



The  
Non-Surgical  
Solution  
For Chronic  
Back & Neck Pain

Patients around the world are discovering this  
new treatment that alleviates chronic pain  
and helps avoid surgery.

# In this Report ...



The discovery of non-surgical spinal decompression.



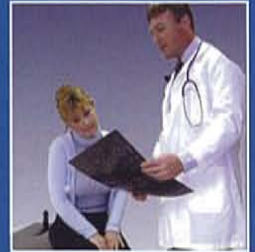
The science behind this revolutionary device.



How does VAX-D Genesis work:



Clinical Study Reports



Frequently Asked Questions

## VAX-D Genesis: The Best Non-Surgical Treatment for Your Back & Neck Pain

These days we are faced with the frustrating and growing epidemic of chronic back and neck pain.

In this day of technology, our expectations can be high. Thousands of patients search the Internet each day looking for non-surgical answers to a host of conditions.

Now there is good news.

***The VAX-D Genesis System has evolved to become the best available option for back and neck pain sufferers.***

Three thousand patients a day are now taking the treatment, and eight out of ten are getting positive results.

VAX-D has evolved over the years, based upon new technology and feedback from physicians, patients and clinical research.

***Our new computer controlled treatment with 'Bio-Feedback' is smoother and more effective than ever.***

*Many clinical studies are available that look at different aspects of the treatment.*



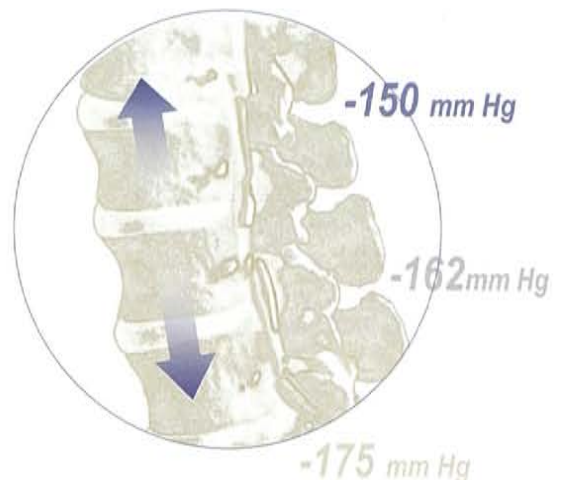
The Back Pain Solution

## VAX-D Discovered & Patented the Process of Decompression Therapy for the Spine



### VAX-D Medical Technologies: The Original

- Non-surgical decompression (known as 'Vertebral Axial Decompression') is now being used across the US and around the world.
- VAX-D is the only treatment shown to lower the disc pressure to negative levels!
- As we commemorate 20 years in the low back pain field, we celebrate a proud history and commitment to the patients for whom we care, and for those who we have helped to "get back to life".



***VAX-D lowers the pressure in your discs, taking the pressure off of the spinal cord and nerves that may be causing the pain.***

## Consider These Facts On Back & Neck Pain & Surgery...



### FACTS:

Back pain is one of the most significant problems facing medicine today. The economic costs are staggering. The estimated cost in the US this year is \$100 billion. Despite the overwhelming statistics, the problem is still growing!

An estimated 1.2 million spinal surgeries are performed in the U.S. each year, and, according to the National Center for Health Statistics, more than 300,000 of them are spinal fusions, at an average cost of approximately \$60,000 each.

Recent studies show that the failure rate for back surgeries is extremely high (50% in some studies), prompting a new diagnostic category for the failures: Failed Back Syndrome, the only such diagnosis in medicine.

- Back pain is the number one cause of work absence after colds and flu.
- 5.4 million Americans are disabled annually due to back pain.
- More money is spent on the treatment of chronic pain than is spent on heart disease, AIDS and cancer combined.
- The average cost for back surgery is about \$40,000.00.
- An estimated 93 million workdays are lost each year due to back pain.
- Only 37% of patients undergoing their first back surgery returned to work. Only 27% of patients with more than one back surgery return to work.
- 70% of patients who had lumbar back surgeries still complained of back pain. 23% complained of constant pain, and 35% were still under treatment.



