

## Defy Gravity

*One of the most powerful forces athletes must overcome, both during and after training, is one of the immutable laws of nature — gravity.*



**T**he concept of hanging upside down for better health is nothing new. It's believed that inversion was used as early as 100 B.C., when Hippocrates the father of medicine first watched a patient have his knees and ankles tied to a ladder to be hoisted upside down for a dose of what's come to be known as spinal traction. For centuries, the headstand position has been used by yoga practitioners as a form of 'postural exchange.' Today, many people, especially athletes, find inversion therapy to be an effective form of exercise.

### **WHY SHOULD YOU BE INCLINED TO INCLINE?**

Unless you're an astronaut, gravity is with you every day. In the search for ultimate fitness, physical activity only increases the compressive effect of gravity on the spine and organs. Inverting the body is a naturally restorative process that cuts across every form of physical activity to help reduce spinal compression, the buildup of acid in the muscles, and the slight skeletal misalignments athletes often create during exercise.

The daily use of inversion therapy, hanging by the lower limbs and allowing body weight to decompress the spine, is a simple, natural, yet highly therapeutic way to create a mild form of spinal traction. It's a way to counteract the forces that compress the spine when sitting, standing, or exercising. Additionally, by hanging upside down, a mild stretch is placed on the calves, shins, quadriceps, buttocks, and the

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lower and upper back, which can also relieve the tension created by various activities.

According to Leroy Perry, D.C., a chiropractic orthopedist and president of the International Sportsmedicine Institute in Los Angeles, "Inversion is a great exercise for the abdominal and thigh adductor muscles. And strengthening the abdomen is the secret to having a strong back."

Perry, who invented the Invertabod, a simple A-frame device that enables you to suspend your body straight downward while flexing from the hips thus stretching and elongating the ham strings, buttocks, and spine, says, "It's important to make a symmetrically strong body around your spine." He recommends one to two minutes of exercise on the Invertabod twice daily to stretch the spine and increase productivity. "To have ripped abs you'll need to incorporate other forms of exercise," advises Perry. But, stretching your spine will help maximize your workout and minimize back pain.

### THE UPSIDE AND DOWNSIDE OF INVERSION THERAPY

According to Perry, most

*Can turning your workout upside down really do wonders for you when you're right side up?*

people can benefit from the right type of inversion therapy. "Anybody with a bad back, weak upper thighs, abdomen, knee, or hip problems will benefit," he says. For athletes who exact a toll on the spine discs and muscles by participating in sports like running, weightlifting and skiing or participate in sports that use one side of the body more than the other (e.g., tennis, racquetball and baseball), inversion therapy may prove especially beneficial.

Some individuals, however, are advised against using inversion therapy. A well-publicized study in 1983 caused some concern when researchers concluded that in using gravity inversion boots in this study (hanging statically for three minutes), there was "cause for concern in those individuals with a history of hypertension, cardiovascular disease and stroke." (JAM Osteopath Assoc. 1983. 82: 853-57). Bob Goldman, D.O., Ph.D., president of the National Academy of Sports Medicine in Chicago, and one of the researchers on this study, notes that health risks are correlated to static inversion for extended periods of time. Problems that occur during static inversion include blood blisters, increased systemic blood pressure and black and blue marks around the eyes. Goldman advises, "Don't stay static upside down. It's important to keep moving up and back."

According to Joanne Broatch in her book, *Better Back, Better Body: The New Inversion Way* (STL International 1993), people with the following conditions should be especially cautious about inversion therapy and are advised to speak to their health-care practitioner before any anti-gravitational workout:

### HOW TO DEFY GRAVITY

You shouldn't have any hang-ups about hanging up, if you follow some basic anti-gravity guidelines. In her book, *Better Back Better Body: The New Inversion Way* (STL International, 1993), Joanne Broatch makes the following suggestions:

#### 1. Begin Slowly

Invert only 15 to 20 degrees at first. Stay down only as long as you are comfortable, even if only for a few seconds at first. Have someone help you the first time.

#### 2. Make Changes Gradually

Increase only a few degrees at a time. You can gain all the benefits of inversion without ever fully inverting yourself. Most people find 20 to 60 degrees adequate.

#### 3. Pay Attention to Your Body

Come up slowly: Dizziness after a session is a sign that you have come up too fast. Wait awhile after you've eaten before you invert. If inversion makes you nauseated, return to the starting position. Perform exercises slowly and be conscious of what is happening in your muscles and joints. Gentle stretching and holding is best.

#### 4. Keep Moving While Inverted

Do not exercise strenuously while inverted. Limit partial inversion without movement to one to two minutes (the greater the angle, the shorter the time). Full inversion without movement should be limited to a few seconds.

#### 5. Do It Regularly

Many times, the effects of inversion aren't long lasting. In order to achieve the most benefits, people need to practice inversion therapy on a regular basis.

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- hiatus hernia
- glaucoma retinal detachment, conjunctivitis
- high blood pressure, hypertension, recent stroke or transient ischemic attack
- heart or circulatory disorders that are under treatment
- spinal injury, cerebroscerosis, acutely swollen joints
- bone weakness (osteoporosis), recent unhealed fractures, medullary pins and surgically implanted orthopedic supports
- the use of anti-coagulants, including high doses of aspirin
- middle ear infection
- extreme obesity

### **HOW TO GO HEAD OVER HEELS AND STILL BE SAFE**

Currently, there are many different inversion devices on the market including anti-gravitational boots (\$60 to \$100), inversion racks (\$70 to \$200), tables (\$250 to \$1000), and hyperextension benches/pelvic traction units including the Invertabod (\$200 to \$500). You may already use some form of anti-gravitational equipment at your local gym. But, buyer beware. Not all anti-gravitational equipment is created equal. Opinion varies on which devices are safest and most beneficial.

Goldman recommends using oscillating beds that allow a range of movement and varying degrees of inversion. Mark Stevens, a personal trainer and owner of The Gym in Brentwood, Calif., recommends that his clients use variations of a hyperextension bench that only inverts from the hips. And, Perry insists that for the safest and most effective workout, people should never completely invert or risk injury by falling from faulty ankle straps or boots.

Although gravity boots are usually the least expensive type of inversion equipment, they provide general traction rather than allow you to focus on one particular body part (e.g., lower back). No matter which type of equipment you choose, keep these points in mind:

- Do you have a health history that may indicate that inversion is not for you? Check with your health care practitioner before starting any program.
- Is the equipment sturdy and well made? If you're using boots, be sure they're comfortable and the fasteners aren't going to unlock. If you're using equipment that completely inverts you, be sure there's no chance of the device breaking or pulling away from a fixture (i.e., frame or doorway).

- Has the equipment been stress tested? Ask for the maximal weight capacity and make sure it is at least four times your weight.
- Does the equipment allow for a range of motion? Be sure you're not stuck in the inverted position. And be sure you can easily dismount from the device.
- Are there ankle straps? Goldman suggests being wary of ankle straps, as the design of some ankle straps may cause injury to other joint systems.
- Does the manufacturer of the equipment you're buying have liability insurance?

## **Where to Buy Guide**

Many companies carry anti-gravitational equipment. For more information about the Invertabod, call (800) BAD-BACK. For information about inversion therapy and a variety of equipment, call Hang Ups, (800) 847-0143.

