

Therapeutic Ultrasound

Disclaimer

This information is not intended to replace the advice of your Doctor. When you have a soft tissue injury obtain medical advice before using a Therapeutic Ultrasound.

This type of "ultrasound," is not the type of application used during pregnancy, that generates images of the womb. That is called diagnostic ultrasound, which is used to capture images of soft tissues and organs.

Therapeutic ultrasound is a treatment tool used for physical and occupational therapy.

It is used for promoting tissue healing and treating chronic pain,

It may be used to aid release any of the following conditions:

- carpal tunnel syndrome
- shoulder pain, including frozen shoulder
- tendonitis
- ligament injuries
- joint tightness

Therapeutic Ultrasound is a form of *mechanical vibration* (not electrical). The frequencies used for therapeutic purposes are between 1.0 and 3.0 MHz (1 MHz = 1 million cycles per second), the human ear cannot perceive this sound.

Therapeutic ultrasound is used to increase blood circulation in soft tissue tissues to promote healing and decrease pain.

Therapeutic ultrasound can improve the flexibility of muscles and tendons restoring a fuller range of motion. It will be offered as part of your overall treatment plan that will include manual therapy, exercise, and stretches,.

What to expect

1. Conductive gel will be applied to the body region to be focused on.
2. The transducer head will be slowly moved over the skin of the body part being treated.
3. The depth of penetration will depend on the specific condition, the selected frequency and the wave shape.
 - a. For soft tissue, the depth is around 50 mm at 1 MHz and 15 mm at 3 MHz
 - b. It is impossible to know the thickness of each muscle layers in an individual

patient.

The treatment commonly lasts 8 to 10 minutes, and it will not be performed more than once per treatment session and combined with manual therapy.

Benefits of Ultrasound Therapy

Therapeutic ultrasound is a popular and widely used treatment offered. It is safe and commonly used to treat various conditions; ultrasound therapy can improve functionality and reduce pain.

Ultrasound therapy has been used for decades; and is quite effective. This process used by trained massage therapists, for treating pain; it speeds up the tissue healing process. There are two types of ultrasound therapies: thermal and mechanical ultrasound therapy. The kind of therapy used entirely depends on the injury to be treated.

1. Provides heat

Ultrasound therapy generates heat deeper in the tissue. The sound waves causes vibration and friction that generates the heat.

2. Helps in treating surgical wounds

The ultrasound increases blood flow. Which carries healing nutrients needed to speed up the healing process. This helps in the treatment and healing of the wound.

3. Treat the Scar Tissue

The **ultrasound** vibrations affect the fibres that form **scar tissue**. **Ultrasound** used over these injuries can prevent future **scar tissue** from forming and enable **scar tissue** to break down.

4. Reduces pain

Ultrasound decreases muscle spasms and improve tissue healing, there by reducing pain. This allowing clients to participate in exercises that will improve their condition.

5. Helps to relax muscles

A strained muscle can be relaxed by inducing vibration and friction through the

application of ultrasound, which provides a much-needed relief to the client.

6. Treat Acute or Chronic Inflammation

Ultrasound physical therapy has benefits in the treatment of acute inflammation. The ultrasound waves can positively effect to the skin and local tissue. Ultrasound will have a positive effect on the healing of injury with acute or chronic inflammation.

7. Great treatment for sports players

Athletes can injure themselves while playing sports; ultrasound therapy provides a method delivering pain relief for them, so that they can go back to competing.

Contraindications

While this type of ultrasound is safe for treating many conditions, there are contraindications for this therapy

- 1. Use of ultrasound therapy is contraindicated in certain areas of the body, such as over the eyes, sexual organs or over growing bones**
- 2. Use of ultrasound over the chest of patients with cardiac pacemakers**
3. Ultrasound therapy should not be used with certain medical conditions.
 - a. Cancerous tissue should be avoided
 - b. Over the spine after a laminectomy. There is risks of injury to the spinal cord.
 - c. Clients with thromboembolic disease, or blood clots
 - d. Applied to the abdomen of pregnant, especially if administered during the first trimester.

In Conclusion

Therapeutic ultrasound is a tool which is widely use by therapists. Thearpi Tylineo will offer it to clients as part of their treatment; it will be part of an overall treatment plan, that includes focused massage, stretches, and exercise.