

Lasers in Dentistry

It seems like lasers are being used all over our bodies these days. Lasers are used from everything from cosmetics to removing tattoos to delicate surgery in many parts of the body. The mouth is no exception as there are now many uses for lasers in dentistry.

So what is a laser? LASER is actually an acronym for “light amplification by stimulated emission of radiation”. Normal white light is actually made of many colors and wavelengths of light that are not focused. Lasers pass a light beam over and over through a substance that produces a beam of a single wavelength that is intensely focused.

Lasers vary widely in their wavelength and power so they can have profoundly different affects—everything from shooting down incoming missiles to doing delicate surgery. In dentistry, there are several types of lasers in use, but all are very low power.

The most common laser in dentistry is diagnostic and is called a “Diagnodent”. It is used for diagnosing small cavities in the pits and grooves of teeth. At my office we look at these grooves at 30 times magnification with an intra-oral camera and still have trouble, at times, telling if there is decay deep in the groove. The Diagnodent allows us to ‘read’ what’s going on beneath the surface with a laser beam so we can catch these cavities at their earliest stages.

There are several different types of lasers to do relatively painless small surgeries on soft tissue (gums, lips, tongue, cheeks). These are used to remove various lumps and bumps and to recontour excessive gum tissue or muscle attachments. The great thing I like about doing these things with a laser is that there is usually no need for stitches and normally very little soreness afterward.

Lasers are great for desensitizing things that already hurt. Good examples are canker sore (mouth ulcers) and sensitive tooth roots. Gentle application of laser energy will actually make these feel better.

Some lasers, using water coolant, are used to cut hard tissues (tooth and bone), often without anesthesia. There are still relatively few dentists offering this service because of the extra time required for the dentist and often extra cost for the patient. These laser procedures do work well, but are not very efficient.

Treating moderate to severe gum disease (actually called periodontitis as it affects the bone) is a fantastic use for one laser. The Periolas is the only laser approved by the FDA to regenerate healthy attachment of gum and bone to the tooth roots. I love my Periolas! The alternative is conventional gum surgery with usually produces much pain, gum recession, and root sensitivity. The Periolas normally allows us to avoid these things almost entirely and help people save teeth that they would eventually lose otherwise.