

RADIAL SHOCKWAVE THERAPY

WHAT IS RADIAL SHOCKWAVE THERAPY?

Radial shockwave therapy (RSWT) is a low-cost, safe and effective therapy that can be used to treat a range of musculoskeletal injuries. The use of shockwaves to treat musculoskeletal tissues is established in medical practice and is a method that has the potential to treat an expanding range of musculoskeletal conditions.

RSWT TREATMENT IS HIGHLY EFFECTIVE

RSWT is a highly effective treatment for patients with:

- Tennis elbow
- Calcified tendon issues of the shoulder
- Golfer's elbow
- Trigger point treatment (in muscles)
- Lateral hip pain (greater trochanteric bursitis)
- Patellar tendinopathy (jumper's knee)
- Medial tibial stress syndrome (shin splints)
- Plantar fasciitis, including heel spurs
- Achilles tendinopathy

HOW DOES IT WORK?

RSWT is a non-invasive treatment that uses pulses of energy which are targeted to damaged tissues. The treatment increases blood flow in the affected area, stimulates cellular renewal and repair, and reduces pain. RSWT is widely acclaimed to be effective in the treatment of many musculoskeletal disorders; it can shorten a period of treatment and provide powerful pain relief.

BENEFITS OF RSWT

The benefits of RSWT are that it:

- Reduces pain
- Allows an earlier increase in functional mobility
- Increases blood flow
- Increases tissue healing

Evidence shows that RSWT usually leads to a short-term increase in functional mobility, and functional improvement is demonstrated at a much earlier stage in a course of treatment. This increased mobility from RSWT may give the clinician and patient the opportunity to introduce active rehabilitation sooner, using exercises that load the tissue/musculoskeletal structures.

THE DIFFERENCE BETWEEN RSWT AND EXTRACORPOREAL SWT (ESWT)

RSWT and ESWT are terms that are often used interchangeably, which is incorrect. Radial shockwave devices use a mechanical 'ballistic' technique to generate shockwaves, whereas ESWT uses high-energy focused sound waves. The most common RSWT devices use compressed air to accelerate a projectile in a hand-piece applicator; this delivers impulses or shocks by kinetic energy to the site of treatment. The differences between RSWT and ESWT are summarised in Table 1.

TABLE 1: DIFFERENCES BETWEEN RADIAL SHOCKWAVE THERAPY (RSWT) AND EXTRACORPOREAL SHOCKWAVE THERAPY (ESWT)

RSWT	ESWT
<ul style="list-style-type: none"> ■ Wave speeds are slower (does not have a true shockwave). ■ RSWT is thought to be more of a pressure wave. ■ RSWT is different in that it is applied to your skin and pressure waves are generated by repeatedly bouncing upon your skin with pressure wave devices, creating pressure waves through your body. ■ When using radial shockwaves, the waves disperse through the outer tissues before getting to the tissue beneath. ■ RSWT is most effective when treating superficial injuries. 	<ul style="list-style-type: none"> ■ Wave speeds are faster – breaks the sound barrier. ■ ESWT is an acoustic wave with a very high-pressured amplitude with short intense pulses. ■ The shockwaves and force created in these machines is transferred to your skin and tissues without effect, and is focused at a specific desired depth. ■ ESWT is a better choice of treatment when dealing with deep-tissue injuries.

When ESWT was first used, the procedure was performed in an out-patient setting, under local anesthesia, taking up to 30 minutes. Now, with newer and more portable technology, it can be done without anaesthesia in the therapist's clinic in less than 10 minutes.

Although these therapies can be used to treat the same conditions they have very different technical characteristics and physiological effects.

RSWT would normally be used for a condition which is initially difficult to treat and would help to prevent the condition from developing into a persistent and painful problem.

IS RSWT RIGHT FOR ME?

The following points will help you discuss the option of RSWT with your therapist and decide if it will help with your recovery/rehabilitation:

- Have your injury diagnosed by a professional practitioner.
- Ask the practitioner about radial shockwave therapy (RSWT) and if it would be a suitable option for the treatment of the injury.
- RSWT is not painful but it is uncomfortable.
- RSWT does not replace traditional therapies but complements the normal treatment provided by the practitioner.
- Be prepared to have RSWT 3–5 times during the complete rehabilitation process.
- RSWT appears to speed up the recovery process, to a specific point in the rehabilitation procedure, by being able to implement functional movement/mobility earlier.
- Traditional treatment should be used to complete the full rehabilitation process.