

Published on Wednesday, September 10, 2008.  
Last modified on 9/10/2008 at 12:47 am

## **Plastic Surgery: How to save face and buy new laser**

**By DR. ALAN MUSKETT**  
**Plastic Surgery**

Lasers are cool. Just about anything with the word "laser" attached becomes high-tech, happening, cutting edge. There's laser engine tuning, laser hair removal, laser tax returns, and hopefully, some day, laser teenager silencers.

So what exactly is a laser? Laser is an acronym for Light Amplification by Stimulated Emission of Radiation. Basically, a gas or substance is stimulated to release light. That light is highly coherent, meaning that the light beams are lined up in the same direction, creating a highly focused beam. Laser beams have different wavelengths, so different lasers, such as carbon dioxide or argon or ruby, work on different materials or tissues. There are a zillion lasers, but basically they all burn things to varying extents.

In plastic surgery, lasers are used to do a number of things. Colored spots, age spots, tattoos, pigmented scars and about any skin abnormality have been treated with lasers. However, the big interest, and the big money, has been in the use of lasers for facial rejuvenation. When your face looks like a damp shirt left overnight in the washer, you need rejuvenation.

Facial lasers work in two basic ways. Fine lines and splotches (that's a medical term) are improved by removing the very outer layers of skin using a relatively wide, low-energy laser beam. Deeper wrinkles are addressed by drilling lots of narrow but deeper holes in the skin.

The carbon dioxide laser has a wavelength that is closest to water, and human skin has a lot of water. My partner and I have had a traditional carbon dioxide laser, and it has done a great job with resurfacing the skin. By completely removing, or ablating, the outer layer of skin, the healed result was a smooth and younger-looking skin. The downsides were a healing time that ranged from three to six weeks and an occasional loss of pigmentation. We liked the result of the carbon dioxide laser but wanted a device with less down time for the patient.

You think shopping for a car, or a flat screen or a new turbo dual beer holder recliner is complicated, try buying a medical laser. First of all, these babies are in the Ferrari range, starting at \$120,000 and rising fast. The names are very new age - Star-Lux, Portrait, Symphony, Encore, Fraxel. The salesmen are former college football players with lots of hair, and they are the same guy who pushed you down and took your Superman lunch box in grade school. The saleswomen are divorced from philandering doctors, so they also think you are a repulsive insect.

I think we tried them all, setting them up in the office and trying them out. Since we are highly ethical and all and don't believe in animal experimentation, we practiced on our employees. One of the conditions of working at Billings Plastic Surgery is that you are the guinea pigs for whatever new hare-brained scheme that comes along. Some of the lasers were painless, and some of them weren't.

We discovered quite a few things.

One is that when they tell you there is no "down time," that is, redness and some crusting, there is often no result, either. It seems that in order to get a really noticeable improvement in skin color and smoothness, you have to inflict a certain amount of injury to the skin. Another is that you should never believe anyone when they say "painless." Procedures are painless when done on somebody besides you. Finally, we figured out that we like the carbon dioxide laser best in its new and improved form.

The fractionated laser has the advantages of the older laser in terms of fairly aggressive results, but with a quicker recovery time and

without the risk of pigment loss. I will discuss fractionated laser technology in my next article.

I was explaining to my son about how lasers target certain tissues. "Forget tissues," he said. "Get a laser that treats issues. Everyone seems to have a lot of issues."

If he can hang on to his hair, he will make a great laser salesman.

*Dr. Alan Muskett is a board-certified plastic surgeon at Billings Plastic Surgery. More information is available at [www.billingsplasticsurgery.com](http://www.billingsplasticsurgery.com).*

Copyright © The Billings Gazette, a division of [Lee Enterprises](#).