Looking and Feeling Your Best

The Langdon Center for Laser and Cosmetic Surgery

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Enhanced Active FX: A Single Laser Treatment that Rejuvenates and Tightens Skin

Enhanced Active FX is a fractional carbon dioxide (CO_2) laser resurfacing technique developed by Robert Langdon, M.D. that provides dramatic improvement of sun-damaged facial skin with only one treatment. Compared to standard Active FX laser resurfacing, the enhanced mode results in significantly more tightening of sun-damaged facial skin. Enhanced Active FX provides the best possible improvement while minimizing the recovery period and the risk of side effects.

The term "laser resurfacing" refers to laser treatment (almost always done on the face) that results in replacement of superficial skin layers with new skin tissue. Resurfacing has a rejuvenating effect because the old sun-damaged skin is replaced with new undamaged skin. Resurfacing treatments take advantage of the skin's ability to spontaneously heal after an injury. Fortunately, most sun damage (photo-aging) in skin occurs in superficial layers that can safely be removed by resurfacing. Common signs of sun damage include wrinkles and excessive pigmentation ("sun spots" or "age spots").

Several different types of lasers can be used for facial resurfacing. As discussed in Dr. Langdon's book "Understanding Cosmetic Laser Surgery," the CO_2 laser is the most effective for this purpose. The greatest advantage of treatment with the CO_2 laser is that the skin will contract (shrink) during treatment. Contraction of skin can dramatically reduce wrinkles and is especially helpful in patients who have relatively severe sun damage with significant wrinkles in the cheeks and "crow's feet" (to the side of the eyes) areas.

Disadvantages of Conventional CO_2 Laser Resurfacing

Conventional CO_2 laser resurfacing was developed in the mid-1990s. The conventional treatment has always been a two-step process in which the epidermis (topmost layer of skin) is completely removed followed by additional treatment of the exposed dermis in order to contract this deeper layer of skin. The greatest drawback of conventional CO_2 laser resurfacing is the prolonged recovery period during which new epidermis must re-grow to cover the "raw skin" of exposed dermis. Lack of the protective epidermis also puts the patient at risk of infection with micro-organisms, requiring the use of antibiotics and anti-fungal medications for up to 10 days. Full recovery after conventional CO_2 laser resurfacing usually requires two weeks, followed by a prolonged period of redness (several months).

How Dr. Langdon "Enhanced" Active FX

In contrast to conventional CO_2 laser resurfacing, Enhanced Active FX is a one-step process. After the skin is thoroughly numbed with local anesthetic, a single "pass" of the laser is all that is needed. A sophisticated scanner delivers CO_2 laser energy in small diameter "spots" over a 1/2-inch square zone of skin. The scanner delivers sequential "spots" that are non-adjacent in order to avoid excessive heating of the skin. After the scan is completed, virtually 100% of the treated zone has received the

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laser energy. The biggest advantage of total skin coverage is that nearly all age spots on the face can be eliminated with a single Enhanced Active FX treatment. During the Enhanced Active FX treatment, Dr. Langdon carefully delivers hundreds of scans to the entire face (except the upper eyelids and eyebrows). He varies the power level of the scans in order to maximize improvement and minimize the risk of side effects.

The main innovation of Dr. Langdon's "Enhanced" Active FX is that he varies the scan rate by changing the power settings of the CO_2 laser. Higher power will increase the scan rate and impart a greater heating effect on the skin. The target of this increased heat is the deeper dermis layer of the skin, in which collagen fibers will immediately shrink, providing significant contraction of wrinkled, sun damaged skin. The result is smoothing of wrinkles, which is especially evident in facial areas with "looser" skin including the cheeks and temples.

Enhanced Active FX: A Safe, Simple and Quick Recovery

Another great advantage of Enhanced Active FX is that the protective epidermal layer remains intact after the treatment. Presence of the intact epidermis prevents the "raw skin" exposure that occurs after conventional CO_2 resurfacing. After Enhanced Active FX treatment, the patient needs only to apply a moisturizer during the several day recovery period. There is no need for wet compresses, wound dressings or antibiotics. The protective epidermis will simply peel off on its own after 4 to 5 days. Fresh new skin will then be revealed. This fresh skin will be much smoother. Because most age spots are confined to the old epidermis, they will peel off along with the treated epidermis.

