Sharp Podiatric
MEDICINE + SURGERY
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SHOCKWAVE THERAPY

Extracorporeal Sound Wave Treatment (ESWT) is a well-tested and clever way to treat soft tissue injuries without direct interventional treatment. It is commonly used for the treatment of soft tissue and bone disorders around the foot and ankle. Originally known as Lithotripsy, an intense and very short acoustic energy wave, traveling faster than the speed of sound, enters the injured area causing a healing response. Formerly used to break up kidney stones, in the early 1990's it was discovered that this high intensity sound wave had benefit on wound and fracture healing. Since 1993, ESWT has been used on a regular basis in Europe for the treatment of tennis elbow, plantar fasciitis and heel spurs and to treat fractured bones that did not heal normally.

Essentially the sound wave takes a chronically dormant and injured cell and converts it to an acutely injured cell causing it to rebuild. Increased metabolic activity and blood flow around the site of injury and pain occurs and we believe this stimulates the body's natural self-healing process. This can cause absorption of calcium deposits in tendons. Extracorporeal shockwave treatment (ECSW) is also called extracorporeal pulse activation technology (EPAT) has been well tested and has shown short-term results between 56% and 91% success rate in the treatment of multiple musculoskeletal conditions and may eliminate the need for surgery.
This treatment modality was first discovered in World War II from sailors on ship who demonstrated damaged lungs without any evidence of superficial trauma. The first medical treatment utilizing shockwave included lithotripsy which dissolved kidney stones without surgery and this technology is still used today on the majority of kidney stones. In the early 1990s this treatment was expanded to treat soft tissue injury such as ligaments and tendons and has grown ever since. It have been evaluated and approved by the FDA.

TREATMENT PROTOCOL

Generally speaking most patients require about 3 treatments performed in the office without anesthesia. The sessions are spaced 1 week apart intake about 10-15 min. The patient will lay in a prone position on the stomach and an ultrasound gel is applied to the affected area. We then start with a lower energy and gradually increase through the 6000 pulse cycle. Most patients tolerate this treatment well and described it as uncomfortable. Bony prominences are more uncomfortable than well-padded areas. There are very minimal limitations after the treatment and patients and athletes can go back to reasonably normal activity. However the treatment will cause a inflammatory response and therefore anti-inflammatory medication such as Advil and Aleve cannot be utilized.

The maximum relief is usually felt 12 weeks after the last treatment and he can take up to 4 weeks for pain relief. The majority of healing occurs between week 6 and 9. **Cost** included for three treatments is $750.

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LIMITATIONS

ECSW should be used cautiously on patient's with a coagulation disorder, use of Coumadin/warfarin or in pregnant woman or growing children. It also should not be used over areas of carcinoma or tumor growth.

Common conditions treated with shockwave therapy include shoulder tendinitis, frozen shoulder, patellar tendinitis, Achilles tendinitis (70% success rate), plantar fasciitis and heel spurs (84% success rate), stress fracture or delayed union (91%).

Website links for previous research include:

Extracorporeal Shock Wave Therapy Is Effective In Treating Chronic Plantar Fasciitis: A Meta-analysis of RCTs Adeel Aqil MRCS, et al Clinical Orthopedics and Related Research November 2013, Volume 471, Issue 11, pp 3645-3652

http://link.springer.com/article/10.1007%2Fs11999-013-3132-2

Comprehensive list of peer reviewed articles:

http://www.storzmedical.com/us/disciplines-and-products/epat/literature.html