

by Margaret Ancira

Sensitive Skin

GETTING IT RIGHT

GOOD COMMUNICATION between the patient and the skin care professional or doctor is imperative in the fight against any skin condition. If a patient complains of oily, dry, dull or congested skin, the proof is evident because of their skin's appearance. Unfortunately, not all skin characteristics are clearly visible and some words used to describe a skin's "personality" can be subjective and vague. The term "sensitive" is a perfect example. Based on data on file from Unilever Home & Personal Care, 50 percent of all women worldwide consider themselves to have sensitive facial skin. What does this really tell the skin care professional? Is the sensitivity because of cosmetic fragrances and preservatives? Is it triggered by ultraviolet exposure, allergens, pollutants, or is it a hereditary component that puts them at risk? The word sensitive has *many* definitions. In our efforts to effectively treat patients that say their skin is sensitive, it is of the utmost importance to determine the source of sensitivity.

Border patrol

The stratum corneum of human skin acts as our barrier to a world of offenders. Densely packed layers of keratinized epidermal skin cells are built upon each other like a wall, glued together with an intricate ground substance that helps protect the skin against many things including transepidermal water loss (TEWL), bacterial colonization, and the infiltration of damaging substances. Extreme environmental conditions, harsh detergents and chemicals, as well as genetic predisposition can all lead to compromised function of this skin barrier. When asked about sensitive skin, James Leyden, M.D., professor emeritus of dermatology at the University of Pennsylvania stated, "... the primary problem is an abnormal stratum corneum." Reduced or impaired barrier function is responsible for many types of "sensitive" skin reactions including dryness, itching, rashes and epidermal fissures. ❧

An important component of the stratum corneum is the intricate combination of lipids that work to maintain moisture and flexibility, while minimizing the TEWL that can lead to dry skin and sensitivity. This combination of cholesterol, sphingolipids, ceramides and fatty acids must be protected in order to minimize the chances of exacerbating sensitivity. Daily use of highly alkaline soaps is detrimental to pre-



Redheads should be warned. According to new research, the skin cancer risk for redheads is about six times greater than for dark-haired Caucasians.

erving the integrity of this all-important lipid layer. Gentle synthetic detergent (syndet) bars or mild surfactant cleansers should be used instead. Dr. Leyden also demonstrated that when acetone is used on the skin “there is a rapid, four- to 10-fold increase in transepidermal water loss.” This further supports the notion that the use of acetone on the skin prior to chemical peel procedures is unduly irritating to the skin. When performing professional treatments such as chemical peels on those with sensitive skin or on any patient, for that matter,

gentle AHA cleansers and toners containing biocompatible ingredients should be used prior to peel application in place of acetone.

Smelling like a rose?

Many international skin care companies cater to the traditional, womanly desire to wear fragrant aromas. When formulated into a skin care product that is applied to the skin, this can lead to a myriad of skin challenges. Synthetic fragrance agents as well as botanicals and essential oils (if used at high percentages) can be the culprit that causes sensitive skin reactions associated with cosmetic product use. The trend in the American cosmeceutical industry is to move away from the use of perfumes and aromatics in an attempt to minimize possible reactions to new products. Fragrance additives are listed as the top offenders to many medical skin conditions such as rosacea, acne and atopic dermatitis. If fragrances are important to your patients, it is wise to suggest using a stand-alone fragrance applied to the hair and not the skin. If the patient is highly reactive, it is recommended that all fragrances be discontinued.

Melanin: friend or foe?

We typically think of melanin as our natural protection against the daily onslaught of ultraviolet exposure on skin. There are two types of melanin: eumelanin, the brown or black tinted melanin, and pheomelanin, the yellow or red melanin that is more prevalent in blondes and redheads. These pigments protect us because they deposit themselves closer to the surface of our skin in response to cutaneous inflammation, including that from sun exposure. Those with a higher percentage of eumelanin tend to be less subject to developing skin cancer, while those with a higher pheomelanin count are at much greater risk.

New research from Yale University School of Medicine challenges this popular belief with findings that exposure to ultraviolet rays can trigger sensitivity in the skin. Douglas Brash, Ph.D., professor of therapeutic radiology, genetics and dermatology at Yale University School of Medicine and the study’s author, found that the skin cancer risk for blondes was two to three times greater than for dark-haired Caucasians, and that the risk for redheads was about six

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times greater than for dark-haired Caucasians. This begs the question of whether our eumelanin is truly what protects us.