# About Your Spine



The spine is composed of the vertebral bones (cervical vertebrae in the neck, thoracic vertebrae in the trunk, and lumbar vertebrae in the low back) each separated by the intervertebral discs. The discs act like shock absorbers and they cushion the spine and allow the various movements.

With time, the stress on the spine and discs causes degeneration and injury. Occupations that include carrying heavy loads, being bent over while working or having to work in awkward positions can put you at risk for having a low back injury.

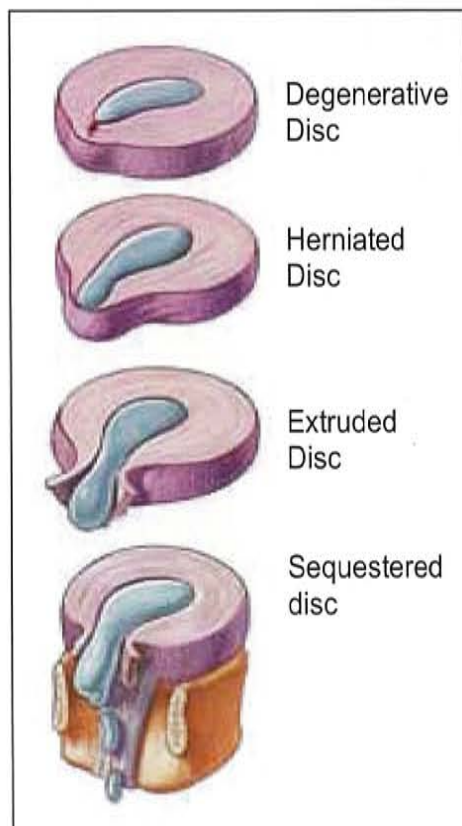
In the center of the disc is a gel-like substance called the *nucleus pulposus*. This is surrounded by the *annulus fibrosus*. If the discs in the spine are subjected to heavy compressive loads, or sheering forces (lifting and rotating) the pressure in the nucleus may cause damage to the annulus.

**Herniated Disc:** If the annulus becomes weakened, the nucleus may push on the wall and cause a bulging disc. If the annulus becomes torn, the nucleus may protrude (a herniated disc). When the tear goes through the annulus, the nucleus may also extrude on to the spinal cord (a ruptured or extruded disc). The mechanical pressure of the nucleus and disc on the surrounding structures will cause pain and can often trigger chemical reactions resulting in pain and inflammation.

**Sciatica:** Sciatica is a condition caused by a herniated or ruptured disc pressing on the sciatic nerve. This causes considerable pain and inflammation. The pain may radiate down the buttocks, the thigh, through the calf and occasionally into the foot.

**Degenerative Disc Disease:** The discs in the spine may become dehydrated and deteriorate over time, and they lose their ability to resist mechanical loads. As the discs deteriorate, they become more prone to injury from mechanical stress. Degenerative disc disease will also contribute to disc bulges, herniations and lateral nerve root compression (lateral canal stenosis).

