

Understanding Male Skin

by Dr. Claudia Aguirre (As Seen in Dermascope Magazine)

All men are created equal. While this may ring true in the political realm of society, it is far from true when it comes to the physiology and care of men's skin. Men, just like women, deal with issues like aging, pigmentation, sensitivity, and acne. However, just as there are keen differences between the skin conditions of men and women, every man's skin is as unique as his fingerprint. His skin health is shaped not only by his genes, but also by his lifestyle choices. A 20-year-old surfer's skin is different than a 50 year-old businessman's skin and will require different targeted products. Treating a man's skin effectively begins with an understanding of physiology, but, like all professional skin care, it depends ultimately upon listening to the client's needs in a very specific and personal way.

The biggest difference between male and female skin is due to the male sex hormones known collectively as androgens. The chief sex hormone of this group is testosterone, which is primarily secreted by the testes and ovaries (yes, women produce it, too!). Although there is variability, adult males produce about 10 times as much testosterone as women. Testosterone exerts its effects by acting on androgen receptors found throughout the body. It does this directly, or by being converted into dihydrotestosterone (DHT), a much more potent activator of the androgen receptors. At birth, baby boys have already experienced the effects of this powerful hormone. Testosterone secretions have triggered the development of his internal and external reproductive organs. Throughout childhood, testosterone levels remain relatively constant until the big upsurge hits with puberty. After puberty, males continuously secrete higher levels of testosterone that result in all the characteristics of an adult male; muscle development and greater upper body strength, facial and body hair growth, deepened voice, and 'manly' odor, as well as a tendency toward more active and aggressive behavior.

Beginning with middle age, testosterone levels steadily decline every year and may be accountable for the changes in men's skin and hair during a man's later years. Testosterone is potent stuff, and we must understand its effects upon the psyches, bodies, and skin of men in order to fully embrace the rapidly growing male skin care market. American consumers spent \$4.8 billion on male grooming products in 2009, a figure that has doubled over the past decade according to market data firm Euromonitor. And this number is only expected to keep rising. In order to better understand and create products directed at male skin, it is imperative to understand what makes male skin 'male'- namely, testosterone.

Testosterone and His Hair

Beginning with the obvious – men can grow a beard and women cannot. Androgens, in particular testosterone, drive hair growth. In areas sensitive to androgen modulation, such as the face, underarms, and genital area, testosterone triggers the production of terminal body hair. In men, this extends to the arms, legs, chest, and pretty much the rest of his body. Androgens also control hair growth in women, though to a much lesser extent. The result is dark, coarse facial and body

hair. Facial hair is thicker than scalp hair, and has a flatter shaped follicle, making it curlier. This can be a distressing quality, especially for males who experience razor-burn after shaving. This occurs when the freshly cut end of a curly hair re-enters the skin, causing inflammation. Sharp razors and shaving creams that minimize friction can reduce the occurrence of razor burn. For men with coarser hair, applying a pre-shave product to soften the beard hair may be a key step in minimizing razor burn and bumps.

Unlike men, women only develop fine vellus facial hair, giving their skin more surface area. Why the big difference? There is not a definitive answer, but looking into our ancestral past may reveal answers. A beard is the best protection a man's face has against the powerful and damaging effects of UV rays. Perhaps there is some evolutionary reason for the beard. Males had to spend more time outdoors in the elements hunting for food, while females remained in the hut tending families. Maybe they needed the extra sun protection? Aid with temperature regulation? Or perhaps added camouflage during hunting? According to anthropologist Desmond Morris, women lost their facial hair to enable human infants to recognize their mothers more easily, creating a greater infant-mother bond. And the coarse, androgen controlled, body hair remained in those areas nearest the sweat glands that produce aromatic sweat, such as the underarms and genital areas of both males and females. Since testosterone also produces aromatic sweat, also known as apocrine sweat, skin care targeted at men must address the characteristic male odor without simply masking it with fragrance. All these traits provide both challenges and opportunities for creating male grooming products in the ever-expanding skin care market. Paradoxically, the same androgens responsible for the growth of facial and body hair can trigger hair loss on the scalp. DHT, and to a lesser extent testosterone, can stimulate the scalp hair follicles to shrink and eventually die off, resulting in a condition called androgenetic alopecia, or male pattern baldness. This condition has become an important facet of male skin care, and has boomed into a billion dollar industry.

