. Your spine wants to naturally go to its proper form (a gentle "s" curve). A regular program of inversion can help you to maintain proper posture and keep your body in balance. Let's face it-poor posture is not only unhealthy, it's unattractive.

Inversion Helps Provide Care and Feeding for the Discs

Your discs have three jobs: to separate the vertebrae, provide flexibility to the spine and to act as shock absorbers. Disc separation is especially important since all communication between the brain and the body is via nerves that pass between each vertebra. Insufficient distance between the vertebrae can result in nerve root pressure and pain.



The inner core of your discs is made of jelly-like material that provides the flexibility and "cushioning" in your back. When you are sitting, standing, or exercising, which I'll term "weight-bearing activities", fluid is squeezed out of your discs and into adjacent soft tissue (just as you would squeeze moisture out of a sponge). As a result, your discs lose some of their moisture and height. To prove this fact, measure yourself in the morning and then again at night. You will lose 1/2" to 3/4" in height by the end of the day. This lost fluid translates into your discs losing some of their cushioning effect.

When you are sleeping, "a non-weight bearing activity", your discs (or "intravertebral sponges") expand as they soak up fluid and nutrients and increase the length of your spine by as much as 3/4". But you don't gain the full height back, accumulating to a total of 1/2" to 2" in height throughout your lifetime.

When your discs are compressed and thinned, your vertebrae potentially place more pressure on these nerve roots. More pressure equals more pain. As you relax, your spine begins to stretch. The space between each vertebra will increase, thus decreasing the pressure on the discs between each vertebra. This encourages fluid movement back into the disc, helping to keep your discs plump and happy and decreasing the pain in your back.

In fact, the only time in your life when you are giving your discs a break is when you are inverting. See graph. The medical study that generated this graph measured the pressure inside the 3rd lumbar disc-it was assigned a baseline pressure while standing of 100%. The study reported that even when you are lying down, the disc pressure remained at 25%. The hundreds of ligaments and muscles that encase and mobilize the spine act like a bunch of rubber bands holding the spine in compression equal to 25% of standing body weight. Inverting to 60° is necessary to reduce the disc pressure to zero. Inverting is the most effective posture that allows your discs to recover from the constant pressure placed on them during your daily activities.

Relieves Varicose Veins:

When inverting, you are helping your heart to clear the blood from your feet, legs, and lower body. This allows the blood in your limbs to circulate more easily, which may help to drain blood from varicose veins.

Inversion Helps to Relieve Stress

Your body will let you know when you are stressed out-back and neck pain, headaches and muscle tension is your body's way of protesting against stress and forcing you to slow down.

If nothing else, Inversion is a great way to take a break and relax. The full body stretch can be rejuvenating and can also help to reduce muscle tension. A study conducted by physiotherapist LJ Nose found that EMG activity (a measure of muscle tension) declined over 35% within ten seconds of inverting. Inversion, therefore, is helpful in relieving tension and pain in your muscles that may have been caused by stress.

In fact, for centuries yoga practitioners have recognized the concept of turning the body upside down to find relaxation. The head stand position is a form of "postural exchange" (reversing the direction of gravity). Not everyone wants to do headstands, so inversion on Hang Ups equipment creates an easier alternative with the added benefit of joint decompression.

Inversion Helps Improve Circulation and Accelerates the Cleansing of Blood and Lymph Fluids

The cardiovascular system is made up of the heart, veins, arteries, and capillaries. It is your body's transportation system, carrying food and oxygen to your body's cells. Your heart pumps blood through the system: oxygen-rich blood from the lungs goes out through the arteries and waste-filled blood comes back through the veins to be cleansed and recharged with oxygen. The cardiovascular system also retrieves blood from your legs and lower torso, carrying it upwards against the force of gravity. Inversion allows your body to work with gravity to ease the circulation process.

Unlike the cardiovascular system, the lymphatic system has no pump. Only the alternate contraction and relaxation of muscles moves lymphatic fluid "uphill" through capillaries and one-way valves to the upper chest for cleansing. Inverting the body so that gravity works with, not against, these one-way valves helps to push the lactic fluid up to the chest. The faster the lymphatic system is cleared the faster the ache and pain of stiff muscles disappears.

Inversion Helps Increase Oxygen Flow to the Brain

Your heart must work against gravity to pump blood up to your brain, which is the body's largest consumer of oxygen. Although it is only three percent of the body's total weight, the brain consumes 25 percent of the body's oxygen intake.

Win Wenger, in *How to Increase Your Intelligence*, noted that "only those brain cells which are close to an ample capillary blood supply are thoroughly developed. Away from such source of supply, brain cells remain undeveloped and useless." Wenger describes "upside down activities" to increase oxygen supply to the brain. He states, "In short, you can much improve the physical state of your entire brain." A brain that is better nourished simply works better.