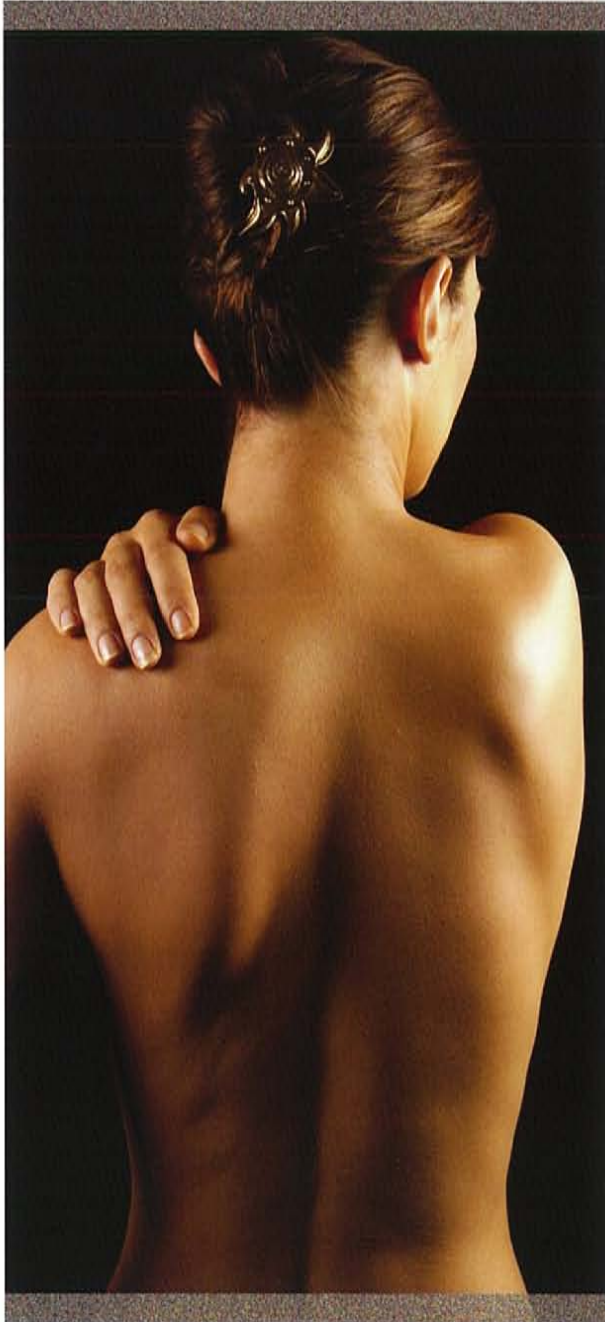
**Facet Syndrome:** The facets are the posterior joints along the side of the spinal column that help to keep the vertebrae aligned and stabilize the spine. Facet Syndrome is a result of injury or degeneration of these joints, and is often characterized by pain, stiffness and inflammation. The pain is generally increased with movement and rotation and is relieved by resting.



# The Birth of A Phenomenon: The Discovery of Spinal Decompression

## How Does Spinal Decompression Work?

In 1994, neurosurgeon Dr. Gustavo Ramos at the Departments of Neurosurgery and Radiology, Rio Grande Regional Hospital, McAllen, and Division of Neurosurgery, Health Sciences Center, University of Texas, undertook to measure the pressures inside the intervertebral disc as patients received VAX-D treatment.



The results were phenomenal. While the patients received VAX-D, their disc pressures were dropping below zero to negative levels. This was the birth of spinal decompression.

