



Understanding and Fighting Winter Itch

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Posted: October 28, 2011, from the [November 2011](#) issue of *Skin Inc.* magazine.

Between November and March, one of the most common questions faced by skin care professionals relates to the treatment of dry winter skin. After all, it's a condition to which few who live in Northern climates are immune. In fact, according to a report from the National Health Interview Survey (NHIS), a whopping 81 million Americans claim to experience dry, itchy or scaly skin during the winter months.

Given the prevalence of the condition, also known as "winter itch," it is imperative that skin care professionals are prepared to combat the problem. Of course, providing clients with tips to improve the symptoms of dry winter skin is vital, but to ensure the recommendations you provide are those that will make a discernible improvement in a client's skin, it's necessary to have a sound understanding of the cause of the condition. What's more, by presenting your clients with the reasons why they are enduring the discomfort of winter itch, they will be more likely to diligently implement your recommendations for how to remedy it.

Physiology of the stratum corneum

To understand skin hydration, it's necessary to look at key components of the stratum corneum—the outermost layer of the epidermis that makes skin impermeable, and protects deeper skin tissue and the body at large from bacterial invasion and other environmental aggressors.

The stratum corneum is comprised of corneocytes, which are flattened, dead skin cells; desmosomes, the proteins that hold the corneocytes together; and intercellular lipids. Under a microscope, these components appear to be arranged in a brick-and-mortar manner, with corneocytes serving as the bricks, connected by desmosomes, and lipids playing the role of mortar that surrounds and protects the corneocytes. Collectively, these components create a physical wall intended to prevent moisture loss. However, the individual roles of corneocytes and lipids are equally important.

Corneocytes are mainly composed of keratin, which holds water and gives skin its strength, along with various other compounds called natural moisturizing factors (NMFs). As humectants, NMFs not only hold water, but also attract it; thus, they are essential to the skin's flexibility and water-holding capabilities. However, they're water-soluble, which is why skin dries out upon extended water contact from showering, bathing, swimming and hand-washing.

Intercellular lipids are comprised of ceramides, free fatty acids and cholesterol. In the stratum corneum, their role is to prevent the loss of NMFs from within the corneocytes. On the topmost layer of skin, they combine with sweat to form the thin acid mantle—the chemical barrier that kills bacteria and regulates moisture loss. What's more, lipids lubricate the skin and, as such, are a major factor in ensuring smooth texture.

Environmental impact on the stratum corneum

For the stratum corneum to properly protect the body, it must be elastic and flexible, which is only possible when the skin is properly hydrated. Normal, healthy skin is 20–35% water. Each day, it loses approximately a pint of water through transepidermal water loss (TEWL), the continuous process by which water leaves the body and enters the atmosphere via evaporation and diffusion. However, when humidity drops, as it does in cold-weather months, there's a dramatic increase in TEWL as the dry air pulls moisture from the skin. When the skin's water content drops below 10%, it begins drying and brings discomfort characterized by redness, itchiness and flakiness. With less water in the skin, the production of NMFs becomes impaired and lipid levels fall, setting in motion a vicious cycle that is hard to remedy.

Add to the mix ongoing or prolonged exposure to irritants, such as soap and even water, and you have a far worse situation.

This exposure causes the skin's acid mantle to disintegrate, which further increases the rate of TEWL and decreases lipid levels. The result is even drier skin that may crack and even become infected.

With less water and fewer lipids to lubricate and protect it, skin no longer exfoliates properly. This is what results in the excessive buildup of dead cells on the skin's surface, giving it an ashy appearance. It also results in an overall degradation of skin health; skin can no longer properly heal itself. In order to address the discomfort caused by these conditions, following are a variety of solutions that can be recommended by skin care professionals in order to help remedy winter itch.

Moisturizers

Of course, the primary objective in treating dry skin is to first minimize discomfort. Lotions and moisturizers can bring temporary relief; however, contrary to popular belief, these products do not add moisture to the skin. Rather, they help to restore the barrier function of the stratum corneum and cover fissures in the skin. Moisturizers typically utilize the following categorical ingredients.

Occlusives. These preserve moisture levels in the skin by slowing the rate of TEWL. Ingredients in this category include petrolatum, oils and silicones.

Humectants. These work just like the skin's NMFs; that is, they attract water from the dermis and hold it in the stratum corneum. Ingredients in this category include glycerin, urea, propylene glycol and sorbitol.

Emollients. These act as lubricants and increase the skin's flexibility and smoothness. They also help to give moisturizers and other skin care products their silky texture. Ingredients in this category include lanolin, isopropyl palmitate and jojoba oil.

Beyond these basic components of moisturizers, research has shown that formulations which incorporate ceramides and aloe vera are highly beneficial to dry skin.

Ceramides. For most individuals, ceramides are one of the most prevalent lipids found in the stratum corneum. In the skin of those who suffer from eczema, however, lowered levels of this key lipid are found. This research has demonstrated the key role ceramides play in preventing skin dryness.

Aloe vera. This is one of the few natural substances scientifically proven to benefit the body. Recent research has helped support the idea that it is beneficial in improving skin hydration due to its humectant properties.

Dry winter skin is best treated with a moisturizer that is rich in humectants. Formulations of this type tend to be heavier and are often marketed as night moisturizers. Regardless of the label, dry skin will benefit from their use throughout the day. Remind clients that it's essential for them to reapply moisturizer every few hours when fighting dry skin. An alternative option is to supplement their morning and evening skin care routine with repeated use of a spray toner rich in humectants throughout the day.

Exfoliation

Although exfoliation is a necessary skin care step year-round, and is one that may be implemented daily with use of a chemical exfoliant safe for at-home use, it's especially vital for those with dry skin. Remember that the diminished water content and reduced lipid levels associated with dry skin interrupt the normal desquamation process. Daily use of an effective chemical exfoliant will encourage the proper shedding of dead skin cells. Not only will this result in skin that looks better, but it will also improve the skin's overall health.

Traditional recommendations

A number of age-old recommendations still hold a good deal of value and should continue to be provided to clients. These include the following.

- Take fewer and/or shorter showers and baths, and reduce water temperatures. This is an essential step for those with dry skin, but should be followed by those with healthy skin, as well. As mentioned previously, water leaches NMFs from the skin and affects its lipid content.
- Avoid the use of harsh soaps and detergents, as well as the frequent use of hand sanitizers. These ingredients remove the skin's acid mantle, thus increasing the rate of TEWL. Instead, alcohol-free hand sanitizer and glycerin soap are recommended.
- Use a cool-mist humidifier in the home and office to maintain proper humidity levels. This will help skin maintain hydration by slowing the rate of TEWL.

The best course of treatment

Although most skin care professionals have a standard list of effective recommendations in the fight against dry winter skin and dry skin at large, it's beneficial to stay abreast of the latest research relative to skin hydration and the ingredients that support it. After all, the scientific gains being made in the field of skin care are many and are leading to the constant development of increasingly effective formulations. By staying aware of research into the condition and the science behind it, you're best prepared to give your clientele the very best course of treatment. And that, no doubt, will lead to a strong and long-lasting professional relationship.

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