All melanin exposed to ultraviolet rays will create superoxides or oxygen-free radicals. This phenomenon has recently been demonstrated in Brash's animal experiments, which studied cell death (apoptosis) triggers and ultraviolet

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rays. His study suggests that cell death occurs where melanin is most concentrated after the skin has been exposed to ultraviolet light. With this information and the growing percentages of people who are developing skin cancer, it would seem that the protective benefits possibly lie more with the darker melanin. There is an obvious benefit to the melanin content of the skin, yet the benefits seem to lie more strongly with dark-haired individuals.

Achooo!

The immune system's primary function is to ward off invasions from germs, pollutants and toxins. Besides being the body's largest organ and its first line of defense, our skin also serves as a barometer of what our immune system will tolerate. Sometimes the immune system misreads the presence of a benign, for-

eign substance and sets off a false alarm. Skin allergies are an overzealous reaction by the body's defense system against an "invading" substance. This "invader" is usually harmless, but can still send a person's defense system into overdrive. These triggers, or allergens, cause the production of immunoglobulin E (IgE), an antibody we all carry in small quantities. Allergic persons, however, overproduce IgE. Under normal circumstances, this antibody is important in protecting us from parasites, but not from other allergens. During an allergic reaction, the body's IgE levels skyrocket and coat volatile cells that contain chemicals including histamine. The body releases these histamines into the bloodstream, causing inflammation and reactions such as redness and swelling, burning, stinging, itching or blisters. Most reactions caused by skin products occur on the face, hands, and body. Some of the most common triggers or allergens, are fragrances, artificial dyes and preservatives used in cosmetic products. Some natural ingredients, such as lanolin or botanicals from the ragweed family can also trigger the release of histamines. Certain medications, such as dermatologic drugs, topical and oral, contain photosensitizing agents that can also cause sunburn, blistering, urticaria, rashes or other skin reactions.

Contact dermatitis, eczema, and hives are all types of skin allergies. Although allergies can develop at any age, the risk of developing allergies is genetic. Ask your patients if they have a family history of allergies. If neither parent is allergic, the chance for allergies is about 15 percent. If one parent is allergic, the risk increases to 30 percent, and if both are allergic, the risk jumps to more than 60 percent.

While no permanent cure exists for these sometimes volatile skin reactions, avoiding contact with known allergens is the best way to prevent future attacks. These reactive individuals often struggle to find cosmetic or drug products that do not cause some type of inflammatory response in their skin. Recommending products that are free of artificial dyes, fragrances and preservatives is the wisest course to take with patients who suffer from contact allergies. When in doubt, a small patch test in a sensitive area can serve as a valuable tool in determining how sensitive a patient may be to an ingredient.

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The global connection

Hereditary background plays a deciding role in the types of sensitivities one may be subject to. For example, certain skin disorders are more prevalent in people with skin of color than in Caucasians. Some of the most common are melasma and post-inflammatory hyperpigmentation. Identifying and protecting skin of color from these inherent sensitivities is becoming more challenging as our world becomes a more diverse place. Interracial and interethnic marriages have blurred the lines and created a rainbow of skin hues.

While skin classification systems such as Fitzpatrick and Glogau can be helpful in determining a person's level of resiliency based on skin color, if the skin care professional further probes about the person's heritage, the professional could find nuances about a person's genetically based sensitivities that conventional classification systems may not. A growing body of research supports this, and alternative classification systems have been established to delve deeper into a person's ancestry. One such system, the Lancer Ethnicity Scale, takes into account not only a person's ethnic background, but those of their ancestors when determining their healing capacity following cosmetic laser or chemical peel procedures. The knowledge gleaned from these subclassifications could help skin care professionals refine their treatment approach to improve the end result of a chemical peel or laser procedure. Another scale, known as the World Classification of Skin Type, is based on various skin types' photosensitivity and tendency toward post-inflammatory pigmentation. This skin phototype system includes three subclassifications within each of its five categories: European/Caucasian-white; Arabic/Mediterranean/Hispanic-light brown; Asian-yellow; Indian-brown; African-black.

As we have seen, there are many ways in which your patients can identify themselves as sensitive. Once you understand the various causes of sensitivity, that knowledge will help you ask all the right questions and crack this code of confusion. Your reward for the added detective work will allow you to provide the best assessment, treatment approach and outcome for your sensitive-skin patients. n

Margaret Ancira, founder and president of Physician's Choice of Arizona, is a licensed esthetician and an internationally renowned chemical peel educator. Her patented chemical peel formulations aid in treating a variety of skin conditions including acne, rosacea, hyperpigmentation and sun damage. Physician's Choice, Professional Products and PCA SKIN, Clinical Care Products are used by select clinical practices in 60 countries. For more information, please call 1-(877) PCA-SKIN or visit the website, www.pcaskin.com.