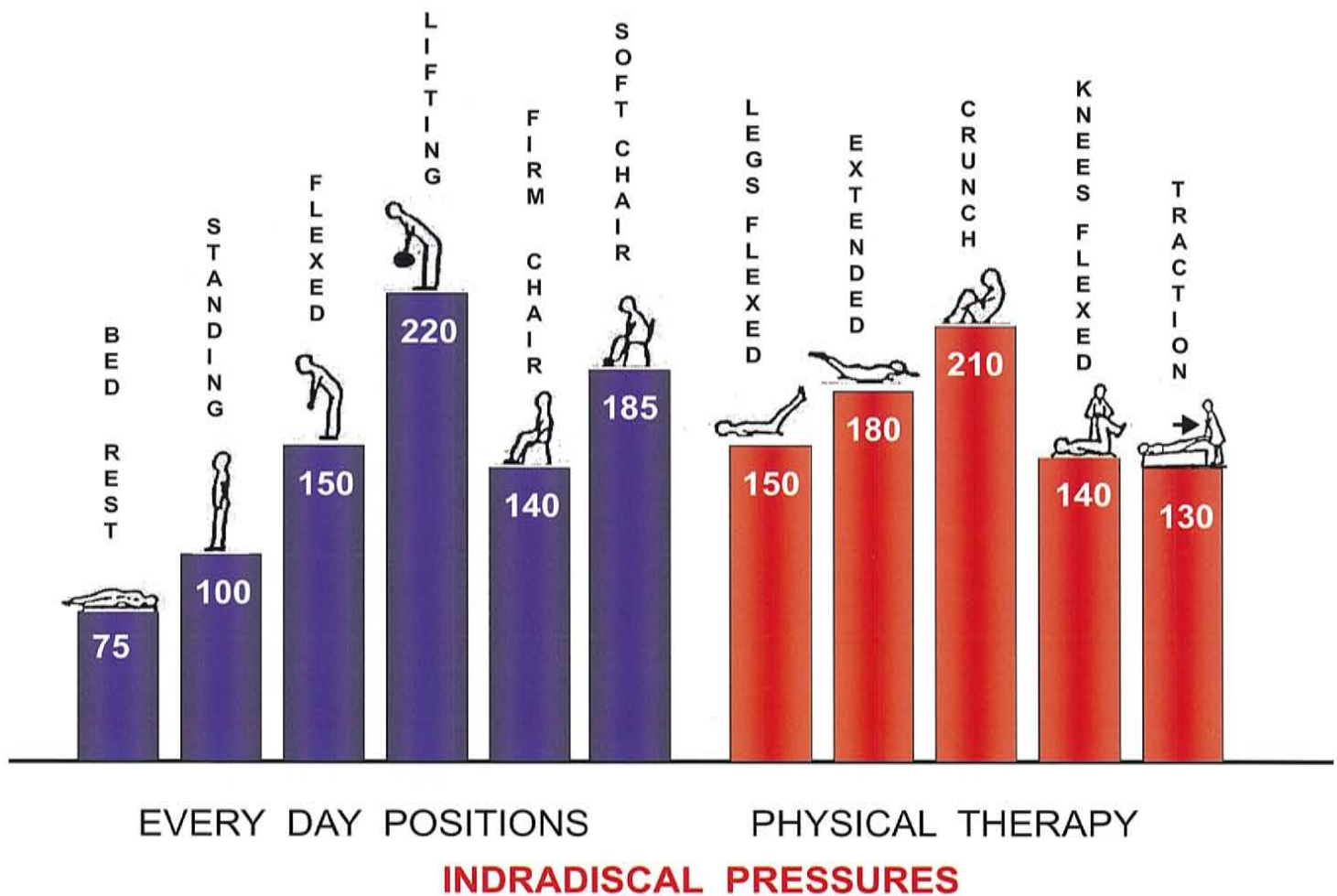
This discovery led to a landmark study that showed for the first time it was possible to lower a human's intradiscal pressure with a non-surgical procedure.

## Relieving Pressure On The Spinal Cord and Nerves.

During each VAX-D cycle, the pressure in the discs is lowered to negative levels. Repeated daily treatment gradually reduces the pain and pressure from the compressed injured disc and nerves. Patients gradually notice improvements in the first 8-10 treatments.

Reducing the pressure in the disc, means reducing your pain and symptoms; it also means increased flow of fluids, oxygen and nutrients into the disc; all of the things necessary for tissues to heal.





### ***VAX-D Lumbar Therapeutic Indications***

- 1. Herniated Lumbar Discs** (One or more levels)
- 2. Degenerative Disc Disease**
- 3. Peripheral Radiculopathy**
- 4. Failed Back Surgery**
- 5. Posterior Facet Syndrome**

# Treatment Solutions Made Easy: VAX-D Genesis System



## What Is The Treatment Like?

VAX-D treatment should be given each day (consecutively), depending on the severity of the disk herniation and the number of herniations. It should be performed a minimum of five days per week. The treatment lowers the disc pressure for 35-40 minutes per day, and the disc is compressed for the remainder of the 24 hour day, so reducing the inflammation from compression is an uphill battle. Even when you sleep, the disc pressure does not drop to negative levels.

The treatment is comfortable for most patients, and many find that their symptoms begin to start to decrease in the first 10 treatment session. Treatments may even be taken twice per day. If the patient experiences any discomfort during treatment or after treatment, the treatment tensions should be reduced to lower levels.

Patients that have longstanding chronic back pain and advanced pathology in their spine may take more than 20 treatment session. Treatment should be continued as long as the patient is making progressive gains.



## What Do The Studies Show?

Results of clinical studies demonstrate that VAX-D is an effective treatment for the management of patients with chronic back pain.

