

Novel Ultrasound Tennis Elbow Treatment

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ULTRASONIC PAIN RELIEF THERAPY

The next step for therapeutic ultrasound

The Ultrasonic Pain Relief device is a novel proprietary physical therapy modality, incorporating unique ultrasound technology, for the effective treatment of nociceptive and neuropathic pain.



Ultrasound has been used by physical therapists as a non-invasive therapeutic treatment since the 1940s and is used to treat a range of musculoskeletal disorders. However, there are limitations.

The therapeutic effects of conventional ultrasound treatment are achieved by applying a transducer to the affected area, which emits sound waves at a frequency of between 0.7 and 3.3 MHz. The sound waves pass through the skin, vibrating or oscillating tissue in the treatment area. However, the intensity of the waves decreases as they are absorbed, and effective deep tissue penetration is rarely attained.

In recent years, low frequency ultrasound using sound waves at a frequency less than 200 kHz has been shown to be effective in some medical applications. However, the use of lower frequencies can result in the presence of standing waves, resulting in so-called “hot spots” which can cause discomfort to the patient.

Although operating at low frequency, the unique proprietary technology incorporated into the Ultrasonic Pain Relief device enables the effective delivery of low frequency, low intensity ultrasound for the relief of pain in tendonitis and inflammatory musculoskeletal disorders.

A novel therapy

Operating at 20-40 kHz, the sound waves issued by the Ultrasonic Pain Relief device are able to penetrate several centimetres into the muscle tissue. Oscillating at 10 micrometres peak-to-peak, 3D acoustic pressure is generated (1-5 Watts per cm²), helping to increase blood flow, and softening and ‘lubricating’ scar tissue. The impact is similar to that of receiving a gentle deep tissue massage and enhances the recovery rate of damaged tissue.

- High power, low frequency ultrasonic waves penetrate tissue and are converted by acoustic pressure.
- Ultrasonic waves pass through the area of the body being treated.
- Muscles, tendons and/or ligaments in the treated area are gently massaged, oscillating the inflammation and loosening scar tissue.
- Blood flow in the treated area is increased, speeding up the healing process.
- Swelling and oedema, the main sources of pain, are reduced.

Advancing the management of musculoskeletal pain

Tendon injury and inflammation, inflammatory musculoskeletal disorders, strains and sprains are often seen as having a very simple and benign clinical presentation. However, this belies the fact that there may be complex causes and that such conditions are often difficult to manage.

Conditions such as tennis elbow are frequently caused by repetitive movement, for example during the course of playing sports – as the name suggests – or undertaking repetitive manual tasks in the workplace.

The pain experienced by individuals suffering from these disorders can be debilitating, and the societal costs associated with lost working days, diagnosis and treatment are significant.

The development of a unique ultrasonic technology that can be applied as a therapeutic treatment in a whole range of musculoskeletal disorders raises the possibility of faster, more complete and more cost-effective recovery.



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Effective, **ongoing** pain relief from tennis elbow and golfer's arm within **24 hours**.

For questions or further information on trial participation or investment, please click [here](#).



Using dense low-frequency 3D acoustic pressure at 1-5 Watts per cm², our unique technology enables deep tissue penetration for effective pain relief.

Treating the affected area for approximately 5 minutes eases inflammation and softens scar tissue, with noticeable results usually within 24 hours.

Contact us



Ultrasonic Pain Relief Ltd.

Kemp House

160 City Road

London

EC1V 2NX

United Kingdom

Tel. +(44) (0)20 3239 4071

Fax: +(44) (0)20 3745 7472

Email: info@tenniselbow.eu

