

Laser Therapy in Dentistry for Pain Management and Other Procedures

Dental Laser Therapy is quickly becoming one of the new advanced and effective methods for treating many dental conditions. Dental Laser Therapy is a painless procedure that modern dentists have started using in their clinics in recent years. The Laser technology is known as low level laser therapy or cold laser therapy. This type of laser is much different than the well know dental surgical lasers that many dentists are already using regularly. The low level laser (LLL) is used only for therapeutic procedures in dentistry. This type of laser does not produce any heat so the patient is comfortable and feels nothing.



Although most dentists are familiar with dental surgical lasers, they may not be aware of the newer Dental Therapeutic lasers. The Low Level Therapy laser can add additional benefits to the use of the surgical lasers both before and after dental surgical or other dental procedures. Some of the applications for the therapeutic lasers include.

- ✦ Pain reduction - before and after dental treatments
- ✦ Abscess pain reduction and faster maturing of the abscess
- ✦ Pre-treatment anesthetic for children
- ✦ Crown Preparation - Less irritation to pulpa and less pain
- ✦ Dentine Hypersensitivity - May achieve immediate results with no additional treatments
- ✦ Endodontics - Treats existing peripheral edema until patient is pain free
- ✦ Post operative - Less bleeding and edema, less post-op pain, accelerates healing
- ✦ Hematoma - Prevention of inflammation and Pain
- ✦ Orthodontics - Accelerates movement of teeth and decreases pain post-activation
- ✦ Pediatric Restorative procedures - Short term superficial anesthesia, faster healing of pulpa
- ✦ Post Restorative - Decrease Pain and less inflammation and Swelling
- ✦ Scaling (deep) - Faster Healing, Less Bleeding, Less Pain during scaling and post-scaling

Low Level Laser Therapy (LLL), is also known as bio-stimulation or phototherapy is defined as a “non-thermal” laser light appli cation using photons (light energy) from the visible and infrared spectrum for tissue healing and pain reduction (North American Association of Laser Therapy - NAALT). There are 325 dental studies, from 82 institutions in 37 countries, with more than 90% of them reporting positive effects of laser therapy. In total more than 30 different dental indications have been reported in the literature.

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How does it Work?

Light penetrates through the tissue and is absorbed by the mitochondria and cell membrane. Increased singlet oxygen generates ATP increasing cellular energy. Nitric oxide production results in vasodilation and increased circulation. Short term increased cell membrane permeability initiates changes in cell activity. Light energy is converted into bio-chemical energy, restoring normal cell function.

Effects of Low Level Laser Therapy based on the Research Literature

- ✓ Increases circulation in vascular and lymphatic system and angiogenesis
- ✓ Reduces or eliminates acute and chronic pain
- ✓ Reduces inflammation and edema
- ✓ Enhances soft and hard tissue repair
- ✓ Stimulates and improves nerve function
- ✓ Increases muscle relaxation

One Dental Laser therapy technology was developed in North America by a Canadian Company called MedX Health, Inc. (www.medxhealth.com). The technology has been available in North America and Europe for a few years now and is gaining popularity amount dentists and oral surgeons. The product has recently been introduced into the Russian speaking countries and CIS region and is now available in the Ukraine. The overall benefit for the dentist who is using this technology will be better patient treatment results, better patient satisfaction and less pain and fear, reduction of complications that may require the patient to return to the dental office the next day for more treatments for bleeding, pain and other problems.

For more information, see our [MedX Dental System](http://www.medxhealth.com).....