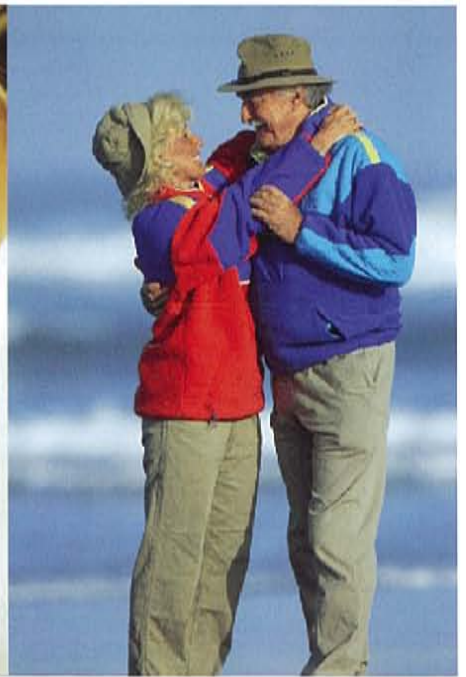
An outcome study on 778 patients and a prospective randomized controlled study both reported approximately 70% success rates and improvements in functional outcomes for patients suffering from disc related chronic low back pain.

A recent two and one-half year study sponsored by **Independence Blue Cross** has also confirmed the effectiveness of VAX-D. The purpose of the study was to determine short- and long-term outcomes after VAX-D treatment in a large sample (296 subjects) of patients with activity-limiting low back pain that had failed at least two previous, non-surgical treatments. The study showed that patients had significantly improved pain and disability scores at end of treatment, at 30 days and at 180 days post-discharge.

The textbook ***'The Practice of Minimally Invasive Spinal Technique • 2005 Edition'*** (published by the American College of Physicians and The American Academy of Minimally Invasive Spinal Medicine & Surgery) has now devoted an entire chapter to VAX-D treatment. The textbook states "VAX-D should not be considered traction in the traditional sense but as decompression. VAX-D is the only non-invasive treatment that has been proven to decompress the disc."



## A Miracle of Technology **Unparalleled Treatment System**

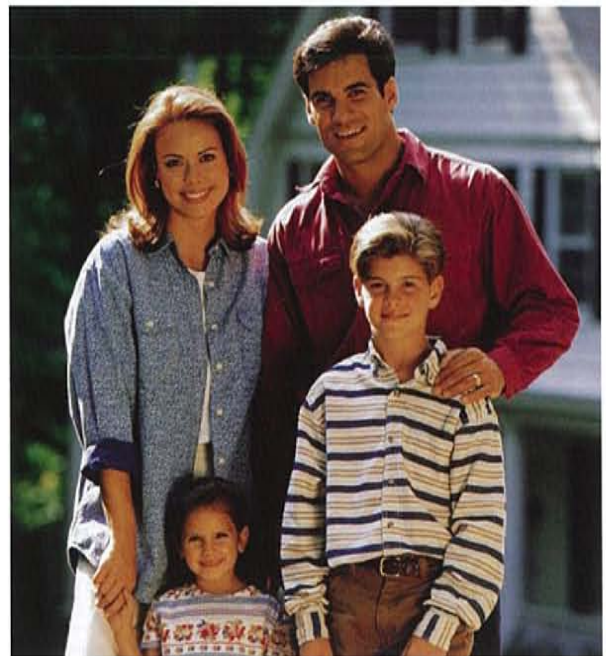


### Patients Talk About VAX-D **"VAX-D changed my life."**

I sustained a serious injury to my low back at the L4-L5 level, in a work related accident that put me in bed for two weeks. When I couldn't get down on the floor to play with our newborn daughter, I knew I had to do something.

Fortunately, my physican approached me about VAX-D, and the rest is history. It is not an overstatement to say that VAX-D changed my life. There are literally hundreds of everyday little things that I can now experience pain free, including wrestling with my two-year-old daughter. "

Steve F.





# The VAX-D Solution: Proven Effective in Study After Study



- **Outcomes After A Prone Lumbar Traction Protocol for Patients With Activity-Limiting Low Back Pain: A Prospective Case Series Study**

Beattie P.F., Nelson R., Michener L., Cammaratta J., Donely J.  
Arch Phys Med Rehabil Vol 89, February 2008

**Patients still pain free  
after 6 months**

- **The Fountain of Youth for the Lower Back / Acute and Chronic Case Presentations**

Varaday A. M.D., D.A.B.R., Yezak M. D.C., Elder J. B.S., M.H.A.  
Dynamic Chiropractic—Vol. 26, Issue 21, October 7, 2008,

