Laser-Assisted Tooth Extraction

A tooth extraction is never a fun procedure, but it can be made easier in many circumstances with the assistance of a laser. Many of us may have experienced difficult extractions as children or teenagers and remember all too well the pulling and torquing of the jaw, as well as the pain and swelling that often followed for several days afterwards. But modern tooth extraction does not have to be this way.

Traditional tooth extraction can be painful for three very specific reasons:

1. The bone and soft tissue can be deeply traumatized by the actions of loosening and leveraging a tooth out of its socket with traditional picks and pliers, causing pain and inflammation.

2. Infectious bacteria may not be easily removed from the deepest parts of the socket and may lead to painful post-operative infections.

3. The soft-tissue and blood flow in and around the socket may be compromised due to the trauma of extraction resulting in an inadequate blood clot and a painful dry socket.

The good news about laser-assisted dental extraction, however, is that all three of the factors listed above can be significantly minimized or even eliminated.
How Lasers are Used in Tooth Extraction

Dental lasers are used in two different ways to improve the process and the outcome of a tooth extraction. In the first step, a laser is used to separate the ligaments surrounding the tooth in order to loosen it in the bone so that it can lift more easily out of the socket with a hand instrument. Then, once the tooth has been removed, a laser is used again to neutralize any bacteria left in the socket, cauterize excessive bleeding, and to therapeutically stimulate healthy bone and soft-tissue growth. These two steps can benefit the success of the procedure and comfort of the patient in multiple ways:

1. Retain more healthy bone
   Laser-assisted extractions are far less traumatic on the jaw bone than traditional extractions, resulting in less bone damage and more healthy bone retention.

2. Heal faster
   Extractions performed with laser-assistance bleed less, clot better, and are far less likely to develop a dry socket.

3. Reduce risk of bacterial infection
   The laser’s unique ability to neutralize lingering bacteria in the deepest part of the socket is especially helpful when removing infected teeth.

4. Stimulate healthy tissue growth
   More and more, dental laser therapy is demonstrating significantly measurable improvements in healthy soft and hard tissue growth, making laser-assisted extraction especially useful in strengthening and accelerating the successful integration of bone grafts and implants.
How Lasers are Used in Tooth Extraction (cont’d)

5. **Reduce treatment time and discomfort**
   In most cases, a laser-assisted extraction will take far less time than a traditional extraction. Any pulling, pushing, and torquing the jaw in order to remove the tooth from the socket is also significantly reduced and may often be eliminated altogether.

6. **Ache less**
   Less trauma to the bone and soft-tissue, combined with better control of bacterial growth means that laser-assisted extractions often hurt less and heal significantly faster than extractions performed using traditional techniques.

7. **Potentially safer for at-risk patients**
   Several studies are now demonstrating that laser-assisted extraction may be a safer alternative for patients who carry a higher risk of serious infection or the development of osteonecrosis following oral surgery. These patients include individuals who are HIV positive, and those who are currently taking or have been treated with oral or intravenous bisphosphonates.
**Conclusions**

Having a tooth extracted is not always an easy procedure, and it is important to discuss all the options and potential complications with your dentist before making a final decision on how your tooth will be removed. Laser-assisted extraction may be the best option for your circumstances, but there are many factors to consider in making that determination.

Certain types of extractions may still be better-treated using traditional techniques or by referral to an oral surgeon. The specifics of your overall health and the condition of the tooth in question will ultimately determine the best treatment path for your improved health and recovery. For patients within my practice, I always encourage you to ask as many questions as you may have in order to feel comfortable and well-informed about any treatment choice you are considering.

**References:**


US National Library of Medicine: *The Influence of Low-Intensity Laser Therapy on Bone Healing*

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Journal of Lasers in Medical Science: *Tissue laser biostimulation promotes post-extraction neoangiogenesis in HIV-infected patients.*