Some people claim that increasing the circulation of blood to the head through inversion may also improve the color and tone of your skin, stimulate mental alertness, and improve hearing and vision. In addition, some claim that hair will be healthier, and may even grow again, if the scalp is well supplied with blood.

Inversion Helps Reduce the Effects of Aging Caused by the Force of Gravity

Most people will lose from 1/2" - 2" (1-5 cm) in height during their lifetime due to thinning discs. As a baby, your discs are 90% water. However, the water content in the discs decreases to 70% by age 70. An active inversion program can help maintain more of your original height.

"Decongests" Internal Organs:

As the body ages, internal organs (kidneys, stomach, intestines) begin to prolapse as a result of the constant downward force of gravity. "Middle-age spread" (that spare tire around the waste), apart from weight gain, is due to the relocation of internal organs. Digestion and waste elimination problems are also common symptoms of organs going south. Inversion helps prolapsed organs resume their normal shape and place in the body.

Increases Oxygen to the Brain:

Peter Russell notes in *The Brain Book* that the deterioration of the brain is not directly linked to age alone. Rather, this deterioration is caused by hardening arteries and high blood pressure, both of which decrease the supply of oxygen to the brain. Thus a major step in reducing mental deterioration (or senility) over time may simply be increasing the oxygen supply to the brain. Keeping the brain active and well supplied with oxygen may help maintain your brain function and mental sharpness throughout your entire life. (NOTE: If you have high blood pressure, consult your physician before starting an inversion program.)

Inversion Enables the Body to Stretch and Re-Align

Nearly every physical activity involves some form of compression of the spine. The compressive effect of gravity is compounded by activities such as running, weightlifting, aerobics, skiing, biking, and golf, which can exact an incredible toll on the spine, discs, and back muscles.

If we perform our daily activities in the wrong way we can create skeletal misalignments. Most often these misalignments are nominal and will readily correct themselves given the opportunity. Inversion with movement (such as side-to-side bends, back arches, and a partial sit-up or two) provides that opportunity.

One-sided activities can be particularly troublesome for the athlete for two reasons: The body will tend to over compensate for the strong-side muscle groups, pulling the spine out of alignment, and one-sided activities usually involve rotation of the spine, often under incredible loads. Examples of these activities are golf, water skiing, tennis, bowling, racquetball, and baseball. Inversion after physical activity may help to realign the spine and keep athletes performing at higher levels for longer periods of time.

Still other physical activities tend to create tension in the muscles due to a contraction of the major muscle groups for long periods of time. In-line skating, swimming, bicycling, windsurfing and rowing are examples of activities which tend to create a great deal of lower back strain. Athletes in these sports can receive a tremendous boost from daily inversion therapy.

Inversion Reduces Pain in Overworked Muscles

Athletes prone to stiffness or muscle spasms after a workout can benefit from the lymphatic wash provided by inversion. Intense muscle activities cause muscles to become sore. This is due to the build up of large amounts of lactic acid and cellular debris in the muscles. The faster this waste is cleared, the faster the stiffness in the muscles disappears.

Inversion Provides Balance and Orientation Training

The performance of inverted activities can be enhanced through inversion training. Inversion helps to develop balance awareness, which occurs when the upper regions of the inner ear are stimulated. Skydivers, gymnasts, springboard divers, and scuba divers find that inversion therapy

fine-tunes the body and inner ear to the inverted world. Inversion therapy has also been used to normalize the ear canal as a treatment for motion sickness.

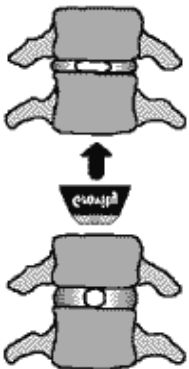
Inversion Strengthens Ligaments

Ligaments are the fibrous strips that hold your bones together. Ligaments are flexible but not very elastic, and can tear when they are stretched too much. The gentle reverse loading and movement that occurs while you invert strengthens ligaments and connective tissue, and helps to protect the athlete from serious injury. Ligaments that are not moved regularly in the right way become stiff, inelastic and more easily torn.

A Final Thought

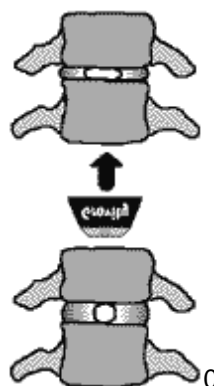
The constant pull of gravity is the most powerful force your body will see during your lifetime. Inversion offers a system of stretching and light exercise that helps to slow or reverse the harmful, compression of the body by gravity. Used sensibly, inversion is extremely beneficial, and no more dangerous than many other popular and widely practiced fitness activities. Sometimes there's an explanation for why inversion works and sometimes there isn't.

The experience of thousands of people who invert regularly is that it gives them the relief from back pain they've been looking for. Just as important, they gain the rejuvenating effects of inversion on the entire body, providing health benefits far beyond the relief of back pain.



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Purchase a [Motion Gravity Table](#) and see how your back and body will feel more healthy.