

As I complete my 26<sup>th</sup> year in cosmetic dermatology and cutaneous laser surgery, it is evident that my journey and extensive experience was only possible with the support of my colleagues in dermatology and virtually every discipline from all over Ontario, particularly from the Ottawa Valley region. As summer ends patients turn their attention to reversing the summer's sun damage and looking their best for the social calendar over the coming winter months. Referring physicians play a vital role in counselling and ensuring that you receive the best advice and therapy for all your concerns. Some 900 physicians currently refer 6000 patients annually. You may be interested in my approach shared with both on responsible rejuvenation. It offers an integrated program of sunscreens, topical therapy, and appropriate procedures tailored to the specific needs of every patient. Here are excerpts from my advice given to patients to provide them with a balanced perspective.

## **A CONVERSATION WITH DR. SHARYN LAUGHLIN**

"A cosmetic procedure should ultimately make you feel and look better. However, glib promises, inflated claims, and a guarantee for the complete restoration of youth should be viewed with scepticism," says Dr. Sharyn Laughlin, Medical Director of Laserderm™. With the cosmetic surgery explosion, medical procedures developed by physicians have moved "from the fluorescent lights of doctors' offices to candlelit eucalyptus-scented skin care salons and wellness centers." This quotation is taken from a recent article in the New York Times warning that there has been an alarming increase in complications associated with cosmetic procedures performed by non-physicians. This does not mean that it should be assumed that every physician doing cosmetic surgery has the appropriate training and expertise. In Ontario, there are no regulations governing cosmetic surgery and many physicians step outside their field of formal training to dabble in cosmetic surgery. "Selecting the person who does your cosmetic procedure requires careful consideration." Dr. Laughlin offers advice on how you can avoid some of the pitfalls:

- Set realistic expectations for yourself from the outset. An experienced specialist will give you a balanced perspective-attainable benefits tempered by difficulties (if any) along the way and minor or major risks that could occur. You should also receive information comparing the procedure being contemplated to all other alternatives, including any that your doctor may not perform. It is reassuring to have a physician tell you, "The procedure you came to me for is not what you need. I would recommend another and can refer you to Dr. X who is trained in that area."
- Establish your comfort level with the credentials of your physician, including formal specialty training and experience. Many physicians performing cosmetic skin surgery have no proper training in either surgery or dermatology. Ask the physician directly whether he/she has Royal College certification and in what field. "At Laserderm we don't subscribe to physicians 'crossing over' and practicing outside their area of expertise" says Laughlin who adheres to this principle strictly. She limits her activity to laser and non-invasive skin surgery. If you need a facelift, tummy tuck, breast surgery, or liposuction - she will refer you to a plastic surgeon. For just an eyelid procedure other than laser resurfacing- she could send you to a plastic surgeon or an ophthalmologist who specializes in eyelid surgery. "Some problems can be corrected with a laser, but if a plastic surgery procedure is preferable, I will to refer the patient to the appropriate certified specialist."
- Be sure you are having the right procedure. "A good part of my day is spent advising patients against having a procedure they came to see me for, either because they don't need it or there is a better alternative, which requires referral to a colleague in another field" muses Laughlin and adds "It may not be what the patient wanted to hear, but not everyone is a candidate for cosmetic surgery or would obtain a worthwhile benefit from a given procedure."

Dr. Laughlin also emphasizes that prevention is a vital part of a rejuvenation program and recommends various measures:

- For any patient, but particularly someone with young skin and few wrinkles or blemishes, prevention is the answer. Daily use of a sunscreen, protective clothing and hats for the outdoors, a balanced diet, proper sleep in a position that avoids ‘scrunching’ your face, drinking 8 glasses of water a day, avoid smoking, etc. -all the things your mother told you. This type of person should nourish their skin not ‘treat’ it. Healthy skin usually looks good. Rubbing on a lot of skin care products is not necessary and may be counter productive as the skin’s repair and immune system can be overwhelmed by too many chemicals over time.
- Avoid ‘product hypnosis’ with skin care products with unproven claims (the vast majority) and too many chemicals. Most products share 90% of the same ingredients and differ little except for the fancy packaging. Keep it simple. Use as few products as possible with the lowest number of ingredients. Many products contain ingredients in too low a concentration to have an effect- you are often better off ingesting some micronutrients than rubbing it on. “In the search for healthy and beautiful skin, less is often more,” says Laughlin. “We will help you find the balance you need based on science and the art of the possible, not hope in a bottle.”
- Good skin with healthy collagen needs prevention and nutrition. Sometimes a chemical peel or microdermabrasion could be helpful to improve texture and restore lustre. There are too many young looking patients having photorejuvenation, laser, and ‘lift’ procedures. “It’s like the ads for products and cosmetic surgery. They show some beautiful person with flawless skin who clearly does not need therapy, at least not for a long time. A before and after picture of an actual patient would be the only useful photographs, but physicians are not advised to use these by regulatory bodies in Ontario.” I show each patient actual case examples for every procedure from our photographic database of over 100,000 images. Each patient is shown the spectrum of outcome – minimal to maximum benefit and the course of healing, including changes after ablative therapy that discourage some from having the procedure.