Testosterone and His Skin

The effect of androgens on hair growth lends itself to the observed differences in facial skin between men and women. Men's terminal hairs are coarse, pigmented, and take up much of the surface area of the skin compared to female skin. By providing effective sun protection, the damaging UV rays are not able to penetrate through a beard to the dermis and cause collagen degradation. It is no surprise then, that shaving greatly increases the risk of UV damage and premature aging. Moreover, fair-skinned men with finer hair will display photo-damage more easily than their darker-skinned counterparts, much like women.

In addition to increased protection from collagen and elastin degradation, male skin can also thank its increased thickness to androgens. Androgens, including testosterone, yield a denser network of collagen fibers than that found in female skin.¹ The firm collagen and elastin network, coupled with the presence of terminal hair follicles, results in thick facial skin in men. Whereas, females may show and be concerned about the signs of photo-aging, males traditionally do not begin to show these signs until later in life. Therefore, men are not easily persuaded into using moisturizing creams early in life due to the nature of their thicker facial skin. It does not hurt that the rugged and weathered look is a sign of masculinity in many cultures. Despite their thicker skins, American men have a greater incidence of skin cancer than women. According to the

Centers for Disease Control and Prevention (CDC), in 2006, 57 percent of people diagnosed with melanomas of the skin were men, and 65 percent of those that died were men.⁶ These scary statistics should serve as an impetus to educate men about the need for daily defense against sun damage while providing solutions targeted to male skin.

He is More Sensitive Than You Think

The epidermal barrier is a highly organized tissue that responds efficiently and rapidly to the changing environment in order to maintain a state of homeostasis, or perfect balance. Comprised of a mixture of ceramides, cholesterol, and fatty acids, the lipid bi-layer mediates both trans-epidermal water loss and penetration of foreign materials into the skin. Once the epidermal barrier is disturbed, either by penetration of foreign material or dehydration, signals are sent by the lipids to replenish the lipid barrier system and remove any foreign material. However, studies have shown that testosterone can have negative effects on epidermal barrier function.

There is still much research to be done, but there are some initial studies that suggest diseases associated with barrier abnormalities, such as psoriasis and atopic dermatitis, are more common in men than in women.² Even in men who do not have these skin diseases, testosterone can slow down barrier development and recovery.² A major role of the skin is repair – when you get a cut, the skin must be able to repair the wound quickly and efficiently. Clinical observations suggest that men, in particular older men, are not able to heal their skin wounds as quickly as women. Lab studies have also implicated testosterone and DHT as major factors that impede wound healing.^{3, 4} Together, these studies suggest that men may not be able to heal wounds as readily as women. This is especially important in facial skin because many men shave on a regular basis, leading to frequent nicks and cuts. Men's skin care must therefore be formulated to assist the skin repair itself and protect the integrity of the epidermal barrier layer.

Testosterone and Acne: Boys vs. Girls

While boys may be excited at the advent of their 'manhood,' they are probably not too thrilled about the effect of testosterone on their skin's appearance. Testosterone increases oil secretion all over the body, as is particularly evident on the face. This increase begins at puberty and remains relatively constant thereafter. On the plus side, sebum provides natural moisturization for the skin. Sebum is produced by the sebaceous glands and is a complex made up of cholesterol, free fatty acids, glycerides, squalene, and wax esters. Sebum and sweat, along with the epidermal lipids discussed earlier, make up the oil on the surface of the skin. Although this mixture provides protection from environmental agents and prevents water loss, it also provides the perfect breeding ground for the bacteria *Propionibacterium acnes*. The presence of these bacteria, along with the excess pore-clogging oil, set the stage for the onset of acne.⁵ During puberty, more sebum is produced than can be effectively secreted, resulting in sebum accumulation in the hair follicle and eventual inflammation. Thus, it is no surprise that acne in young males is more severe and long-lasting than in females. By adulthood, most men normalize their oil production so that acne is not a life-long skin problem.

