# Benefits of Low Level Laser Therapy

1**. Increase vascular (circulation):** By increasing the formation of new capillaries, which are additional blood vessels that replace old ones. New capillaries speed up the healing process by carrying more oxygen as well as more nutrients needed for healing and they can also carry more waste products away.

2. **Stimulate the production of collagen:** ollagen is the most common protein found in the body. Collagen is the essential protein used to repair damaged tissue and to replace old tissue. It is the substance that holds cells together and has a high degree of elasticity. By increasing collagen production, less scar tissue is formed at the damaged site.

3. **Stimulate the release of adenosine triphosphate (ATP):** ATP is the major carrier of energy to all cells. Increases in ATP allow cells to accept nutrients faster and get rid of waste products faster by increasing the energy level in the cell. All food turns into ATP before it is utilized by the cells. ATP provides the chemical energy that drives their chemical reaction of the cell.

4. **Increase lymphatic system activity:** Edema, which is the swelling or natural splinting process of the body, has two basic components. First is a liquid part, which can be evacuated by the blood system and the second is comprised of the proteins, which have to be evacuated by the lymphatic system. Research has shown that the lymph system can be doubled with the use of Light Therapy. The venous diameter and the arterial diameters can also be evacuated at a much faster rate to relieve swelling.

5. **Increase RNA and DNA synthesis:** This helps damaged cells to be replaced more promptly and strong.

6. **Reduce the excitability of nervous tissue**: The photon of light energy enter the body as negative ions. This calls upon the body to send positive ions like calcium among others to go to the area being treated. These ions assist in firing the nerves thereby relieving pain.

7. **Stimulate fibroblastic activity, which aids in the repair process:** Fibroblasts are present in connective tissue and are capable of forming collagen fibers.

8. **Increase Phagocytosis:** Which is the process of scavenging for and ingesting dead or degenerated cells by phagocyte cells for the purpose of clean up. This is an important part of the infection fighting process. Destruction of the infection and clean up must occur before the healing process can take place.

9. **Induce a thermal like effect in the tissue:** The light raises the temperature of the cells although there is no heat produced from the diodes themselves.

10. **Stimulate tissue granulation and connective tissue projections:** Which are part of the healing process of wounds, ulcers or inflamed tissue.