

# Water Workouts & Back Pain



**LeRoy Perry Jr., DC fits a flotation vest with weights attached to Los Angeles bodybuilder Ofer Samra before a spine-unloading water workout.**



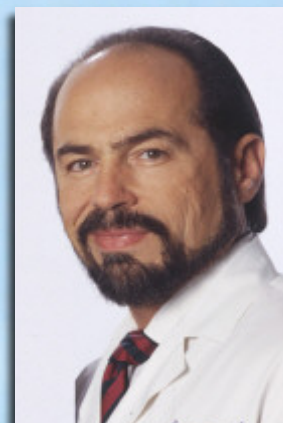
# Dr. LeRoy Perry's

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### Water Workouts & Back Pain

By: LeRoy Perry Jr., D.C.



A promising new method to treat low-back pain has emerged from behind the former Iron Curtain. Hydrokinetic decompression therapy (HDT) is a cutting-edge therapy for decompressing the spine, which can help athletes as well as back-pain sufferers. My introduction to the technique came in 1975 when I saw East German athletes practicing methods of kinetic movement in a swimming pool.

The athletes' goal was not rehabilitation but rather enhancement of muscle coordination and proprioceptive abilities. Studies demonstrate that movement techniques for particular sport activities when performed repeatedly in a non-weight-bearing environment (such as a swimming pool) can alter improper and often stressful compressive posture. Improper technique in any movement - whether at your desk or in the gym - can lead to spinal compression, loss of proper circulation and decreased nerve function.

Experimenting with this technique, I discovered that as long as an individual's feet touched the bottom of the pool, the body's musculature would not relax completely. Using the deep end of the pool, I could manipulate the muscles, improving posture and the mental outlook of the patient. Once the patient worked through a full range of motion to the point of muscle fatigue, elongation and eventually spinal decompression followed.

### LIFT UP & PULL DOWN

The basic application of this technique is simple: The patient is suspended vertically in water, usually by a flotation vest with waist straps anchored poolside with a shock-absorbing tether. Weights, attached to a belt around the hips, hang down directly below the body. The flotation vest lifts the patient upward while the weights pull downward; the patient uses a modified pedaling/running technique with a free, pendulum like arm swing.

This technique has been extremely beneficial for patients who have scoliosis, herniated or bulging discs, sciatica or arthritis, or who need a safe method to regain conditioning and stamina. Diabetes, obesity, postnatal reconditioning and post-surgical rehabilitation are only a few of many conditions that can benefit from HDT.



### UNLOADING THE SPINE

For nearly everyone, gravity plus movement eventually impacts and compresses the spine. Sitting in a chair - especially if your posture is imperfect and your weight is poorly distributed on the chair - can cause low-back problems over time.

The greater the degree of compression, the greater the friction and more intense the trauma. If you're an athlete, the problem is compounded. Every sport has some inherent biomechanical instability or pathomechanical stress. Runners, jumpers and weightlifters all experience the pain of friction and compression.

For the serious bodybuilder, the results and range from competitive defeat to injury to simply not achieving his or her potential.

Most patients suffering even the most acute pain report decompressive relief as a result of HDT. For severe cases of disc fragmentation, bone spurs and arthritic degeneration, surgical intervention may be necessary, but HDT can be greatly beneficial in strengthening the patient pre-and post-operatively, helping to ensure the greatest surgical benefits and recovery.

### **STRETCH, RELAX, CONTRACT, RELAX**

An HDT session consists of four phases. During the first 8-12 minutes (reactive muscle stretch, phase 1), the larger spinal muscle groups normally stretch out. Over the next 4-8 minutes, the deeper spinal muscles begin to relax (muscle adaptation, phase 2). The total musculature begins to contract over the next 10-15 minutes, (reactive muscle contraction, phase 3). Within the next 10-15 minutes, fatigue ordinarily sets in, leading to relaxation, during which the greatest benefits are realized (muscle relaxation, phase 4). Once the patient works up to phase 4 (determined by communication between therapist and patient), he/she typically reports a dramatic feeling of relief and lightness as well as an enhanced freedom of motion.

In follow-up sessions, adjustments are made in two variables: weights and time. Depending on the specifics of the patient's problem, body weight and size, the hanging weights listed in "Sample HDT Program" are used.

The formula is to increase the time by five minutes each day and the weight by 5-pound increments every three days.

Individuals are maintained at that weight/time combination for three consecutive days or treatments, at which point the weight is again increased by 5 pounds (to a total of 30) for 20 minutes. Five minutes are again added each treatment until a total of 30 minutes is reached, and then 5 more pounds are added and so on. Weights continue to be increased until the patient indicates the weights are "too heavy" at which point the load is reduced by 5 pounds.

#### **SAMPLE HDT PROGRAM**

DAY	POUNDS	TIME
1	10-20	15 minutes
2	10-20	20 minutes
3	10-20	25 minutes
4	10-20	30 minutes
5	25	20 minutes
6	25	25 minutes
7	25	30 minutes

### **THE CONDITIONING PHASE**

The patient is now ready for cardiovascular training as well as spinal distraction (extending the compressed spine). Cardiovascular training includes "double time" and eventually "triple time," speeding up leg and arm movements until the lower end of the heart-rate training zone is reached. The duration is gradually increased in five-minute increments until significant cardiovascular benefits are achieved. Some patients with spinal compression disorders can go 45-60 minutes.

Athletes also employ these techniques of cardiovascular training, often using ankle and/or wrist weighs as well as increased weight suspended from the waist for greater resistance and muscle hypertrophy. This technique is favored by some athletes to reduce "down" time from injuries that might otherwise prevent them from maintaining cardiovascular fitness and muscle tone.

#### **HDT GUIDELINES**

- Never try HDT without a trained doctor or therapist on hand.
- Use only approved flotation equipment that cannot be deflated.
- Always have a lifeline attached for quick and easy exit from the pool.
- In all cases check with your doctor to make sure this technique is good for you. Your doctor can call or write the International Sports Medicine Institute at 3283 Motor Ave., Los Angeles, CA

### **SUPPLEMENTAL THERAPY**

HDT can be combined with the use of the Invertabod, a forward flexion inversion system. [See Cutting Edge, January 1995, page 250.]

These techniques allow the patient to maintain self-care, which is both effective and inexpensive. For the athlete sidelined with an injury, HDT and the Invertabod can help maintain conditioning and enhance coordination, strength and performance.

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