

**GET BACK IN THE GAME FASTER...**  
**GET BACK IN THE GAME BETTER!**

**NEW, CUTTING EDGE TECHNOLOGY,  
FOR SPORTS MEDICINE**



 **MicroVas**

# Simple, Non-Invasive Physical Medicine

## THREE SIMPLE METHODS:

### Increased Circulation

Perfuses tissue, elevates oxygenation: aids in fibroblast proliferation, collagen formation, transcapillary exchange of nutrients; aids delivery of systemic antibiotics.

### Involuntary Exercise

Retrains and rebuilds muscle, aids in flexion, elevates metabolism.

### Lymphatic Drainage

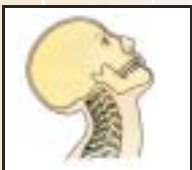
Relieves swelling and inflammation, decompresses nerves in constricted spaces, boosts body's immune responses.

### Whiplash

(Cervical Strain)

Typically caused by a violent tackle or auto accident. MicroVas

Therapy not only alleviates pain, but through tissue oxygenation, aids in collagen production and proliferation of fibroblasts to rebuild the torn ligament and muscle fibers.



### RSD/CRPS

Reflex Sympathetic Dystrophy  
Complex Regional Pain Syndrome

### Fibromyalgia

Tennis Elbow  
Golfers' Elbow  
Little Leaguers' Elbow

Carpal Tunnel Syndrome

Knee Sprain/Strain  
Patella-Femoral Syndrome  
Plica Syndrome

Stasis Ulcers  
Diabetic Ulcers  
Pressure Ulcers

Ankle Sprain/Strain  
Tarsal Tunnel Syndrome

TMJ Dysfunction

Adhesive Capsulitis  
Bursitis  
Torn Rotator Cuff

Urge Incontinence  
Erectile Dysfunction  
Groin Pull

Edema  
Lymphedema

Shin Splints  
Ischemic Rest Pain  
Spider Bites

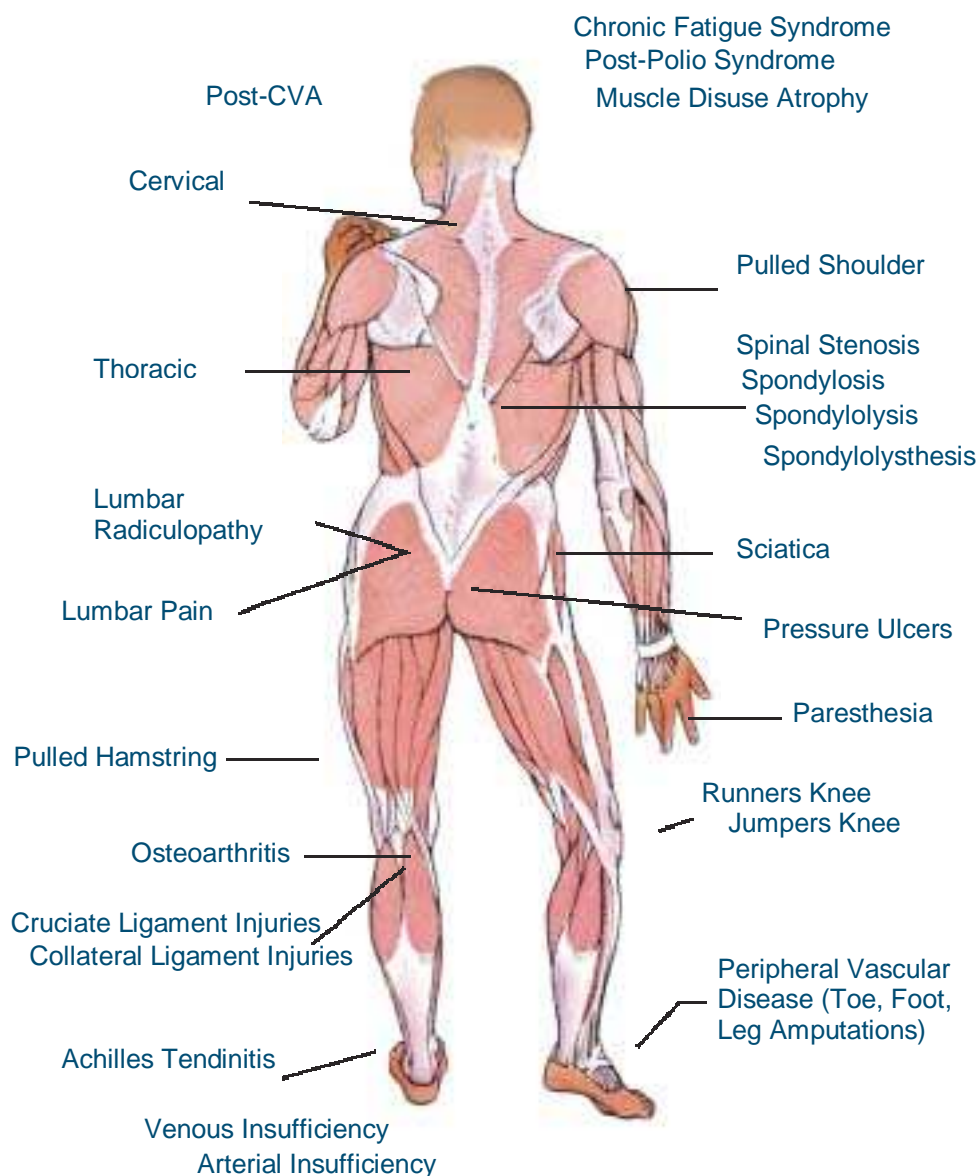
Plantar Fasciitis  
Plantar Ulcers



### Plantar Fasciitis

MicroVas therapy enhances lymphatic drainage to reduce local pressure and restores blood flow/oxygenation to tissue and nerves. With pressure reduced and circulation increased, angiogenesis contributes to stabilization and homeostasis. Palliative effects of MicroVas therapy include the blocking of neurological transmission of pain signals and stimulation of endorphins.

# Has Many Applications For Healing



## Sprains/Strains: Sports Injuries and Accidents

The most common form of injury is the sprain (tear in a ligament or joint capsule) or strain (tear in a muscle or tendon). Not only can MVT give the equivalent of simultaneous multiple massage therapists in action, but it massages at a deeper level, and, unlike therapists, does not tire. Muscles are working at a level unreachable by external manipulation.

