

### **Phonophoresis- what is it and why is it used?**

Phonophoresis uses the application of Ultrasound to enhance the delivery of topically applied drugs through the skin toward a target tissue area. Ultrasound machines generate a range of therapeutic sound waves which produce thermal and non thermal effects. Phonophoresis is applied by a health care provider in a clinical setting. Medication selected by your medical provider for Phonophoresis is generally used to decrease inflammation caused by injury and overuse.

#### **The Theory**

The deep heat from ultrasound waves causes your blood vessels to increase in size.
Blood brings nutrients to the area and carries away wastes to help decrease inflammation.
Pain-killers and anti-inflammatory medications are commonly used as possible types of medications.
Recent studies have failed to show that Phonophoresis increases the absorption rate of medication over placebo (non-medicated treatment), and it has been stated that more research needs to be gathered before clinical effectiveness and parameters can be established.

#### **Medications used with Phonophoresis**

Medications mixed into gels, creams, or ointments	Salicylates
Cortisol	Pain-killers
Dexamethasone	Lidocaine

#### **Conditions, impairments and functional limitations treated**

Indicated for localized inflammation of a tendon	lateral epicondylitis
bursitis	shoulder
joint arthritis	tendinitis

#### **What can the patient expect to feel or experience?**

Treatments last 5 to 8 minutes for golf ball to tennis ball size area. Larger areas will require more time.
Patients may experience slight warmth over the treated area
Report any tingling or other uncomfortable sensation during treatment to your therapist.
Some patients may experience a brief, mild rash after treatment

#### **Safety and Contraindications**

The same contraindications that apply to Ultrasound will apply to Phonophoresis. The contraindications of the medicine being applied will have to be considered. Drugs with anesthetic effects may cause numbing in the tissue leaving the patient unable to detect sensation and heat through the treated area.

If you have any of the following conditions, consult with your health care provider to see if Phonophoresis is a therapeutic choice for you:

breast implants	thrombophlebitis
malignancies	pregnant
pacemakers	any medical condition for clearance

#### **Additional information and References**

Contact: Licensed PT or PTA, Licensed OT, & OTA.

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