For aging or damaged skin and associated problems there are specific procedures proven to offer a benefit. However, each patient should assess their comfort level with the common situation where laser surgery is performed in a vacuum by physicians and non-physicians without specialty training in cutaneous medicine. “The procedure is only one part of the expertise required to take you through your cosmetic treatment safely.”

## **REJUVENATION SHOULD BE RESPONSIBLE AND LOGICAL**

Patients with laxity and descent of facial tissues need a surgical approach or a “lift procedure” that should be performed by trained facio-plastic surgeon certified by the Royal College of Canada. Laser procedures are better for removing wrinkles and improving texture or tone, and erasing red or brown discoloration, but are limited in the ability to tighten loose skin. Hence, if there is major descent and laxity we refer the patient to a Plastic Surgeon for the appropriate procedure and reserve Laserderm’s role to deal with remaining wrinkles etc. For the patient with photodamage – wrinkles, spider veins, red or brown discoloration, and minor laxity, a planned program responsive to specific needs requires the integration of fillers, Botox and tailored light-based procedures. No one measure or single laser method is able to meet each patient’s needs. A responsible rejuvenation program requires broad expertise and skill, and access to several laser or light based systems.

## REJUVENATION NOTES

Dr. Laughlin developed laser skin resurfacing with a SilkTouch™ CO<sub>2</sub> laser in 1994. For fifteen years she assisted the laser industry to develop lasers and procedures for patient care and trained hundreds of physicians and surgeons from all over the world in laser resurfacing techniques. Last year, she produced the clinical method for using the new fractionated CO<sub>2</sub> handpiece that delivers innovative microscopic effects.

**Traditional CO<sub>2</sub> or Erbium laser resurfacing** is still the most effective way of “erasing” wrinkles and photo-damaged or aging skin in a single treatment session. There is about 7-10 days of downtime, the need for specific wound-care, and a period of redness in the new younger skin. There is no method of rejuvenation that produces the same level of dramatic wrinkle reduction and skin tightening that may take 10-15 years off your facial age. Traditional laser resurfacing is only appropriate for treatment of the face.

**Fractionated CO<sub>2</sub>** is a new approach to resurfacing of wrinkles and skin tightening with less downtime and faster healing and recovery. It has the novel advantage of being appropriate not only for the face but now makes treatment of other body areas possible using a special handpiece that delivers the laser beam through a sieve. This fractionated approach is a gentler alternative to regular CO<sub>2</sub> resurfacing but requires more treatments to achieve results that approach but rarely equal the level of standard resurfacing. Treatments are usually repeated at monthly intervals for patients preferring less downtime but still needing rejuvenation and tightening.

The principle of FRACTIONATING laser energy is now at the forefront of laser skin surgery. A Fraxel laser was the first system to use pixels of laser energy to repair the skin and stimulate the growth of new collagen- non-ablative resurfacing in contrast to ablative or traditional resurfacing. A series of four treatments gradually resurfaces the skin to remove fine lines, brown spots, redness, and fine vessels from sun damaged skin. This non-ablative Fraxel laser can treat the face and most body areas for wrinkles and scars. Non-ablative methods are better suited to younger patients with lower degrees of sun damage or for minimal to moderate wrinkles. It gives you a brand new skin and is suitable for patients who do not require tightening.

For severe skin damage and deep wrinkles (usually in older patients) ablative CO<sub>2</sub> resurfacing is best and reduces facial age by up to 15 years. Fractionated ablative CO<sub>2</sub> resurfacing may be used on face and body, and achieves up to 50-75% of the benefits of standard resurfacing with faster recovery. Non-ablative resurfacing has even less downtime but attains roughly 25% of the rejuvenation benefits of ablative methods, but is very effective for fine lines and discoloration in younger patients. This spectrum of technology is available to your patients at Laserderm. Dr. Laughlin and the Laserderm team use their expertise and experience to help them select the resurfacing approach that is best suited for their particular skin. Dr. Laughlin's favourite approach for moderate to severe wrinkling and photodamage of the face and neck is to do 3 treatments with Fraxel Restore™ - a laser that penetrates the deepest to provide a better overall skin - followed by a final treatment with ablative fractionated CO<sub>2</sub> for more superficial effects, and more effective tightening.

