

COLD LASER THERAPY

LASER is an acronym for **L**ight **A**mplification by **S**timulated **E**mission of **R**adiation. Light created in this way is then culminated and directed into an intense beam of coherent light through the use of cathode and anode reflecting components in order to produce a single stable frequency. Therefore a TRUE laser is one that produces the emission of coherent light, generated at a precise and stable frequency, and in a focused direction.

How does it work? The Major Premise:

The sun emits energy in a broad spectrum called the electromagnetic spectrum of radiation. This radiation, or light energy, includes visible light (400 – 800 nm wavelength). Short –wavelength photons are very energetic, whereas longer wavelength photons have lower energy. Although this is a relatively new technique, researchers are finding that light energy of moderate wavelength (630 to 640nm) has a healing effect on damaged skin, muscle, nerve, and other tissues. Light waves are emitted from the laser tool and pass through skin, muscle, tissues, and even bone. The degree of penetration (or frequency) is adjusted according to the condition. Unlike the powerful lasers used to cut or break down tissues in laser surgery, the mild wavelengths used in this Low Level Laser Therapy stimulate and moderate processes such as cell division and inflammation.

The photons of the 635 nm wavelength are strong enough to alter the shape of certain receptor proteins in the mitochondrial cell membrane, but weak enough not to damage crucial molecules such as DNA, enzymes (proteins), and lipids. The 635 nm photon wavelength has just the right amount of energy to stimulate mitochondrial membrane proteins, resulting in an increase of cellular energy ATP. ATP is the energy DNA needs to create proteins.

Small amounts of increased cellular ATP have profound influences on cellular physiology. The nervous system uses the greatest amount of ATP energy. Consequently, the greatest improvement in physiology seen with laser therapy is in neurological function.

With laser light, “certain cell functions are stimulated,” especially the increase of a cell’s ATP energy. This increased ATP synthesis is associated with:

1. increased cell metabolism
2. increased collagen synthesis
3. stimulation of DNA formation
4. improved immune system function
5. increased new formation of capillaries

(over)

Laser therapy has been found to enhance the following:

- Wound Healing
- Physical Therapy
- Nerve Regeneration
- Pain Management

Studies have shown that different types of cells respond to different frequencies

While Cold Laser Therapy does not “fix” health problems, we have used it with people with the following conditions:

- Moles
- Rashes
- Liver and gall bladder toxicity
- Food allergies
- Pre- and post-surgical skin carcinomas
- ADD in children/Neurological Disorganization
- Neurological disorders
- Parkinson’s Syndrome
- Tourette’s syndrome
- Sprain/Strain Injuries
- Whiplash
- Post-Stroke