

The Benefits of Low Intensity Radial and Focused Extracorporeal Shock Wave Therapy

Extracorporeal Shockwave Therapy (ESWT) was first introduced into clinical practice in 1980 as a treatment for non-invasive lithotripsy (destruction of kidney stones with “high energy” SWT) (1). In the last two decades SWT has been commonly used as a treatment for musculoskeletal disorders and the stimulation of bone growth (2) (medium to low SWT). Common orthopedic conditions treated successfully include plantar fasciitis (heel), Achilles tendinopathies, patellar (kneecap) tendinitis, shoulder and elbow tendon issues, femoral head necrosis, patellar knee jaw, osteochondritis and calcified shoulder tendonitis (3-6). Shock wave therapy has also been used to treat recalcitrant angina pectoris (chest pain) possibly due to its ability to stimulate angiogenesis (new blood vessel formation). (7-8) For more than 10 years low intensity shock waves have been used to treat erectile dysfunction (and prostate issues) by improving blood flow and breaking down fibrous tissue (9-11).

Focused and radial shockwaves both promote:

- 1) Neovascularization – the building of new blood vessels
- 2) Release of growth factors such as eNOS (endothelial nitric oxide synthase)
- 3) VEGF (vascular endothelial growth factor)
- 4) PCNA (proliferating cell antinuclear antigen).
- 5) An anti-inflammatory effect
- 6) A breakdown of fibrous tissue
- 7) Stimulation of stem cells

These all lead to the improvement of the blood supply and to an increase in cell proliferation and ultimately tissue regeneration for tissue repair (12).

Shockwave treatment is a non-invasive therapeutic intervention without the risks of surgery and postoperative pain that has been used medically for 20-30 years.

Conditions Which Respond to Radial and/or Focused-ESWT 3-5 Weekly Treatments \$150/per body part (20-30 min)

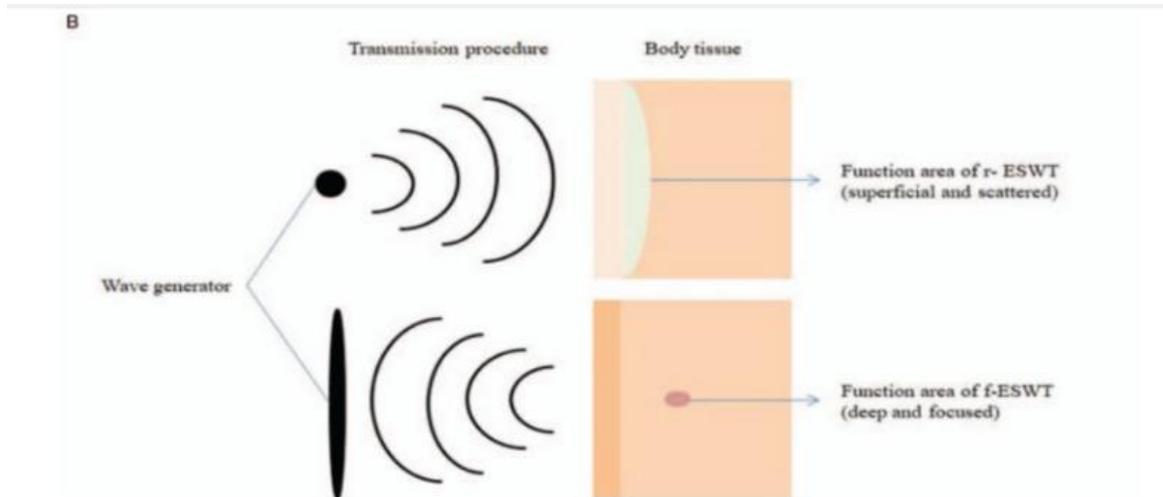
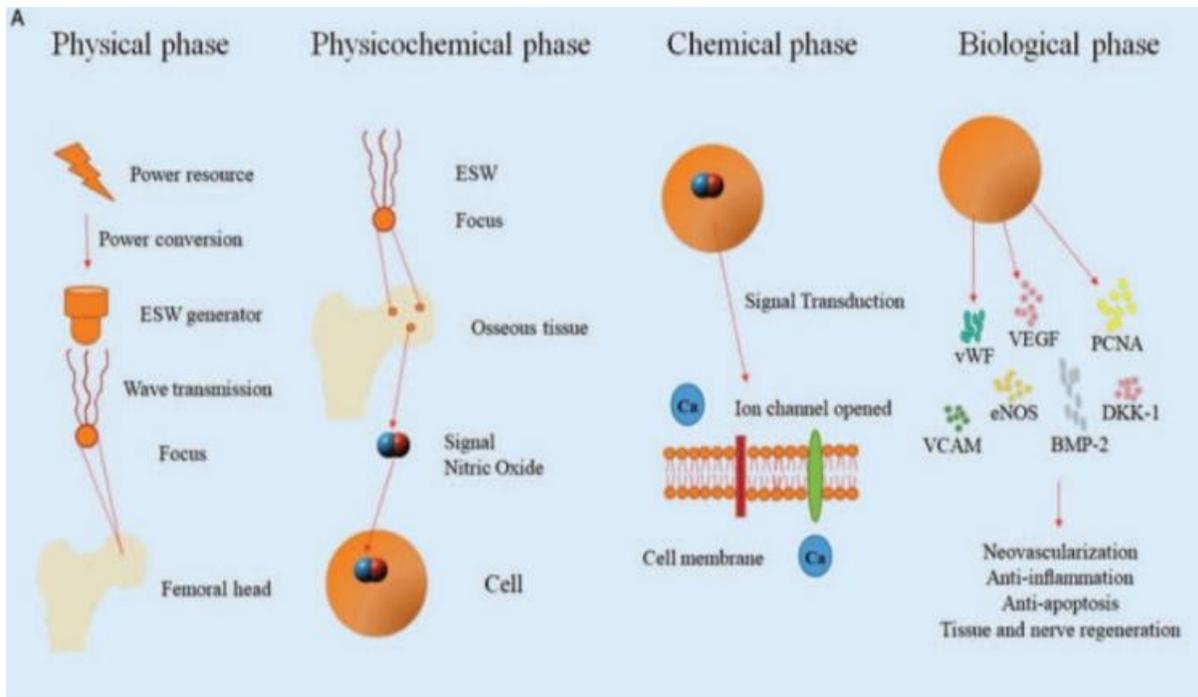
Achilles Tendinitis	Greater Trochanteric	Patellar Tendinitis
Avascular Necrosis (hip)	Syndrome (hip pain)	Plantar Fasciitis
Benign Prostatic Hypertrophy (BPH)	Low Back Pain	Rotator Cuff Partial Tears
Bicep Tendinitis	Lymphedema (8-12 weekly)	Shin Splints
Bursitis Hip	Muscle Strains	Shoulder Pain
Calcium Deposits	Overactive Bladder	Tennis Elbow (outside)
Carpal Tunnel Syndrome	Neck Pain (stiff neck)	Trapezius Pain
Erectile Dysfunction (6-18 weekly or twice per week treatment sessions***)	Neuroma's (feet)	Urinary frequency
	Neuropathies (feet)	Wound Healing
	Nocturia (nighttime urination)	

