

The Healing Power of Laser

PHOTOBIMODULATION-ACCELERATED TISSUE HEALING

HOW LASER THERAPY AFFECTS TISSUE




▶ 1. APPLICATION

A laser applicator is placed in contact with the skin and activated to transmit laser light energy; for TheraTouch LX2 applicators delivering wavelengths of 850 nanometers (nm) and/or 650 nm, the applied energy terminates in the subcutaneous tissue of the patient

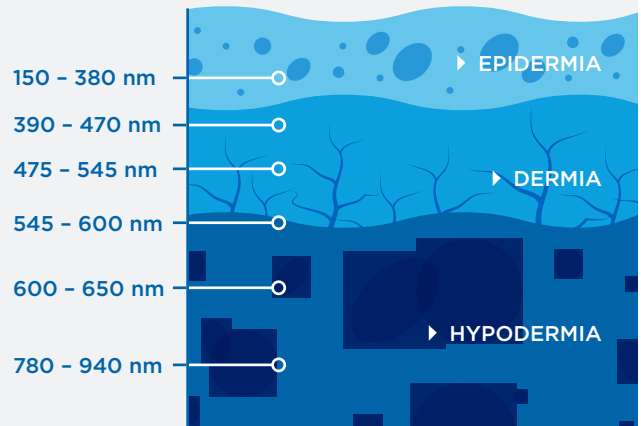
▶ 2. ENERGY ABSORPTION

Chromophores, including the cytochrome c oxidase (CCO) protein, of the mitochondria in the affected cells absorb the energy from the laser light, increasing their activity

▶ 3. MODULATION OF CELLULAR MOLECULES

| | | |
|---|--|---|
|  | Adenosine Triphosphate (ATP) is Increased | The energy source for most cellular functions, when ATP increases, it accelerates the cell's ability to heal and fight infection |
|  | Reactive Oxygen Species (ROS) is Activated | The modulation of ROS improves cellular healing and repair faculties |
|  | Nitric Oxide (NO) is Released | NO is a vasodilator, which accelerates circulation, reduces inflammation, and helps oxygen and immune cells to move throughout the tissue |

DEPTH OF LASER PENETRATION



PHASES AND PHYSIOLOGIC EFFECTS OF PHOTOBIMODULATION IN TISSUE HEALING

▶ HEALING PHASE

▶ PHYSIOLOGIC EFFECTS

Inflammatory Phase

Nonpharmacologic anti-inflammatory and analgesic therapeutic modality that inhibits the inflammatory response

Proliferative Phase

Accelerates tissue healing by increasing fibroblastic activity leading to increased collagen synthesis and collagen deposition

Maturation Phase

Shortened healing timeframe, with treated tissues having higher tensile strength

TheraTouch LX2

LASER THERAPY SIMPLIFIED

▶ Evidence-Based Clinical Protocols

Developed with therapeutic researchers, the TheraTouch LX2 populates treatment parameters proven effective for the selected indication, including a Tissue Healing protocol.

▶ Full-Color Touchscreen

The menu-driven user interface guides treatment setup in a straightforward and logical flow, making the device easy to learn and simple to use.

▶ Dosage Calculator Displays Joules, J/cm², and J/diode

Display dosing measurements in your preferred unit of measure, or all simultaneously, with real time calculation to update each when adjusting treatment output.

▶ Choice of Two Laser Applicators

TheraTouch LX2 comes standard with a 9 diode cluster applicator, with an additional single diode applicator also available.

• CLUSTER APPLICATOR

- Four 650 nm wavelength LED diodes at 10 milliwatts each
- Five 850 nm wavelength infrared laser diodes at 200 milliwatts each
- Total power of 1040 milliwatts

• SINGLE DIODE APPLICATOR

- 650 nm wavelength infrared laser diode at 200 milliwatts of power

▶ Optional Therapy Cart

Transport the TheraTouch LX2 and accessories from room to room with ease.

