

Therapeutic Ultrasound

How does it Work? Ultrasound is produced by converting the electrical energy from the wall into mechanical energy. The energy is created by vibrating crystals within the sound head which produces high frequency sound waves. To compare, the human hearing range (15,000-20,000Hz) vs. ultrasound (1,000,000MHz). The high frequency sound waves cause cells to vibrate creating molecular movement and heat. The



increased temperature helps to recirculate blood in the affected tissues bringing fresh nutrients to the region at a cellular level. A small inflammatory process is actually created bringing new cells to the region accelerating the healing process. Inflammatory responses are usually bad but by controlling inflammation to a concentrated region at a very small dose the body signals new cells to the area to rebuild tissues and take away the injured cells. This is how therapeutic ultrasound is able to help break adhesions and decrease pain.

Commonly used for: Bursitis, sprains and strains, joint dysfunction, tendonitis, chronic pain, frozen shoulder, spasms. Ultrasound has the ability to penetrate 5cm to those hard to get to ligaments and joint spaces.

What to expect? Because ultrasound operates at such a high frequency ultrasound is usually not felt. Electrical stimulation can however be produced through the ultrasound head which would feel like little twitches through body tissue.



Watson, T. (n.d.). Ultrasound therapy. Retrieved February 11, 2019, from

<http://www.electrotherapy.org/modality/ultrasound-therapy>