**Severe cases facing surgery  
achieve success**

- **Short And Long-Term Outcomes Following Treatment with the VAX-D Protocol for Patients with Chronic, Activity Limiting Low Back Pain**

Beattie P.F., Nelson R., Michener L., Cammaratta J., Donely J.  
Journal of Orthopaedic & Sports Physical Therapy, Volume 35, Number 1, Jan 2005

**Cases succeed after  
failing other methods**

- **Efficacy of Vertebral Axial Decompression (VAX-D) on Chronic Low Back Pain: A Study of Dosage Regimen**

Ramos G., MD,  
Journal of Neurological Research, Volume 26, April 2004

**76% of patient pain free  
with just 20 treatments**

- **VAX-D Reduces Chronic Discogenic Low Back Pain- 4 year Study**

Odel R., MD, Ph.D., Boudreau D. DO  
Anesthesiology News, Volume 29, Number 3, March 2003

**Patients are still pain free  
after 4 years**

- **A Prospective Randomized Controlled Study of VAX-D and TENS for the Treatment of Chronic Low Back Pain**

Sherry E., MD FRACS, Kitchener P., MB, BS FRANZCR, Smart R., MB, Ch.B  
Journal of Neurological Research Volume 23, No 7, October 2001

**70% success rate in patients  
in pain for 7 years**

- **Vertebral Axial Decompression Therapy for Pain Associated with Herniated or Degenerated Discs or Facet Syndrome: An Outcome Study**

Gose E., Ph.D, Naguszewski W., MD, Naguszewski R., MD,  
Journal of Neurological Research, Volume 20, No 3, April 1998.

**788 patients pain free with  
herniated & degenerative discs**

- **Dermatosomal Somatosensory Evoked Potential Demonstration of Nerve Root Decompression After VAX-D Therapy**

Naguszewski W., MD, Naguszewski R., MD, Gose E., Ph.D  
Journal of Neurological Research Vol 23, No 7, October 2001

**VAX-D decompresses nerve  
roots and leg pain**

- **The Effects of Vertebral Axial Decompression On Sensory Nerve Dysfunction In Patients with Low Back Pain and Radiculopathy**

Tilaro F., MD, Miskovich D. MD  
Canadian Journal of Clinical Medicine Vol. 6, No 1, January 1999

- **Effects of Vertebral Axial Decompression On Intradiscal Pressure.**

Ramos G., MD, Martin W., MD,  
Journal of Neurosurgery 81: 350-353, 1994

- **Prospective Randomized Study of VAX-D Therapy for Acute Low Back Distress**

Peerless S., MD, FRCP, Meissner L., MD, FRCP  
Barnett H. J.M., MD, FRCP, Stiller C. R., MD, FRCP  
The John P. Robarts Institute, University Hospital at London, 1996

- **An Industry Based, Restrospective, Cost Analysis of Vertebral Axial Decompression (VAX-D) VS. Surgery For Lumbar Disc Disease: 10 Case Studies**

David C. Duncan, MD, Don Keenan, SPHR, Ph.D.  
Sinclair Oil Corporation Study, Tulsa Oklahoma

- **An Overview of Vertebral Axial Decompression**

Tilaro F., MD  
Canadian Journal of Clinical Medicine Vol. 5, No 1, January 1998





# The Non-Surgical Solution

## Frequently Asked Questions



### **What is VAX-D Genesis and how does it work?**

VAX-D is a patented medical technology that gently stretches the spine and decompresses the discs. VAX-D Treatment is able to reduce the pressure in the lumbar spine down to levels of -160 mm of mercury, relieving the pressure on pinched nerves. In short, VAX-D breaks the cycle of pain caused by bulging and degenerated discs and assists the body to heal itself. Each treatment takes 30-40 minutes. Most patients find VAX-D to be comfortable, and relief of pain can usually be noticed in the first few sessions.

### **Will VAX-D help a slipped disc?**

A bulging or "herniated" disc is sometimes incorrectly referred to as a "slipped" disc. VAX-D succeeds at treating bulging or herniated discs over 70% of the time.

