

A Rose by Any Other Name

Published Cosmetic Surgery Magazine, April 2004

## ROLL-AWAY THE YEARS

An Alternative to Lasers and Deep Chemical Peels

**Medical Needling has been used successfully to treat fine lines; wrinkles; lax and photo-damaged skin; to reduce the appearance of stretch marks; and to improve acne, post burn and ice pick scars. It has also been used post liposuction to tighten skin.**

Ever since the days of Cleopatra and most likely long before, women and men (yes, men) have been in search of ways to enhance their appearance. History demonstrates the use of a myriad of potions, brews, spells, creams, acids and herbs to enhance beauty and reverse or limit the effects of aging.

Modern technology has brought us ever improving and less invasive surgical techniques; even stronger skin peeling agents; lasers, from Co2 to erbium and beyond; Intense Pulsed Light (IPL); ever evolving prescription and non prescription topical products; and a new generation of injectables such as Botox, Fat, Collagen, Hyaluronic Acid, Polylactic Acid and Calcium Hydroxylapatite, to name just few. From 2000 to 2004 there was a 43% increase in minimally invasive cosmetic procedures and a 16% increase in total cosmetic procedures, according to the American Society of Plastic Surgeons. There are no signs of this increase abating. In 2004 there were over 9 million cosmetic procedures of which approximately 7.5 million were minimally invasive. This article will describe a new medical procedure performed by physicians that is creating great interest in the cosmetic community due to its, efficacy, minimal down time, ease of use, costs and patient satisfaction..

Our industry is changing faster than ever. A generation has long been referred to as a 20 year period. In skin science and technology, the term generation is now down to a period lasting two to five years with advances coming daily. These changes are driven both by scientific developments and demand from an affluent and aging baby boom population. More individuals will be over 60 years of age than younger than 60. Consumers are translating their desires by putting their money behind efforts to look younger. Even in an international economy that has not been as strong as everyone would like or as our politicians claim, the skin care industry continues to outpace almost all sectors of the economy in terms of growth and spending. And, they want results not just fluff and buff treatments.

Consumers want less expensive alternatives to plastic surgery, minimally invasive procedures, shorter down time and less chance of complications. Physicians and medical estheticians also share the goals and expectations of their patients and clients. An emerging, simple technology is now receiving substantial attention as it appears to meet the growing needs of cosmetic patients, skin care professionals and physicians. It is a procedure that requires all three parties to play an active role in ameliorating some of the conditions of aging that we so badly want to go away: the appearance of fine lines, wrinkles, stretch marks, lax skin in the abdominal area, arms and even thigh's; ice pick and acne scarring.

A triumvirate of resources is needed to address these conditions in a manner that produces measurable, sustainable and visible results: a skin care professional prescribing (used as a term of art) a home care regimen, professional, in office, aesthetic treatments by licensed estheticians and a minimally invasive medical procedure performed by a physician. Working in partnership, this three pronged approach combines to produce extraordinary, lasting results

### Home Care Protocol

A crucial part of any cosmetic procedure is preparing the skin prior to treatment. We firmly believe that the most essential elements of an efficacious skin care regimen are vitamins A, C, a brigade of antioxidants, growth factors, and polypeptides. This will reduce down time, patient discomfort and speed the recovery process. It is not only important to ensure that a client is using these ingredients, but the formulations, packaging and manufacturing process of a skin care product must be designed to protect the products so that they remain active, free from contamination caused by bacteria and that they are not biodegraded by light and air.

Our environment (sun damage, pollution, nicotine, carbon dioxide, etc.) contributes significantly to the aging process. Topical skin vitamins go a long way in helping to repair and restore skin health. As described by internationally renown Plastic Surgeon, founder and Medical Director of Environ Skin Care, Dr. Desmond Fernandes, these vitamins improve the overall skin function resulting in thicker, smoother skin. Cellular structures become better organized, are more effectively bound together and more evenly distributed resulting in dramatically strengthened glycosaminoglycans and inter-cellular lipids. Fibroblast functionality improves along with increased collagen and elastin. Simply put, use of these vitamins, polypeptides and growth factors, pre and post procedure, yield improved and longer lasting results.

Please note, however, that there is no one magical product or regimen. A skin care professional should develop a pre and post skin care protocol based on a patient's particular skin condition and the procedure to be undertaken. Traditional skin care products available at your local beauty supply or drug store will not contain enough of the required active ingredients to produce the desired results.

