EXTRACORPOREAL SHOCKWAVE THERAPY

FREQUENTLY ASKED QUESTIONS

What is ESWT?

Extracorporeal shockwave treatment, also known as ESWT, is a non-invasive, non-surgical treatment option for the intense, persistent heel pain associated with chronic plantar fasciitis. "Extracorporeal" means "outside the body". Shockwaves, also known as pressure or sound waves, are generated from a special ESWT device, and focused onto the targeted tissue. The shockwaves are delivered outside the body to trigger an individual's own repair mechanisms. The concept behind shockwave therapy in orthopedic disorders is that the shockwave stimulates and reactivates healing through microdisruptions of vascular or minimally vascular tissue to encourage revascularization and other elements necessary to advance normal tissue healing. Additionally, shockwaves help to over-stimulate pain transmission nerves, which can lead to a reduction in sensitivity and pain.

What is plantar fasciitis?

The plantar fascia is a band of connective tissue on the plantar surface of the heel that plays a large role in maintaining the normal architecture of one's foot. Plantar fasciitis is a common clinical condition caused by overuse or injury of the plantar fascia and is defined as traction degeneration of the plantar fascial band at its origin on the medial tubercle of the calcaneus. Inflammation, fibrosis, and decreased vascularization of the fascia occur, causing symptoms of sharp heel pain. Other symptoms that may occur include burning in the sole of the foot, recurring foot pain that is especially aching in the morning or after sitting, or heel pain after beginning a new exercise routine.

What causes plantar fasciitis?

There are a number of predisposing factors, including, foot pronation, obesity, poor fitting shoes, minor trauma, occupational risks and change in exercise program. Although everyone is at risk, plantar fasciitis is most commonly found in athletes, runners, overweight individuals, or those who are required to stand on hard surfaces for prolonged periods of time. Although approximately 2,000,000 Americans suffer from plantar fasciitis ESWT is an appropriate treatment option in approximately 5 to 10% of those cases as the remainder of the cases can adequately addressed with more conservative therapies.

Who should receive ESWT for plantar fasciitis?

Prior to undergoing ESWT treatment, the patient must have been diagnosed with chronic plantar fasciitis for at least six months and only after the patient's symptoms fail to respond to three conservative treatments. Conservative treatments include rest, physical therapy, heel cushions, NSAIDs, cortisone injections, taping, orthotics, shoe modifications, night splinting and casting. In years past, surgical intervention for chronic plantar fasciitis was required when these other treatments had failed, but today, ESWT is available as an alternative, non-invasive treatment option.

Who should not receive ESWT treatment for plantar fasciitis?

ESWT is not recommended for patients with certain conditions, i.e. patients with pacemakers, patients taking medications that may prolong or interfere with blood clotting – coumadin, pregnant patients, etc. Children or women that may be pregnant are also not considered appropriate candidates for ESWT. ESWT is not appropriate for individuals suffering from acute plantar fasciitis. Your health history should be reviewed with your doctor to see if this treatment is appropriate for you.

How Does ESWT Work?

For over twenty years, extracorporeal shockwave lithotripsy (ESWL), a non-invasive procedure, has been successfully used in the treatment of kidney stones. As the force of a shockwave causes the disintegration of the kidney stone, so does the acoustic energy promote healing in the distressed tissue. The shockwave stimulates and reactivates healing through microdisruptions of vascular or minimally vascular tissue to encourage revascularization and other elements necessary to advance normal tissue healing.

The ESWT device consists of a power supply, a console for generating shockwaves, and a portion of the device that transmits the shockwaves. During the treatment, the shockwave delivery aspect of the device is aligned or positioned over the body so that energy is delivered to the specific body part, with minimal energy delivered to the surrounding tissue. The Epos Ultra® is an electromagnetic shockwave emitter whose acoustic (sound) waves travel through a water filled cushion that is positioned against the patient's heel. The Epos Ultra® includes an ultrasound imaging system that allows the physician to precisely direct the shockwaves to the treatment area during the procedure.

What happens on treatment day?

On the day of the procedure, you (the patient) will arrive at the treatment location approximately one half hour before the scheduled appointment. There you will meet your physician and the highly trained technician. After briefly fulfilling registration requirements, you will recline in a comfortable chair or bed, with your injured foot resting on a large, fluid-filled cushion.

Typically, an ankle block utilizing local anesthetics is administered for anesthesia (using a Biojector needle free injector.) After localizing the inflamed fascia with the ultrasound, the injured heel receives shockwaves during this 20 minute outpatient procedure.

Post operatively patients are discharged directly home from the treatment centers. Your physician will provide instructions and exercises imperative to your recovery.

What are the side effects of ESWT?

Compared to invasive or endoscopic surgery, ESWT has fewer side effects and a much shorter recovery time. The most common adverse reactions include temporary pain (bruising and soreness), edema and petechiae. These possible occurrences, however, usually clear within a few days. The risks associated with surgical incisions and general anesthesia are eliminated.