

Radial Shockwave Therapy Program

As part of our Physical Therapy Division, we offer to you and your patients Radial Shockwave Therapy. We offer a **complimentary** assessment of your patient to determine if Radial Shockwave Therapy is appropriate for their condition. Our treatment costs \$450 for the initial course of 3 treatments (compared to \$875 at other facilities) and is eligible for insurance coverage as physiotherapy when performed by one of our certified physiotherapists.

RWST has been around since the mid 1980s in Europe, but it was not common here until the last decade likely due to the exorbitant costs of the technology. Shockwaves were developed in a medical environment originally to treat kidney stones and this continues today under the name lithotripsy. At Leading Edge Physiotherapy we invested in our state-of-the-art Swiss Dolorclast technology in 2008 because we knew the benefits to our clients outweighed our cost. One of our certified therapists has been using the technology for over eight years. Our technology continues to be some of the most advanced in the industry.

How It Works:



A radial shockwave is a low to medium energy shockwave that is pneumatically generated through the acceleration of a projectile within the handpiece of our Swiss Dolorclast device. When the projectile strikes the applicator a shockwave is generated. This shockwave enters the tissue spreading radially and is transmitted through a water soluble gel on the skin's surface. Unlike extracorporeal shockwaves, radial shockwaves have their focal point at the tip of the applicator and are transmitted to the target zone in a broad energy pattern. This allows us to apply a considerable total level of energy using multiple pulses from the applicator without the need for anesthesia or ultrasound/radiography to pinpoint the location of the diseased tissue/calcification.

The exact mechanism of shockwave therapy remains unknown. Based on results from studies performed by Dr. Ching-Jen Wang, it appears that the radial shockwaves' physical energy cause a biological response with increased metabolic activity around the site of the tissue damage and pain. In contrast to lithotripsy in which the shockwaves disintegrate the renal stones, radial shockwaves do not destroy tissue, rather they microscopically cause interstitial and extracellular responses which induce a healing effect.

Specifically, the shockwaves were shown to stimulate the early expression of angiogenesis-related growth factors including eNOS (endothelial nitric oxide synthase), VEGF (vessel endothelial growth factor) and PCNA (proliferating cell nuclear antigen), which then induces the ingrowth of neovascularization. This improves blood supply and increases cell proliferation and eventual tissue regeneration to repair the tendon or bone tissues.

The treatment also induces an analgesic effect. This mechanism is theorized to occur as a result of an initial rise in concentration of substance P in the zone of the shockwave with a subsequent prolonged reduction in its total concentration. This may explain the initial pain response followed by prolonged analgesia.

The following conditions have been shown in the research to be effectively treated utilizing Radial Shockwave Therapy:

- Plantar Fasciitis (Including Heel Spurs)**
- Achilles Tendinitis (Including Retro-Calcaneal Exostosis)**
- Shin Splints**
- IT Band Friction Syndrome**
- Lateral Epicondylitis**
- Medial Epicondylitis**
- Patellar Tendinitis**
- Rotator Cuff Tendinitis (Calcific or otherwise)**
- Hallux Rigidus and Valgus (Painful Bunions)**
- Chronic Myofascial Trigger Points**

St. Albert
Superior Performance Centre
780-458-2669

Edmonton
Royal Glenora Club
780-761-1160

leadingedgephysio.com

Referral:

When your patient attends for a complimentary assessment of their condition our physiotherapist will assess and qualify them if they:

- Have been diagnosed with one of the preceding conditions.
- Have had the pain for longer than 3 months.
- Have failed other conservative treatments or you have determined that it may be resilient to the conservative treatment.
- Don't have any contraindications including: recent cortisone injections (within the last 30 days), bleeding disorders, blood circulation disturbances, cancer and/or pregnancy.