Today, there are many options for fractional laser resurfacing. All have brief recovery periods but require multiple treatments in order to see significant improvement. Some fractional lasers can improve acne scars and pores but do not afford tightening of the skin. The CO_2 laser has the unique property of inducing skin contraction, a powerful method for smoothing wrinkles that result from sun damage.

If you have significant sun damage with facial wrinkles and age spots, please call our office to schedule a consultation with Dr. Langdon. Enhanced Active FX may be a great option for you.

Enhanced Active FX Provides Dramatic Improvement in Facial Skin with Only One Treatment

Enhanced Active FX is a special variant of CO_2 laser resurfacing. Dr. Langdon developed this technique in order to provide maximal improvement with minimal risk of side effects. Only the CO_2 laser has the ability to dramatically tighten skin. After a short (4–5 day) recovery period, the old epidermis peels off to reveal fresh, smooth skin.

Before and Two Months After a Single Full-Face Enhanced Active FX CO_2 Laser Resurfacing Treatment. The dramatic smoothing of the wrinkles in the cheek and temple region is the result of the skin-tightening effect of the CO_2 laser.

We're Nuts about Nuts: New Research Confirms That Eating Nuts Can Prevent Heart Disease and Prolong Life

A recent study in the journal *JAMA* (2015) confirms what was already known about nut consumption: eating nuts contributes to a decrease in overall and cardiovascular disease mortality, including heart attack and stroke. Previous studies of health professionals in the U.S focused on intake of nuts and the reduced risk of mortality. The recent *JAMA* study expands on this earlier research by including previously unstudied population groups including low-income Americans and Chinese residents (all income levels) of Shanghai, China.

Multiple Studies Show That Eating Nuts Reduces The Risk of Heart Attacks and Strokes as well as Overall Mortality

All of these studies demonstrate that nut consumption is associated with decreased total mortality and that the greater the amount of nuts eaten, the greater the overall health benefits. In particular, a report from the *New England Journal of Medicine* (2013) from an analysis of over 76,000 women in the Nurses' Health Study (NHS) and over 42,000 men in the Health Professionals Follow-up Study (HPFS) found that eating nuts was associated with decreased "all-cause, cancer-specific, and heart disease-specific mortality." In fact, eating five or more five-ounce servings of nuts per week resulted in a 35 to 50 percent reduction in coronary heart disease and death. In addition, another report published in *BMC Medicine* (2013) from an analysis of Spanish men and women, aged 55 to 88, showed nut consumption was linked to lower total mortality. The benefits of eating nuts were even more evident in individuals who combined a Mediterranean diet with nut consumption.

All of these earlier studies included primarily well-educated health professionals or individuals of European descent, leaving unanswered whether these findings could be applied to individuals of other ethnic or socioeconomic backgrounds. The new study demonstrates that nut consumption contributes to decreases in both total and cardiovascular mortality across all ethnic and socioeconomic groups.

Nuts (And Peanuts) Have Healthy Fats, But Some Have More Fat than Others

Almost all types of nuts, including peanuts (which are actually legumes), are beneficial. About 80 percent of calories in nuts are from fat, but it is mostly healthy—unsaturated—fat. Because of their high fat content, nuts should be eaten in moderation: about a small handful four times a week, according to the American Heart Association. Walnuts have been well studied for their benefit in preventing heart disease because of their high levels of omega-3 fatty acids, but other nuts, including almonds, hazelnuts and pecans, provide heart-healthy benefits, too. Nuts also vary in their amount of calories and levels of saturated and unsaturated fats. For example, one ounce of dry-roasted almonds has 169 calories and 15 grams of total fat, with 1.1 gram of saturated fat and 12.9 grams of unsaturated fat; one ounce of dry-roasted macadamia nuts has 204 calories and 21.6 grams of total fat, with 3.4 grams of saturated fat and 17.2 grams of unsaturated fat.