### Remember:

- Most available sunscreens use photochemical filters that delay sunburn due mostly to UVB and minimally to UVA-II (290-340nm) measured by the SPF number. High SPF sunscreens prevent sunburn but do not provide important protection against UVA-I if they contain no effective filters.
- A minority of the products available in Canada or the USA provide adequate protection against the deeper penetrating UVA-I (340-400nm).

It is counterproductive to practice prevention or have rejuvenation therapy if your sunscreen allows for ongoing photoaging or some cancer risks. Acceptable products for UVA1 coverage include:

1. ROC Minesol Protect SPF 60 from Johnson and Johnson.
2. Products with Mexoryl™ SX/LX include various formulas from L'Oreal- their La Roche-Posay Anthelios XL SPF 60 and others from their Vichy line- Capital Soleil SPF 60. They use Mexoryl SX and LX in < the ideal 3-4% concentration, where they could provide proper UVA coverage on their own. They add avobenzone that needs octocrylene for stability, and end up with a “cocktail” of 5 actives. La Roche-Posay Anthelios XL SPF 60 provides broad spectrum coverage with 5 actives and 28 total ingredients- one of the better formulas, as many others have >40 total ingredients.
3. We support the precept: less chemicals-more efficacy-Please ([www.cyberderm.ca](http://www.cyberderm.ca)). and the principle of using single agent coverage from low hazard effective UVB filters, such as encapsulated octinoxate, or micronized or nanoparticle titanium dioxide, with single a agent that extends coverage to 400nm. To fill the void for a formula with only 2 actives and low total ingredient load (ideally < 25), CyberDERM Laboratories developed a formula using octinoxate and nanozinc oxide - only 2 actives with 24 total ingredients. Although Health Canada and the FDA do not require UV testing, the product was voluntarily tested using the UK-Boots Star rating method. It was confirmed to give proper UVA coverage (3+ stars, UVA/UVB ratio > 0.60).

Daily use of a truly broad spectrum sunscreen is one part of a sensible protection program for prevention and maintenance after rejuvenation therapy. Be dedicated to daily sunscreen use on your face, neck, and décolletage, still exposed to sun with winter wear. CyberDERM's anti-aging cream targets the genetics and the immunology of aging at a cellular level in the skin. It combines the innovative ayurvedic principal curcumin with Renovage™ that acts to inhibit telomere shortening ([www.cyberderm.ca](http://www.cyberderm.ca)). Winter requires adequate hydration to combat the drying effects of harsh wind, the cold outside, and 'dry' air in heated homes. CyberDERM's new moisturizer contains resveratrol (thought to be the most promising of all anti-aging agents), and ectoin that stimulates the action of heat shock proteins, the mediators of laser induced benefits at a cellular level. This innovative moisturiser will provide emollient therapy and prolong and enhance the benefits of all light-based therapy.

With the summer sun waning, it is now the time to tackle problems such as melasma, for patients to lose the tan and consider preventative maintenance or rejuvenation. Our experience over 25 years confirms that laser or Intense Pulsed Light (IPL) is not optimal for melasma and may worsen the condition, except for deep melasma, rarely seen, that can be treated with the Fraxel laser. Melasma is best treated with specific TCA peels or topical agents. CyberDERM has introduced a bleaching agent and skin lightener containing Emblica (another ayurvedic active from the Indian sub-continent), shown by our own pilot studies to be more effective than hydroquinone, alphahydroxy acids, and even retinoids, in most cases. It also has the intriguing effect of brightening skin in any normal colour (fair or olive skin) that has no discoloration from abnormal pigment.

Dr. Laughlin hopes that this is a useful framework for you consider prevention of photodamage and prudent rejuvenation. Our use of specially researched topicals integrated with management of dermatological issues and selective laser therapy is the logical approach to rejuvenation. Please visit [www.laserderm.ca](http://www.laserderm.ca) and [www.cyberderm.ca](http://www.cyberderm.ca) for more details. She is pleased to speak personally to your physician to discuss your concerns. Please call for personal information from our staff or to receive printed information by mail or if you prefer e-brochures.

Referrals from your physician can be made by a facsimile sent to 613-722- 2877. You may call 613-722-4436 or 613-722-6568 for appointments without a physician referral.