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AGING SKIN: A DISCUSSION OF ITS ETIOLOGIES AND NON-SURGICAL TREATMENT STRATEGIES

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Skin aging is a result of a combination of factors, some of which can be avoided and some of which cannot. In this article we will try to inform you of some those factors and then discuss non-surgical approaches to the treatment of aging skin. We will focus on the face, but the same principles and treatments can be applied to the rest of the body. This is not meant to be an exhaustive review, but merely a basis to help you consider where your skin lies in the spectrum of aging and how to begin to approach its care.

It may seem odd that we consider gravity as our first “enemy” in our fight against aging but it plays a major role in the appearance of aged skin. As one looks to the extremes of age, one can see the jowls become more prominent and the cheeks descend. This leads to a deepening of the folds from the corner of the mouth to the nostrils. In addition gravity affects the brow and eyelids too. Gravity is a constant force pulling at our skin.

Another factor that contributes to aging is loss of soft tissue support and atrophy. This is best seen around aged eyes as they can appear sunken in. As we all age the connective tissues of the face slow down their normal rate of turnover and become lax. In addition, normal facial fat may atrophy, or lose its robust character. This loss of normal volume, coupled with gravity can accentuate an aged look.

Each of us houses a unique combination of genes we inherited from our parents. As such each of our skin is different. From number of pores, to texture, our skin is individually our own. Some of us will tend to make fine wrinkles while others make deep furrows with expression. Therefore, each one of us ages, based on our particular genetic code, at different rates and to different degrees than our neighbor.

Our skin is a mirror of the muscles that lie beneath it. Nowhere is this more evident than in the face. When we smile or we frown our expressions are evident due to the unique interaction of our facial muscles with the overlying skin. As such, those of us with more pronounced facial musculature may see wrinkles, lines, and furrows at an earlier age. Not to say that expression is a bad thing but it may contribute to the appearance of earlier aging in the face.

Lastly, a largely preventable cause of facial aging is called photoaging, or damage from sun exposure. Even if you are not a sun worshipper, cumulative exposure to sun over a lifetime takes its toll. The once pink and fresh quality of the skin turns more yellow and sallow appearing, just as fabric on your furniture that is sun exposed turns pale and yellow. Photoaging also changes the quality of your skin resulting in an increased number of fine wrinkles and variable pigmentation changes/spots.

Prevention is the best course of action for all of our skins “enemies” but most often we find ourselves with varying degrees of skin damage at different times in our lives. There are treatment options for all phases of sun damage, and skin aging. We will discuss options for more superficial damage first and then discuss approaches to deeper levels of damage and including more complex treatments. While we will not discuss surgical procedures, they too play an important role in creating a more youthful appearance and combating the appearance of aged skin.



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The cornerstone of every treatment protocol is always start a vigilant prevention program to avoid any further damage. To avoid this chronic exposure of sun, we recommend use of a sunblock with a 15 or higher SPF (sun protection factor) rating applied prior to any makeup on all sun exposed surfaces. .

Our first treatment protocol (for mild to moderate skin damage) utilizes a derivative of Vitamin-A, known as tretinoin. Tretinoin is a medication that helps to return the epidermal skin cells (or those cells on the skin surface) to a more normal appearance after they are sun damaged. Dermatologists and plastic surgeons have noted some improvement in the fine wrinkles and other signs of photoaging as a result of these changes of the epidermal cells at the skin surface. We also offer all natural alternatives that may provide comparable results.

We often prescribe a low dose of tretinoin followed by a gradual increase in strength, in order to see full benefits from the treatment while decreasing the incidence of side effects. Tretinoin's side effects are irritation of the skin with redness and dryness, with possibly flaking of the dry skin. A moisturizing program can help or, if needed, various anti-inflammatory creams can be utilized. Tretinoin makes the skin very susceptible to sun damage; therefore a sunscreen program must be started, and maintained, at the same time. Effects of the treatment become apparent over several weeks to months, and usually include improvement in pigmentation, smoother texture to the skin, decreased pore size, and softening or even resolution of fine wrinkles.

A more aggressive option that can help with photoaging is glycolic acid. Glycolic acid is a weak acid, found naturally in sugarcane, which acts as a super moisturizer to help reduce the dryness caused by sun exposure. It also helps to remove superficial pigmentation or brown spots, helps to even out the skin surface, and helps to reduce pore size. It does not appear to have all of the benefits of Vitamin-A (tretinoin) in repairing damage, but remains a useful alternative. Glycolic acid is placed in various products supplied for daily use on the face. The most effective program consists of daily treatment with a general glycolic acid facial cleanser for two to three weeks prior to a glycolic acid peel at a higher strength. The glycolic acid peels are performed by trained personnel usually in plastic surgery or dermatology offices. A series of peels given at one to two week intervals is recommended for optimal results. The advantage of glycolic acid peels, compared to other facial peels, is that after neutralization, the surface changes consist usually only of some mild to moderate redness. Make-up can usually be applied after the peel and minimal special precautions are needed. For this reason, we are able to use this peel on women of color with virtually no risk of pigmentation irregularities, which can often be seen with deeper peels. Not all brown spots and pigmentation problems respond to glycolic acid peels, however. This is why your dermatologist and / or plastic surgeon evaluates your skin prior to recommending a particular skin program.

For more severe photoaging with leathery skin and deeper wrinkles, a deeper chemical peel is needed. The depth of the skin damage determines the depth of the chemical peel needed to correct the damage. A chemical peel of medium depth usually involves T.C.A. or trichloroacetic acid, which is a stronger acid than glycolic acid. This acid is applied to the facial skin alone or in combination with other agents, in order to create a deeper degree of peel. After a T.C.A. peel there is usually a more noticeable degree of redness and superficial blistering and peeling of the skin surface similar to a severe sunburn. After five to ten days, the surface layer regenerates as a smoother and more even skin surface with less blotchy pigmentation.

We stress again that it is critical not to expose this delicate new skin to the sun. Inadvertent sun exposure can lead to complications of blotchy pigmentation, irregularities, and the need for additional chemical peels to correct these problems. A moisturizer program is also advised after a peel and many dermatologists and plastic surgeons pre-treat



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peel patients with the Vitamin A derivative, tretinoin, for two to six weeks to help reduce potential unevenness of the peel. A Blue Obagi peel is a form of TCA peel.

For those patients with severe sun damage, laser resurfacing or a phenol chemical peel may be advisable. This peel has several ingredients of which the main one is phenol, which produces a deeper peel that is used to treat deeper wrinkles. The disadvantage of this peel is the length of recovery (usually seven to fourteen days) during which wound care to the face is needed, and the persistent redness of the skin for many months after the peel. As sun exposure is very detrimental to the newly formed skin, this peel is usually performed in the fall or winter so some healing has taken place prior to the sun intensive seasons. Neither T.C.A. nor phenol peels would be performed on patients who are taking Accutane for acne. As there are many factors to consider in choosing a peel including skin type, depth of wrinkles, skin pigmentation, pre-existing skin conditions such as acne, skin sensitivity, pore size, and lifestyle as well as the many types and subtypes of peels available, evaluation by a plastic surgeon or dermatologist is advisable. Other non-surgical options include injectable fillers and Botox® and can be used in conjunction with the above modalities. To find our more information about these options, please visit the article titled "A Brief Introduction to Injectable Fillers and Botox®" located on our website in our Resource Center. If facial aging is more severe, a plastic surgeon also has a variety of surgical procedures to correct some of the aspects of facial aging.

At Plastikos, we can address all of your questions and concerns. Please contact us today at (770) 457-4677 or visit us at www.plastikos.com.