Besides being heart-healthy, nuts and peanuts have additional benefits. As snacks, they are high in protein and fiber, contributing to a sense of fullness. There is even more good news about nuts: Although high in fat, nuts are not completely digested, and only about 80 percent of their calories are actually absorbed. They are, in fact, a lower caloric food than has been thought. Furthermore, in a previous issue of our newsletter (Vol. 3, No. 2, page 3), we reported in an article about types of food that were associated with weight gain or loss that nuts are among the foods most associated with weight loss (available at www.langdoncenter.com; under the menu "Read News," select "Newsletter"). For a healthy snack, choose nuts with less total and saturated fat such as almonds, hazelnuts, pecans and peanuts.

Endoscopic Brow Lift

Gravity is a major contributor to the appearance of aging of the face and neck. A face lift is very effective at lifting the sagging skin of the neck and lower face but does not address the problems in the upper face (at and above eye level). In the upper face (forehead, brows and temples), sagging will lower the brows and deepen "crows feet" wrinkles in the temple area. A lowered brow can contribute to excess skin and drooping of the upper eyelids, resulting in a "heavy" or tired appearance of the upper lids. Excessively low brows may even block part of an individual's visual field. Many people compensate for sagging eyebrows by overusing their forehead muscles to lift the eyebrows. The forehead muscles (referred to as the frontalis muscles) lift the brows but also cause horizontal wrinkles in the forehead. The more these muscles are used, the deeper the forehead wrinkles become. Frown muscle action, which pulls the brows closer together, produces vertical frown lines and also pulls the brows down farther, worsening the gravitational sagging of the brows.

Botox Injections Offer Only Temporary Improvement to Frown Lines and Forehead Wrinkles

In the upper face, muscle activity can be temporarily suppressed with botulinum toxin (Botox, Dysport, Xeomin) injections. Relaxation of the treated muscles will improve frown lines, crows feet wrinkles, and horizontal forehead wrinkles. In the forehead, there is a trade-off between improving forehead wrinkles and additional lowering of the brows. If the forehead muscles are totally paralyzed, the horizontal forehead wrinkles will look very smooth, but unfortunately the eyebrows will sink even lower. This produces a heavy look to the brows and results in even more droopy, excess skin in the upper eyelids.

A brow lift (also called forehead lift) is the single procedure that does the most to improve the aging changes in the upper face. In a brow lift, the outer part of the brows are elevated just a few millimeters, improving the brow position and reducing excess skin of the upper eyelids and in the crows feet area. The outer brow changes from slanting downward to a more horizontal position. This improved brow position gives the area around the eyes a more alert, well-rested appearance. Another great benefit of the brow lift is improved horizontal forehead wrinkles. The higher brow position reduces the need for the patient to use their frontalis muscles, thus improving the forehead wrinkles. Unlike Botox injections, which improve forehead wrinkles but worsen (lower) brow position, the brow lift improves both forehead wrinkles and brow position.

Another Brow Lift Benefit: No More Botox

Dr. Langdon uses the advanced endoscopic technique for brow lift. Use of the endoscope requires only small skin incisions just behind the hairline and enables a minimally invasive approach to brow lift with minimal scarring and no hair loss. The traditional method requires a long incision (from ear to ear) behind

Before and Two Months After an Endoscopic Brow Lift. In addition to improved position of sagging eyebrows, the patient has smoother skin and reduced wrinkles in the upper eyelids, "crows feet," and forehead areas.

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Endoscopic Brow Lift

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the hairline, which results in a visible scar with permanent hair loss and possible numbness in the scalp. Dr. Langdon's method includes inactivating the frown muscles, which in most cases obviates the need for future Botox treatment in this area. Most of Dr. Langdon's brow lift patients thus enjoy not only improved brow position and reduced forehead wrinkles and frown lines, but they also do not require ongoing Botox injections to these areas.

To learn more about endoscopic brow lift, please visit our web site (www.langdoncenter.com).