Androgens can also trigger acne in women. Women with higher hormonal levels of androgens, such as those with polycystic ovarian syndrome, have a higher risk of developing acne than normal females. Clearly, hormonal control of the pilosebaceous unit – comprised of hair follicles

and sebaceous glands – is a risk factor in developing acne. Men using anabolic steroids, a testosterone-like substance, can also experience increased bouts of acne. However, it must be noted that there is not a single, “silver bullet” cause and cure for acne. Other factors, including cellular and immune function, are also major players in the development of acne.

Male Skin Care: Fiction vs. Future

Women experience a precipitous decline in the female sex hormones estrogen and progesterone during menopause. The ‘male menopause’ or ‘andropause’ condition has been in the limelight recently. However, this is not a proper representation of the changes associated with aging males. True, men do experience declines in hormonal levels but not nearly to the extent that females do. Nevertheless, the decline in androgens may be responsible for some of the changes associated with aging in men. Loss of muscle tone and bone density, depression, decreased libido, sexual dysfunction – even memory loss – have all been linked to aging males and decreased testosterone. But perhaps these are just a part of aging. Aging is a natural process that affects both men and women physiologically, emotionally, socially, spiritually, and of course hormonally. The physical characteristics of aging bodies cannot be solely attributed to one substance like estrogen or testosterone. Despite the complexities, male hormones, in particular testosterone, govern much of the male physiology and behavior and this powerful chemical remains the crucial component for understanding male skin.

Today’s man is waking up to the benefits of high-tech grooming. More and more, men are making efforts in taking care of their health and overall appearance – and this is reflected in their skin. Current fashion calls for tailored, clean lines and a move away from the sloppy and slouchy. Men’s grooming habits are following this trend as well. The smash television series “Mad Men” depicts a dashing Don Draper as an icon of retro masculinity. Men today are seeing more and more personal care products targeted towards them. Viral marketing campaigns focused on men’s grooming have been hugely popular this year. This may be a reflection of the societal changes that impact men in this day and age. Men today are feeling the pressures that many women are already used to. Working later in life means competing with younger men in the workforce, a phenomenon heightened by today’s economic state. Men must mobilize every personal asset in order to compete effectively. Trends in the plastic surgery arena also reflect these changes. Men are heading to their doctor’s offices to get nipped, tucked, and polished before heading out into the workforce for a second chance. This second chance is not confined to his career. With divorce rates as they are, it is safe to assume that many men are on their way to their second or third marriages. This means a renewed competition for older men, where youth and health are still regarded as proofs of power by the women selecting them. Although men are beginning to be more concerned about wrinkles and skin elasticity, they are not going to fall for claims of overnight miracle cures. Men know that toned abs take time, so toned skin must. Men’s skin care is being refined for all of the issues that women have been targeting for so long. No longer will a man be a soap-and shampoo kind of man. In fact, Euromonitor predicts an 18 percent increase in men’s anti-aging products in Europe over the next couple of years.

Today, whether men admit they have looked or not, retailers provide toners, cleansers, masks, balms, creams, scrubs, even concealers, and antishine powders, all targeted toward men. The

skin therapist now has a unique opportunity to create a bridge to the male consumer, beginning with targeted mini-treatments for common male skin complaints like an ingrown hair in the beard-line, or a blemish the day before the big presentation. By keeping initial skin care experiences brief, specific, results and performance-oriented, therapists invite men to become curious, ask questions about products and treatments, and the long-term effects of informed skin care. This dialogue may then become the basis for a dependable client-therapist relationship – statistics show that men rarely “price-hop” and show greater loyalty to their service providers than women.

References

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