Pain creation is also tied to the inflammation you create by your physical actions, diet, the status of your gut wall, the state of your 37 trillion bacteria in your gut and your environment (allergens and toxins). To truly deal with pain you need to deal with all these factors which Kirk Hamilton will address at your first visit. Frequently diet change and a few supplements are recommended to enhance healing along with ESWT.

NOTE: A shock wave is NOT an electric shock. It is a pulsed sound wave (acoustic, pressure wave) that creates a response in body tissues that releases natural body chemicals that promote healing, circulation, new tissue formation, anti-inflammation, and breakdown of fibrous tissue.

Radial versus Focused Shockwave Therapy

(r-ESWT vs f-ESWT)



The four-stage process of shock waves acting on human tissues (A), and different working mode of extra-corporeal shock wave and radial pressure wave (B). BMP-2: Bone morphogenetic protein-2; DKK-1: Orthogenesis factor Dickkopf-1; eNOS: Endothelial nitric oxide synthase; ESW: Extra-corporeal shock wave; f-ESWT: Focused extra-corporeal shock wave; PCNA: Proliferation cell nuclear antigen; r-ESWT: Radial extra-corporeal shock wave; VCAM: Vascular cell adhesion molecules; VEGF: Vascular endothelial growth factor; vWF: Von Willebrand factor.

Action Steps

1. If unsure about trying SWT schedule a FREE 15 minute phone appointment with Kirk to discuss EPAT therapy for any of the above conditions that may affect you. (SWT is valuable in treating Erectile Dysfunction. Ask Kirk about this as well).
2. If you are sure you want SWT treatment make an initial 75 visit with Kirk which will include a treatment, medical history, and short examination of your problem. Further treatments are scheduled for 30 minutes per body part treated.
3. For more information go KwikerMedical.com → Services → scroll down to Acoustic Wave Therapy and Erectile Dysfunction and Extracorporeal Pulse Activation Technology (EPAT).

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