A SUPPLEMENT TO
Pediatric News®

Highlights From A Dermatology Summit

How Important Is Skin Care Advice: What Do Your Patients Want to Know?

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The supplement is based on proceedings from the Skin Hydration Summit held on Saturday, March 17, 2007, in New York, New York. This supplement was supported by:

Unilever

The supplement was produced by the customized publications department of International Medical News Group. Neither the Editor of PEDIATRIC NEWS, the Editorial Advisory Board, nor the reporting staff reviewed or contributed to its contents. The opinions expressed in this supplement are those of the faculty and do not necessarily reflect the views of the supporter or the Publisher.

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TOPIC HIGHLIGHTS

FACULTY DISCLOSURES

Faculty/authors must disclose any significant financial interest or relationship with proprietary entities that may have a direct relationship to the subject matter.

Dr Baumann has received funding for clinical grants from Allergan, Inc., Avon Products, Inc., Galderma Laboratories, Medicis Pharmaceuticals Corporation, Stiefel Laboratories, and Unilever PLC.

Dr Berson is a consultant to Kao Brands and OrthoNeutrogena. She has received funding for clinical grants from CollaGenex, Inc., DUSA Pharmaceuticals, Inc., Galderma Laboratories, Medicis Pharmaceuticals Corporation, and Stiefel Laboratories.

Dr Cook-Bolden has nothing to disclose.

Dr Goldberg has nothing to disclose.

Dr Goldwasser has nothing to disclose.

How Important Is Skin Care Advice: What Do Your Patients Want to Know?

Foreword

As part of an ongoing effort to facilitate dialogue among the nation's leading skin care experts, five dermatologists were convened at the Skin Hydration Summit, sponsored by Dove®, in New York City on March 17, 2007, to discuss the importance of hydration as a fundamental component of their patients' dermatologic care.

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David J. Goldberg, MD, JD, is a Clinical Professor of Dermatology and the Director of Laser Research at Mount Sinai School of Medicine in New York City. He also is Clinical Professor of Dermatology and Chief of Dermatologic Surgery at the University of Medicine and Dentistry of New Jersey–New Jersey Medical School in Newark. Dr Goldberg has published more than 100 peer-reviewed manuscripts and is the author of several books on cosmetic dermatology. He is on the editorial boards of *Lasers in Surgery and Medicine* and *Dermatologic Surgery*, and is currently Senior Chief Editor of *Journal of Cosmetic and Laser Therapy*.

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This group of dermatologists reviewed data that demonstrated the well-established clinical benefits of skin care products (eg, mild, emollient-rich cleansers and balanced moisturizers) that deliver moisturizing ingredients to the stratum corneum to help retain its healthy, hydrated state, but do not damage the stratum corneum's moisture barrier. While there was general agreement among these dermatologists that the evidence supporting the clinical benefits of healthy skin care practices is compelling, extensive discussion ensued regarding how these concepts currently factor into dermatologic practice and how these experts introduce these concepts to their patients.

Introduction

Dermatologists generally agree that although all patients could benefit from a discussion about skin care basics, the level of relevance and importance of such a discussion varies within the general patient population. For instance, there are patients with dermatologic conditions for whom gentle, emollient-rich cleansing and moisturization are critical for effective disease treatment and overall skin health. Such populations include patients with acne, atopic dermatitis (AD), or eczema, and patients who are aging or experiencing the iatrogenic effects of prescription treatments or cosmetic procedures. Harris Interactive® conducted a survey of 422 patients with these skin conditions, which indicated that there is widespread underuse of mild cleansing and moisturizing products in these populations.[1] Of the patients surveyed, 68% indicated a desire for more education from their dermatologists about how cleansers and moisturizers can impact their skin's health. They also confirmed an increased willingness to use cleansers and moisturizers if the products were recommended by a dermatologist. According to the survey, patients were four times more likely to follow a physician's directions when the benefits of the products were explained to them, compared with when they received no explanation.

There is clearly a demand for dermatologists to discuss skin care practices with their patients. While the dermatologists at the Skin Hydration Summit noted that they recognize the importance of discussing daily skin care with their patients, particularly as it relates to treatments for their patients' skin conditions, hectic schedules can limit the time available to spend with each patient, thus lessening the likelihood of these discussions. These dermatologists specifically acknowledged a need for practical tools and better approaches to having these discussions more often with their patients. Tools that could be used to prompt more frequent discussions between patients and the dermatologists' allied staff, including dermatology nurses and physician assistants, would also be valuable.

While these dermatologists are familiar with the basic structure of the stratum corneum (SC), they acknowledged that the clinical relevance of healthy skin care practices is elevated by a deeper understanding of how moisture, or lack thereof, affects the integrity of the skin barrier. The dermatologists in this group believe that a review of the SC components and the mechanism of how their relative hydration levels affect the structure and function of the SC is necessary to fully appreciate the critical role of moisture in skin barrier health.

Stratum Corneum: Physiology and the Role of Hydration

As an organ, the skin acts as a barrier that protects against ultraviolet (UV) radiation, microorganisms, and toxic agents.[2] One of the skin's most important functions is preventing dehydration. The most superficial layer of the skin, the stratum corneum (SC), is essential for this function, as it actively regulates hydration levels. Previously thought to be a layer of dead skin cells, the SC is actually a biologically active tissue that functions as the primary interface with the surrounding environment. While the SC is predominantly impermeable to water, it allows for some water transport, which is important for maintaining adequate SC hydration levels and, as a result, skin flexibility.