Dysport: an Alternative to Botox

In addition to Botox, the original botulinum toxin, we now have two other FDA-approved neurotoxins: Dysport and Xeomin. All botulinum toxins work the same way—by inactivating motor nerve endings where they interface with muscle cells. Inactivated nerve endings are unable to transmit the signal to the muscle that stimulates muscle contraction; thus, the muscle becomes paralyzed. Paralysis of undesired muscle activity, such as frowning and squinting, significantly improves the corresponding wrinkles in the frown line area (between the eyebrows) and the "crows feet" area (to the side of the eye). The neurotoxin effect is temporary, however, because within a few months the nerve cells generate new nerve endings, which are able to restore the muscle activity. Patients usually require additional treatment after 3 to 4 months.

Botulinum toxins are proteins that are produced naturally by Clostridium botulinum bacteria. One of these bacterial toxins is the basis for Botox, Xeomin, and Dysport. There are minor chemical differences between these three products based on their respective manufacturing processes. In clinical practice, Dysport usually inactivates the targeted muscles more quickly (within 2 to 3 days) compared to Botox (within 3 to 5 days). In most patients, the duration of the effect of Dysport is longer than that of Botox. There seems to be individual variation, however, because some people find that Botox has a longer therapeutic effect then Dysport.

Worldwide, Dysport is the most commonly used neurotoxin and its use is "catching up" to that of Botox in the United States. At the Langdon Center we use both Dysport and Botox. If you've never tried Dysport you may want to give it a try—you might find that it acts faster and lasts longer than Botox.

Bellafill: the Newest Injectable Filler

Bellafill is the newest injectable "filler" to be used at the Langdon Center and is receiving a great deal of interest because of one major advantage: it provides permanent results. The main component of Bellafill is tiny particles made of methacrylate, a type of synthetic polymer. Methacrylate is a biocompatible material that has been used for decades in implantable medical devices and is extremely well tolerated. The methacrylate particles are optimally sized to stimulate production of the patient's own collagen, providing long-term volume augmentation.

Bellafill is placed beneath the skin and is used in two ways. First, deep folds or furrows around the mouth can be filled by placing Bellafill just below skin level in the area of the furrow. Second, Bellafill is used is as a more generalized filler over wider areas of the face that are prone to volume loss as part of the aging process. These areas include the temples; the area in front of the ear and below the cheekbone; the mid-portion of the cheeks; the front part of the face on either side of the nose; and the jawline in front of and behind the jowls. This more generalized volume loss (referred to as atrophy) is most pronounced in people who are of normal or less than normal body weight.

Upon injection of Bellafill, there is an immediate improvement, but the majority of the correction develops over the next few months as the patient's own collagen appears in the vicinity of the methacrylate particles. Collagen produced by a patient tends to be long lasting and is bolstered by the continuous presence of the Bellafill particles. Clinical studies have proven that there is substantial augmentation five or more years after initial treatment.

Attend One of the Langdon Center's Free Special Events

The Langdon Center presents free special events for all interested people several times a year. These events are held in the evening throughout the year and include comprehensive seminars on laser and cosmetic surgery with background information on the aging process. Some of these are "show-and-tell" events in which Dr. Langdon and his staff demonstrate actual treatments such as Botox, "filler" injections, CoolSculpting and laser treatments. We also present at least two off-site programs each year at venues such as The Waters Edge in Westbrook and the Mystic Marriott. At every event, attendees are encouraged to ask questions of Dr. Langdon. All events are fun and educational and include refreshments. Be sure to join our email list at LangdonCenter.com to receive notification about our upcoming events!

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New and Noteworthy

To Learn More . . .

Information about our services is available online:

www.langdoncenter.com

We encourage you to visit our continually updated website for comprehensive information about many of the procedures offered at The Langdon Center. You can join our email list to receive our monthly eNewsletter, which provides timely updates on events at the Langdon Center and announcements of special "online only" discounts on products and procedures.

There are also links to Dr. Langdon's blog featuring up-to-date commentary on topics related to laser and cosmetic surgery and many examples of "before-and-after" photographs of Dr. Langdon's actual patients. The website also includes special resource articles by Dr. Langdon and PDFs of all recent editions of our print newsletter "Looking and Feeling Your Best," which offers in-depth articles about Dr. Langdon's procedures.

What's Inside . . .

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