

SAN LUIS DERMATOLOGY AND LASER CLINIC

NEWSLETTER

FALL 2010

Welcome to the inaugural San Luis Dermatology and Laser Clinic Newsletter. It is our goal to inform you of new and exciting developments in Dermatology, to educate you regarding the health of your skin, and address developments in medicine as they relate to the skin. This newsletter will be e-published quarterly.

In the coming quarters, we plan on discussing the following topics of interest:

- Acne and diet
- Choosing and using a sunscreen
- Vitamin D: Not just for strong bones
- Peplin: The new miracle cancer cream

Before we get into the newsletter, a couple of quick headlines:

UPDATE ON PEPLIN

I talked to a pharmaceutical representative from the company that will be marketing this revolutionary new precancer treatment. Unfortunately, she felt it would be January 2012, before it's available. If you have serious issues, we may want to do an alternative treatment in the meantime.

VITAMIN D

If you haven't heard, this neglected vitamin is incredibly important. I'll explain how and why in next quarter's newsletter. In the meantime, if you haven't had your level checked, do so! If it is low, get working on getting it in the high normal range.

FALL, 2010 QUARTERLY NEWSLETTER

LASERS

Since it represents a part of our name and a significant portion of our work, for this quarter, I have chosen to discuss lasers and spotlight, in particular, our GentleLase hair removal laser.

WHAT IS A LASER?

A laser is a device employing narrowly focused high-energy light to accomplish a task. The word “laser” is an acronym, standing for Light Activation & Stimulation by Enhanced Radiation (L.A.S.E.R.). Lasers are produced by generating a very intense light, filtering it so a single wavelength remains and further manipulating it so all the peaks and troughs of the waves line up together. Such light is referred to as coherent.

In order to achieve its designated purpose, a laser has to have a target, or so-called chromophore. For example, the 755 nm Alexandrite GentleLase® laser we use to remove hair has as its chromophore the pigment melanin, which is present in abundance in the growing bulb of pigmented hairs.

To achieve its purpose, the energy of the laser must pass through a portion of the skin. In many instances, something must be done to the overlying skin to protect it from the energy, or a burn and potential scar may result. In the case of the GentleLase hair removal laser, a freezing spray is delivered milliseconds before the beam arrives, thus protecting the overlying skin. In other lasers, ice-cold gels are applied to the skin and the beam fired through them.

There are many variables in delivering laser treatments: the wavelength of the light (measured in nanometers or nm.), the intensity or power (measured in Joules), the pulse duration (measured in fractions of a second), and the spot size of the delivered energy. Some lasers are designed to permit adjustment of some of these variables, while others are hard-wired with rigid parameters.

In the case of the GentleLase laser, we have a variety of spot sizes to accommodate different parts of the body. In large areas such as the back, chest, or legs, a 1.8 centimeter spot (almost $\frac{3}{4}$ inch) is used. In more restricted areas such as the axillae (armpits) or bikini line, a 1.5 cm. (over $\frac{1}{2}$ inch) works well. For the upper lip and chin, a 1.2 cm. (under $\frac{1}{2}$ inch) is used and in really tight spots like the external ear and nostril, an in even smaller 0.8 cm ($\frac{3}{8}$ inch) spot is ideal. The larger the spot size, the more energy is delivered to the hair bulbs because the larger spot increases back-scatter of the laser beam under the skin. The smaller the spot size, the higher the energy that can be delivered to the skin. With the GentleLase, the pulse duration is fixed, but the energy can be varied from 10 to 40 joules. Higher powers are used in lighter-skinned people since there is less melanin in the epidermis and burning is unlikely. Darker-skinned patients must be treated with lower power to avoid the possibility of burning. Tests of the appropriate power are always performed on Gentlelase patients before the treatment to avoid the risk of potentially burning a patient and producing scars.

Laser safety is of the utmost importance when using such high-powered technology. No one is allowed in the laser operatory without the proper eye protection, and

patients will wear metal foil -backed eye patches to eliminate the risk of injury to the cornea and the retina.

The GentleLase will predictably produce a 20-25% reduction in hair per treatment. We feel certain that we achieve a 75-80% permanent reduction in hair density, and some times even better. Some of our happiest patients are Gentlelase patients and that's where we get all our referrals. We recommend four treatments for any one location at varying intervals depending on the anatomic site. For the face, treatments can be done on a monthly basis. On the torso, six-week intervals are appropriate. On the legs, two months should be allowed between treatments.

Our GentleLase patients are a very satisfied group. Having unsightly hair removed from the chin or upper lip, or eliminating the constantly in growing hairs in the armpits and bikini line, makes life a little more pleasant. It also keeps our laser hair patient population growing because they invariably tell family and friends what a simple and cost-effective treatment it is.

We also have lasers that remove small capillaries and reduce the redness of Rosacea (the Vbeam®), improve Acne scars and fine lines (the Smoothbeam®), and remove Tattoos as well as brown sun spots (the AlexTriVantage®). We will discuss these in a later newsletter but information sheets on each can be obtained from our front desk ladies.