### **If I've had back surgery, can I still have VAX-D?**

If you have had back surgery that has failed, you may still be a candidate for VAX-D unless you have fixed surgical hardware used to fuse the spine. In fact, a clinical study showed that VAX-D provides relief for patients who have had back surgery.

### **How many VAX-D treatments will I need, and how quickly can I expect to get better?**

The number of treatment sessions depends on the severity of your condition. The average is between 25 and 45 sessions.

### **Are there any reasons that I may not receive VAX-D treatment?**

There are a few individuals who cannot take advantage of this treatment. These people have conditions such as: Tumors, Fractures (broken vertebrae), Osteoporosis (Reduced bone mass/density) or Pregnancy.

### **How much does VAX-D cost, and will my health insurance or Workers' Compensation cover it?**

Generally, the cost of VAX-D is about 1/10<sup>th</sup> the cost of back surgery. You would have to contact your clinic and health insurance provider to see if your policy covers the treatment.

### **How is VAX-D different from traction or the other treatments claiming to decompress the spine?**

Although traction devices can stretch the lower back, they do not decompress the discs and spinal nerves. Traction tables have an electric winch that is mounted in a column or is attached to the head of the table. They are easily identified by the simple cable that attaches to the patient's harness. Either static or intermittent traction modes can be chosen, but no other device has been shown to reduce the disc pressure to negative levels.

### **Why should I consider VAX-D Therapy?**

VAX-D is the original patented, non-surgical treatment for back & neck pain. It is the only treatment proven to lower the pressure in the discs! VAX-D Therapy has been proven safe and effective in numerous clinical studies. Over 3000 patients a day are being treated with VAX-D Therapy. There are none of the risks and complications associated with surgery, injections and anesthesia. VAX-D is painless and patients can remain at light duty work while undergoing treatment. VAX-D is easy and convenient.

Choose VAX-D now,  
... because life won't wait!





## Versatility in Treatment Choices

### Supine Treatment



**VAX-D Genesis G2 • FDA 510(k) 071347**

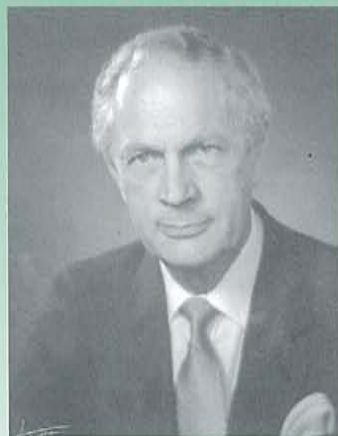
#### INTENDED USE

The VAX-D Genesis G2 Dynamic Logarithmic Spinal Decompression System is designed to relieve pressure on structures that may be causing low back pain, sciatica and neck pain. It relieves the pain associated with herniated discs, degenerative disc disease, posterior facet syndrome and radicular pain. This is achieved non-surgically through the application of logarithmic distraction tensions applied to the patient according to the VAX-D protocol.

#### SUMMARY

The system is designed to apply tensions to the spine in a smooth logarithmic time/force curve that allows trunk and paraspinal muscles to relax. The operating principles of the VAX-D Genesis G2 permit the application of accurately controlled distraction tensions to the lumbar and cervical spine in order to decompress the intervertebral discs and spinal structures.

## Invention Born of Necessity



Dr. Allan Dyer - Inventor

*How one doctor's injury brought about the invention of VAX-D*

Meet Allan Dyer, M.D., PhD., the inventor and founder of the revolutionary VAX-D technology. Dr. Dyer and his associates have consistently remained on the forefront of innovative medicine. As former Deputy Minister of Health in Ontario, Canada, Dr. Dyer's many contributions to health sciences include his extensive research that led to the development of one of the most vital medical tools used in every hospital emergency room around the world; the heart defibrillator.

Dr. Dyer's own experience with back pain began with a herniated disc that proved to be so debilitating as to confine him to a wheelchair. After conventional treatments failed, Dr. Dyer was driven to create a solution of his own and formulated the theories that led to the design and development of VAX-D. After spending more than six years in research and development with a team of physicians, engineers, and technicians at major teaching hospitals, Dr. Dyer introduced VAX-D in 1991. Today there are over 500 VAX-D units operating throughout the world. The number of patients currently treated by VAX-D exceeds 3,000 per day.