



# Understanding Photobiomodulation Therapy

Light therapy, in its modern form, has been in use for decades and is trusted by hospitals, clinics, professional athletes, sports institutions and even NASA.

Photobiomodulation (PBM) therapy dates back to the practice of healing by sunlight documented well over five centuries ago. Research and technology has since come a long way, and by focusing exclusively on the use of red and near-infrared light, we capture the benefits and leave the risks in the past. 5,000+ studies spanning 40 years verify the science, clinical value, and overall benefits of PBM therapy. By employing either laser or LED technology to produce the clinically proven wavelengths of light, high quality PBM products should possess the following characteristics in order to produce desired results:

- ☀️ **EFFECTIVE LIGHT WAVELENGTHS** - Products should utilize the wavelengths that have been studied and have proven effective.
- ☀️ **DOSAGE** - Light should be delivered at useful intensity levels (light density) for correct and safe dosages.
- ☀️ **PULSING** - Added pulsing features for each light band.
- ☀️ **USER INTERFACE** - Treatment protocol libraries that personalize the technology to a user's exact conditions to ensure a thorough application of light.

**1500BCE** - Egypt practices healing by sunlight known as heliotherapy.

**17th Century** - Issac Newton identified the visible light spectrum by separating light with the prism.

Artificial light used institutionally

**1950's** - Light is first used to treat newborns with jaundice.

**1960** - First laser is developed.

**1967** - Hungarian Endre Mester reported the improvement of the healing of wounds by way of low-level laser therapy, today known as PBM.

**21st Century** - Both LED and laser PBM products are further developed and available to the public.

**1890s** - Phototherapy was pioneered by Niels Ryberg Finsen and was considered revolutionary medicine for tuberculosis, smallpox, lupus and arthritis.

**1962** - Light Emitting Diode (LED) is invented.

**2002** - FDA approves first PBM device.