**LOW LEVEL LASER THERAPY (Cold Laser Therapy)**

Cold Laser Therapy or Low Level Laser Therapy (LLLT) is a treatment that utilizes specific wavelengths of light to interact with tissue and is thought to help accelerate the healing process. It can be used on patients who suffer from a variety of [acute and chronic conditions](https://www.spine-health.com/conditions/chronic-pain/types-back-pain-acute-pain-chronic-pain-and-neuropathic-pain) in order to help eliminate pain, swelling, reduce spasms and increase functionality. Low Level Laser Therapy improves tissue repair (skin wounds, muscle, tendon, bone, nerves), reduces inflammation and reduces pain wherever the beam is applied. Usually applied by a doctor, therapist or technician, treatments typically take 1 - 10 minutes and should be applied two or more times a week.

**How Cold Lasers Work**

Non-thermal photons of light that are emitted from the laser pass through the skins layers (the dermis, epidermis, and the subcutaneous tissue or tissue fat under the skin). This light has the ability to penetrate 2 to 5 centimeters below the skin at 90mw and 830 nm. LLLT works predominately on a protein in mitochondria (cytochrome c oxidase) to increase ATP and reduce oxidative stress. A cascade of mitochondrial and intracellular downstream effects lead to improved tissue repair and reduced inflammation

Cold laser therapy can stimulate all cell types including muscle, ligament, cartilage, nerves, etc., so a number of conditions can be treated by cold laser therapy. Some of conditions that may typically be treated by cold laser therapy include & FDA approved are:

* Arthritis pain
* Neck & Back pain
* Carpal tunnel syndrome
* Fibromyalgia pain
* Knee pain
* Tendonitis
* Muscle & Joint Pain and inflammation

**Effectiveness of Cold Laser Therapy**

For years, physicians have been using cold laser therapy on patients who are seeking effective, alternative methods for pain relief. Since 1967 there have been over 2,500 clinical studies published worldwide. Many of these studies are double-blinded, placebo-controlled and have demonstrated cold laser therapy to be a proven method for pain relief.