More important than the massage, however, is the ability of MVT to bring additional blood flow and tissue oxygenation which, in turn, promotes collagen reduction, enhances proliferation of fibroblasts and increases white blood cell fighting capacity to accelerate healing and tissue rebuilding.

During MicroVascular Therapy (MVT), the body responds just as it does with exercise: the Ph falls as lactic acid increases, local temperature increases, concentrations of adenosine, potassium, nitric oxide and other local Metabolites increase. After several minutes, the muscles begin to feel fatigue, and the next day one may feel a slight ache in muscles just as after a workout.

## Beyond Aquatic Therapy?

The benefits of exercise for arthritic patients is well documented, however there is an acknowledged need to ameliorate the effects of wear and impact from exercise.

MicroVas Therapy provides increased muscle activity, metabolism and blood flow without joint movement. By boosting circulation it is believed that MicroVas therapy positively impacts synovial fluid production for enhanced joint lubrication.



# Rebuilding Athletic Performance

**The MicroVas System provides a solid foundation for rebuilding athletic performance through a unique, proprietary technology that takes Physical Medicine and electrical stimulation to the next level:**

## Increased Circulation

MicroVascular Therapy immediately and dramatically increases blood flow<sup>1</sup> which perfuses the capillary beds and elevates tissue oxygenation, aids in fibroblast proliferation and collagen formation<sup>2</sup>, upregulates platelet derived growth factors and boosts transcapillary exchange of nutrients.

## Involuntary Exercise

Retrains and rebuilds muscle, aids in restoring flexion, range of motion and strength. Elevates metabolism and production of local metabolites.

## Lymphatic Drainage

Boosts lymphatic drainage from 10-fold to 30-fold<sup>3</sup>, which relieves swelling and inflammation, decompresses nerves in constricted spaces and boosts the body's immune responses.

