

# The Latest in the Quest for Eternally Young Skin

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People are now living longer than they ever have. From the Bronze Age to medieval times, most people were not expected to live past their 35th birthday. Plagues, wars, and harsh living conditions kept life expectancy hovering around 30 years for the majority of time that modern man has been on Earth. According to the World Bank, the average lifespan worldwide dramatically rose to 67.2 years in 2010. So that is the good news. However, the paradox of living longer is that we now must also contend with more age-related pathologies, including the visible evidence of skin aging during the latter decades of life. It is estimated that the anti-aging skin care industry will be a \$291.9 billion industry by 2015 (Global Industry Analysts, Inc.). It is not only the graying baby-boomers, the youngest of whom are now in their 50s, who feed this phenomenon: people, especially women, have anti-aging on their radar as early as their 20s. Longer life also means that many of us will compete with younger people for jobs as well as dates and mates, well into our 40s and beyond. For these reasons, the importance of value driven skin care is essential for men and women in modern society.

## **THREE KEY TRIGGERS OF VISIBLE AGING: GENETICS, ENVIRONMENT AND TIME**

Often, someone who “looks good” to us in their 40s, 50s, and beyond is seen as lucky and the recipient of good genes, regardless of lifestyle habits. Conversely, many individuals who play by the anti-aging rules – no sun, no cigarettes, plenty of exercise, stress-management, and mindful nutrition – may appear weathered and fatigued, in spite of their virtuous practices. The truth is that every condition is the result of multiple causation. These collective forces collide to create an individual’s aging “profile.” Do genes matter? Most definitely yes. Genes probably drive the responses to the other two key factors – an individual’s environment, including the self-created “micro-environment” of the person’s own lifestyle choices and habits, and the simple passage of time itself. We are only now beginning to explore and understand the long-range impact of environment, and how the environment relates to an individual’s DNA, as well as the ticking of the telomere, or biological clock. When it comes to normal skin aging, many functions are altered. In terms of that steady tick-tick-tick, the telomere loses 30 percent of its length in human skin fibroblasts during adulthood, resulting in less collagen production. The number of immune and pigment-regulating cells declines as the years roll on. The flow of nutrients and metabolites between dermis and epidermis is reduced, as contact between dermis and epidermis weakens with age. The number of blood vessels in the skin declines; meaning that the skin experiences a decrease in blood supply and resulting dermal volume. In tangible terms, each of these time-driven actions has a familiar effect associated with aging. Combined with the environment, these factors interact in complex and subtle ways which produce highly singular patterns in each person. Here is something you may not already know about genes and sun: exposure to ultraviolet (UV) rays can actually change a person’s genetic function, and thus change the inherited “script” which guides the way the person ages. Imagine a dimmer switch in your house.

Having the switch itself is a genetic structure while the dimmer can be controlled by environmental factors as well as genetic programming. These environmental and lifestyle factors are called epigenetic and dispel the belief in many people that direct, unprotected sun exposure will have no major impact on their biology. But the fact is that all human skin reacts to UV rays, and these reactions may be taking place out of sight, on the genetic level. Since the environment can have a major impact in the way our genes function, we can set ourselves up for future damage if we do not make appropriate lifestyle adjustments early on. While we can be sun-smart, avoid tanning booths, protect our skin and maintain a generally healthy lifestyle, there are ingredients that will protect the skin from accelerated photoaging. Today, sunscreens have become highly sophisticated in their form and function and are now regularly referred to as "daylight defenders." This helps drive home the need for daily, year-round protection versus protection restricted to summer beach trips. Traditionally the downside of physical filters, such as Zinc Oxide and Titanium Dioxide, has been their visible, chalky residue, but new, micronized, ultra-fine dispersion technology enables a more even distribution onto the skin. The latest formulas have additional skin benefiting ingredients allowing sunscreens to perform more like a moisturizer for different skin types from oily to dehydrated and aging skin. Some even have intelligent UV boosters that burst open on contact with UV exposure and flood the skin with antioxidants like Vitamin C and E for maximum free radical protection.

#### **WHAT CAN CLIENTS DO – AND WHAT CAN WE DO FOR THEM?**

There is no single, silver bullet to prevent visible aging – and it is safe to say that the intrinsic pace of aging can be greatly accelerated by environmental stressors. Many of these stressors are familiar to all of us as enemies of good skin and overall health: psychological stress, UV exposure, cigarette smoke, and the environmental pollution potentially present in our industrialized world. These stressors affect the skin in multiple ways, but share a common effect – inflammation. Inflammation as a physiological phenomenon is a relatively well-established area of scientific study, but its cascade is only now being recognized as a significant factor in many pathologies, including loss of skin integrity. Ironically, many of today's most drastic anti-aging procedures, such as micro-needling (also known as collagen induction therapy) inflict acute inflammation on the skin. Moreover, aggressive exfoliation or over-processing skin with a random array of products of different strengths can do the same. This inflammatory reaction may make the skin feel tight and seemingly smoother – seemingly "younger" to a suggestible client. The effect of these practices is temporary, and may in fact result in long-term damage, including the permanent thinning of the protective lipid barrier, and persistent reddening. As skin care professionals, it is always in our best interest to guide clients away from quick-fixes, which put them at risk. Some key ingredients to reduce inflammation and the accompanying redness and dehydration in sensitized, reactive or recently resurfaced skin are botanical extracts of Ginger, Oats, Bisabolol, Chamomile, Lavender and Red Hogweed Root. Peptides can also address sensitivity that can be felt, but not always seen, such as Acetyl Tetrapeptide-15 and Palmitoyl Tripeptide-8. Antioxidants and barrier-repairing emollients are also key in preventing future environmental damage. In all, the approach for arresting the accelerated aging process should

include: resurfacing the skin through gentle exfoliation, boosting cellular activity through bioactive ingredients such as Retinol and re-energizing the skin through electrical or mechanical action. The goal is to raise the skin's level of function, to heighten the skin's "metabolism," without creating inflammation. If the client is receptive to a more incremental approach, structure the relationship as a long-term partnership. The "glue" in the partnership is your expertise and her trust, and this bond is reinforced by the power of your touch: skin on skin. She already knows that she needs to wear UV protection even when it is not sunny and a wide-brimmed hat when it is. Our role as skin therapists is to find out what she does not yet know about her skin, and help her to integrate this knowledge into her lifestyle, as well as into our professional treatments. For instance, lipid-based exfoliants with a maximum strength combination of exfoliating ingredients like Lactic Acid and Salicylic Acid offer the aging skin client optimal visible results without risk of inflammation. These formulas may be massaged over the skin to replenish depleted barrier lipids, and the light massage aspect soothes sensitized areas – so different from, say, the microdermabrasion craze of a decade ago. Reaching back into ancient history, consider integrating acupressure as a modality to boost cell metabolism and release stress throughout the body. The key to successfully building an effective yet safe anti-aging program is realizing that since aging is a multi-factorial response, the treatment must also be multi-action. Stand-alone products are a thing of the past. The new generation professional products use a hybrid approach, combining many ingredients – and both high-tech and high-touch techniques – to produce optimum results. So it seems there is a smart way to age! An informed and proactive approach keeps the client feeling empowered and supports the integrity of the skin through every decade.