

Low Level Laser Therapy (LLLT) and Low Level Laser = Cold Laser = Soft Laser

Light is one of the most fundamental forces of life. It provides energy and facilitates the metabolic processes essential to life.

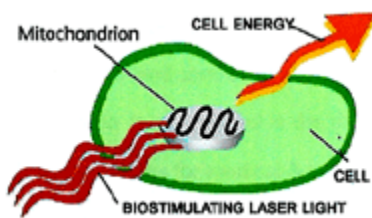
The lasers are the latest and the most advanced light sources. They generate artificial light and amplify it into focused intense beams of light. Laser technology plays a growing role in many aspects of modern life, including medicine and aesthetics. Non-invasive low level laser therapy - cold laser therapy or soft laser therapy - has a bright future!

When laser light is absorbed by a living tissue, it triggers biological reactions in the cells. Variety of endogenous chemical substances are produced in the cells and carried by blood and lymphatic flow to other parts of the system. Hence, the effects of cold laser light may not be only local, but can also achieve wide systemic effects.

Therapeutic effects of low level laser light irradiation include the following:

- ◆ increased production of ATP (Adenosine TriPhosphate)
- ◆ increased cellular metabolism
- ◆ increased collagen production
- ◆ increased enzyme production
- ◆ increased protein synthesis
- ◆ better blood flow
- ◆ better lymphatic flow and drainage
- ◆ reduced inflammation

The main and the most important effect of laser light on cells is the accelerated production of the ATP (Adenosine TriPhosphate). ATP molecules are found in the cells of all living things. In animal and human systems, Adenosine TriPhosphate is synthesised in small cellular organelles called mitochondria. In the mitochondria, the primary cellular energy source - the ATP - is produced by combining oxygen with sugar derived from food.



ATP can be described as the 'energy carrier' or the 'energy shuttle' capable of harnessing the chemical energy generated from the breakdown of the foodstuffs and transporting it across cellular membranes for conversion into 'fuel' that is required for normal body functioning. Adenosine TriPhosphate is often referred to as the 'energy currency of life'.

If a person has insufficient levels of ATP available, the energy cannot reach the tissues. This can lead to a variety of health problems, such as a susceptibility to infectious diseases, poor wound healing, inflammation and swellings.



In short - the low level laser therapy devices (soft lasers or cold lasers) deliver light into living tissues (this process is also referred to as 'phototherapy'), increasing the ATP and shuttling more energy and nutrients around the body for healthy metabolism and the appropriate functioning of organs. Please note that therapeutic cold lasers - also called cold lasers or soft lasers - are not 'heat lamps' and they do not cause perceptible tissue heating or even warming. Cold laser light does not heat treated tissues. The Low Level Laser Therapy - also called Cold Laser Therapy and/or Soft Laser Therapy - exerts photochemical effects rather than thermal.

Low level laser therapy devices - cold lasers - soft lasers - have been in medical and veterinary use for some 35 years. In the USA, the FDA recently approved therapeutic/medical low level lasers for human use, because of their excellent safety with no significant risks attached. To date, much efforts have been vested in research into the effectiveness of the LLLT - cold laser therapy - and its applications in medicine, dermatology and anti-aging indications. Currently, the Internet provides a wealth of information about the developments in laser therapies as well as about specifications and availability of different laser devices.