### Professional Skin Treatments

Once a client has started on Vitamin A, C and other elements essential to an appropriate skin care protocol, a series of professional treatments should be added to enhance skin preparation. The procedures should be designed to enhance skin health with the operative word being **penetration**. The use of topical penetration enhancers plus iontophoresis and sonophoresis will go a long way to restoring skin health and creating an environment that adds to the success of any medical procedure.

One must ensure that the vitamins are not only chirally correct but are ionized in the proper format to work effectively. Low frequency ultra sound, using cavitation, is a superior way to penetrate essential vitamins into the skin, rapidly restoring skin health. A series of three to six treatments, pre and post surgery, adds great value to your client. You can learn more about Iontophoresis and Sonophoresis by e-mailing the authors at [info@dermaconcpets.com](mailto:info@dermaconcpets.com).

### Collagen Induction Therapy - Medical Needling

The principle behind Medical Needling, also called Collagen Induction Therapy, is quite simple. The medical needling instrument is rolled across the area to be treated thereby causing a minute injury to the dermis, which results in the start of the wound healing cascade. This is a medical procedure performed with the aid of either a topical or local anesthesia. If treating the entire face, neck and décolleté, some physicians prefer conscious sedation.

There are three primary phases to the body's natural wound healing process. All take place in a predictable series of events according to Laurence Rosenberg, MD of the University of Alabama. The first is the inflammatory phase which is characterized by hemostasis and inflammation. Collagen is exposed at this stage. The second stage is proliferation where epithelialization, angiogenesis and collagen production. Fibroblasts and collagen is deposited in the wound at this juncture as well. Collagen deposition continues for some time which results in enhanced results. The final aspect of the wound healing cascade is the maturational process where the wound(s) undergo contraction. The entire process of wound healing is a continuum with overlap all along the way.

The act of creating a wound stimulated the body to produce its own collagen which is not rejected and can last for as long as five to seven years. It is the body's own production of collagen that results in a tightening of the skin, a lessening of fine lines and wrinkles and a softening and reduction in scarring.

Therefore, Medical Needling, in essence, is creating a wound to the treated area. A sterile roller with medical needles is rolled across the treated area creating thousands of micro wounds. These punctures then begin the wound healing cascade which causes the body to produce its own collagen, even in peri and post menopausal women. As the body is producing its own collagen, there is no rejection. According to Dr. Fernandes, the leader and pioneer in this field, five days after the injury to the dermis, a fibronectin matrix is laid down along with collagen. This collagen is deposited in the upper dermis just below the basal layer of the epidermis. Collagen Type III is the dominant form in the early stages, later being replaced with Collagen I. It is useful to remember that tiny little islands of skin remain after the needling thereby keeping the skin intact.

The success of Medical needling not only lies in the adequate preparation of the skin with vitamins A and C **AT LEAST ONE FULL SKIN CYCLE PRIOR TO THE PROCEDURE**, but also in the education of the patient as to the post-operative care. One cannot stress how important it is that the patients are well-informed as to how to take care of their skin in the first 72 hours post needling. This is where the esthetician again plays an important role. As the skin has lost its barrier function the surface of the skin feels dry and can even feel rough for the first few days. It is important to keep the skin hydrated. The skin should be gently washed with a cleanser containing tea tree oil and no harsh detergents as they will just dry the skin out more. In addition, the application of appropriate creams and enriched Vitamin A, C and E oils are vital. The aim is to prevent any scabbing. Sun exposure should be avoided until the skin is healed. Remember that a skin cycle in an older sun-damaged person may take up to 50 days.

The advantages of this procedure according to Dr. Fernandes include: it does not damage skin; skin becomes thicker with greater than a 400% increase in collagen deposition; any part of the body can be treated; needling can be performed on all skin types even Fitzpatrick IV and V, without fear of hyper or hypo pigmentation; there is no risk of demarcation lines. Medical Needling is a less costly, safe alternative to laser resurfacing.

Plastic Surgeons in the United States are fast becoming advocates of this procedure. Leonard Miller, MD and Board Certified Plastic Surgeon of Boston, Massachusetts has probably been doing medical needling longer than anyone else in this country. He feels that the best results are achieved in patients who have early signs of lip lines, wrinkling, and loose crêpey skin.

## Summary

**Medical Needling and Collagen Induction Therapy is a valuable, cost effective and efficacious, medical treatment for fine lines, wrinkles, brow lines, tightening lax skin on most parts of the body, stretch marks and to significantly improve the appearance of acne and ice pick scarring and even to tighten the skin post liposuction. Used in combination with at home skin care protocols and in-office professional skin treatments, the results achieved are significant and long lasting.**

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