## Pain Management

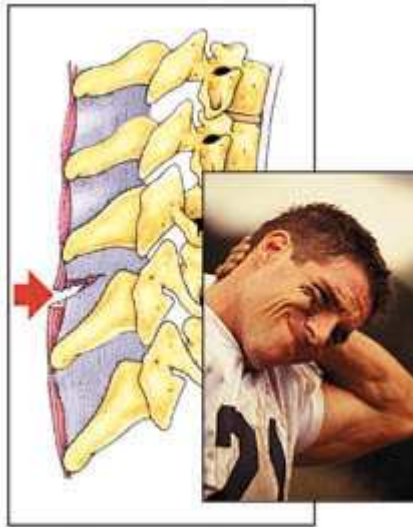
Palliative effects of MicroVas therapy include the blocking of neurological transmission of pain signals and stimulation of endorphins.



**I was suffering from acute tendinitis in my arm which severely impacted my pitching. Seeking relief, I went to see Dr. James R. Andrews at the**

**HealthSouth Sports Medicine and Rehabilitation Center in Birmingham, Alabama where he prescribed a new technology for me: the MicroVas Vascular Treatment System. The treatments I received helped me get back on the mound for the playoffs.**

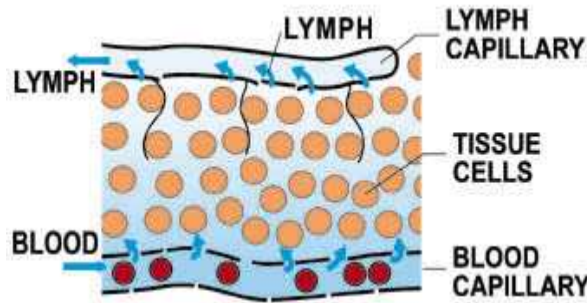
**John Smoltz, Pitcher - The Atlanta Braves**



## Real Healing Doesn't Occur Until Torn Muscle Fibers, Ligaments or Tendons Are Repaired

Most of what we do following an injury is designed to make the athlete feel better: to reduce pain and swelling. We sometimes forget that the inflammatory response is part of the body's defense against injury.

The heat and redness that accompany injury, indicate tissue perfusion and are a sign that the body is delivering more blood, oxygen and nutrients to the injured area. Capillaries become "leaky" which leads to an increase in interstitial fluid, which, in turn, elevates the volume of lymphatic drainage and triggers the body's immune responses. The "leaky" capillaries also give rise to an elevated level of platelet derived growth factors which are crucial to new tissue growth. The pain, of course, is to encourage the athlete to give it a rest.



R.I.C.E., or Rest, Ice, Compression and Elevation, is the Gold Standard of sports injury care because it works. But RICE+MVT works even better! Here's why:

After injury, the inflammatory response causes capillaries to dilate. The capillary walls increase in permeability allowing more plasma to leak into the intercellular spaces. The liquid accumulates between cells causing swelling. Applying ice to the injury constricts the capillaries to minimize leakage into the extracellular space and also serves to numb the pain. This application of ice, however, also constricts the lymphatic vessels and thus slows drainage and by constricting blood flow, diminishes the supply of oxygen and nutrients needed for the proliferation and remodeling stages of healing.

MVT stimulates the lymphatic system(3) to upregulate drainage, decrease swelling and boost the body's immune responses. At the same time, it promotes blood flow to help deliver more oxygen and nutrients to aid in the proliferation and remodeling stages.

So RICE for one or two days, then apply MVT for a faster recovery. MicroVas therapy also provides "no-load" exercise which has been found equal to volitional strength training(4) for the muscles to help keep them in tone during recovery while waiting for the injury to heal enough for traditional physical therapy and exercise.

1. Clinical Study: University of Oklahoma Health Science Center, unpublished, 1999

2. Lawrence B. Harkless, D.P.M., et al, Seven Keys to Treating Chronic Wounds Podiatry Today

3. Guyton's Textbook of Medical Physiology, 8th Edition, pp 182-183



**neuroVasix**  
3061 W Albany Road  
Broken Arrow, OK 74012  
Tel. 918-362-3225  
Fax 888-258-0041  
[info@neurovasix.com](mailto:info@neurovasix.com)  
[www.neurovasix.com](http://www.neurovasix.com)