

BIOLOGICAL EFFECTS OF LASER THERAPY

1. Anti-Inflammation

Laser Therapy reduces inflammation with vasodilation, activation of the lymphatic drainage system, and reduction of pro-inflammatory mediators. As a result, inflammation, erythema, bruising, and edema are reduced.

2. Analgesic Effect

Laser Therapy of diseased and damaged tissue produces a suppression of nociceptors, an increase of stimulation threshold, and an increased release of tissue endorphins. The result is a decreased patient perception of pain.

3. Accelerated Tissue Repair and Cell Growth

Photons of light from lasers penetrate deeply into tissue and accelerate cellular reproduction and growth. Laser light increases the energy available to the cells so that they can take on nutrients and get rid of waste products more quickly.

4. Improved Vascular Activity

Laser light significantly increases the formation of new capillaries in damaged tissue. This speeds the healing process, resulting in more rapid wound closure.

5. Increased Metabolic Activity

The energy from photons of laser light is captured by chemical complexes within cells resulting in activation of enzyme systems and increased energy delivered into cellular metabolic processes.

6. Trigger Points and Acupuncture Points

Laser therapy stimulates muscle trigger and acupuncture points without mechanical invasion to provide musculoskeletal pain relief.

7. Reduced Fibrous Tissue Formation

Laser Therapy reduces the formation of scar tissue.

8. Improved Nerve Function

Slow recovery of nerve functions in damaged tissue results in numbness and impaired limbs. Laser therapy accelerates nerve cell regeneration.

9. Immunoregulation

Therapy laser photons have an effect on immune systems status through stimulation of immunoglobins and lymphocytes. Laser therapy energy is absorbed by chromophores (molecular enzymes) that react to laser light. The enzyme flavomono-nucleotide is activated and starts the production of ATP, which is the major carrier of cellular energy and the energy source for all chemical reactions in the cells.

10. Faster Wound Healing

Laser light stimulates fibroblast development. Fibroblasts produce collagen, which is predominant in wound healing in damaged tissue. Collagen is the essential protein required to replace old tissue or to repair tissue injuries. As a result, laser therapy is effective on open wounds and burns.