SC structure is similar to that of a brick wall: a layer of terminally differentiated keratinocytes called corneocytes that act as the "bricks" is embedded in the "mortar," a continuous lipid matrix.[2] The unique lipid composition within the SC accounts for approximately 20% of the SC volume and is composed primarily of ceramides (50% by mass), cholesterol (25%), and fatty acids (10%–20%).[2–4] The SC lipid pool is gathered from the contents of the lamellar bodies found in two less superficial skin layers: the stratum spinosum and stratum granulosum. As lipids approach the SC junction, they are enzymatically cleaved and conjoined to form the SC "mortar," which surrounds the corneocytes. The lipid barrier is hydrophobic and, therefore, prevents water from readily entering the SC from the environment. In turn, the lipid matrix also retards water evaporation from skin, which makes it integral to the maintenance of adequate hydration within the SC.

The building blocks of the SC are corneocytes. An average of 10 to 20 layers of corneocytes constitute the SC on most body surfaces.[5] The corneocyte structure is made up of a hardened, insoluble proteinaceous structure called the cornified envelope (CE), which encases a highly organized, insoluble bundle of keratins.[2] The CE is covered with a monolayer of long-chain ceramides that anchor the corneocyte within the lipid matrix, thereby maintaining the impermeability of the skin barrier. Corneocytes are bound to each other in the same cellular plane, and to those in the planes above and below, by intercellular protein structures called corneodesmosomes.[2]

Normal, healthy SC function depends on the overall level of hydra-

tion within the SC. Adequate hydration is preserved by an intact SC barrier, which can actively prevent water loss and retain moisture. One process that is closely regulated by water levels in the SC is desquamation, which is the highly controlled corneocyte release from the surface of the skin.[2,6] To facilitate desquamation, proteases degrade corneodesmosomes in a process that is regulated primarily by hydration levels and pH. In addition, it is now thought that organizational changes in the lipid bilayers close to the skin surface influence this degradative process.[7]

A dynamic, biochemically active structure, the SC is constantly responding to changes in the environment to ensure optimal structure and function through the maintenance of adequate hydration. Natural moisturizing factor (NMF) is derived from the hydrolysis of filaggrin, a process which is regulated by SC water concentration and protects the SC from dessication.[6,8] Recent studies have linked two loss-of-function mutations in filaggrin to a severe decrease in NMF associated with atopic dermatitis (AD). These new data highlight the fundamental role for hydration in overall skin health by suggesting that one of the underlying causes of the immunologic complications and weakened skin barrier found in AD patients is due to a reduction in, or loss of, filaggrin expression,[9] which may compromise the skin's ability to retain moisture.

The importance of SC moisture is best illustrated when the barrier endures mechanical stress or enters a disease state that causes a loss of hydration. While minor breaches in the skin barrier can remain localized and have little effect on overall skin health, severe, repetitive, and widespread barrier damage may induce cytokine release and an inflammatory response that leads to hyperplasia and abnormal keratinization.[2] As a consequence, enzymatic processes that rely on relative hydration levels become misregulated, thus setting the stage for a cycle of dry, flaky skin.

Moisture levels within the SC can decrease in response to a variety of external factors, including mechanical stress, harsh cleansing, and low ambient humidity. Internal factors such as genetic predisposition, age, hormonal influence, and disease can also lead to dry skin conditions. Recent evidence indicates that the compromised skin barrier associated with various disorders, such as AD and psoriasis, is not merely a consequence of these diseases but may contribute to and even instigate the associated inflammatory responses.[2] ■

"In your experience, to what extent do dermatologists fully recognize the molecular basis for keeping the skin barrier healthy and/or hydrated? Is an in-depth understanding of these mechanisms essential for the dermatology community?"

Dr Goldberg:
I have noticed that there is a disconnect between the molecular aspect of diseases, such as AD and psoriasis, and what we do every day when we treat them using certain techniques. Those of us in practice are learning, by listening to presentations and reading about the molecular mechanisms that keep skin well hydrated, but there is still a little bit of that disconnect between the medical and the cosmetic sides of dermatology.

Dr Goldwasser:
The information above provides the rationale for certain techniques for healing dry skin that are considered time-honored approaches, such as occlusive wraps and acid mantle cream. When we use these techniques, we do not necessarily understand precisely what we are doing on an enzymatic level. So, the clinical data that define the molecular components of keeping skin well moisturized correlate well with techniques that we have been using in the clinical setting for years; however, they offer a new understanding of why these techniques have worked so well in the past and why we continue to find them useful.

Dr Cook-Bolden:
The key elements in achieving success in skin care are hydrating or moisturizing the skin and maintaining the skin's hydration. While patients understand the overall concept of applying moisturizers to the skin, they could benefit from tips on optimizing skin hydration and maintaining or sealing in the moisture. In general, dermatologists and professionals in the skin care industry understand these concepts.

Dr Baumann:
Currently, there is more of an emphasis on the importance of skin barrier function for a lot of the dermatoses that we treat. Dermatologists in training now will be more knowledgeable about it, and people who have trained in the past, such as us, are learning about it by keeping up with journals, and realizing that there is a lot more to this in regard to maintaining healthy skin.

Dr Berson:
I agree with that. Dermatologists who frequently perform chemical peels and laser resurfacing probably have an appreciation of skin repair, but those just starting out may not. Those dermatologists with less experience will hopefully gain a better understanding over time for the role of hydration in maintaining skin barrier function.

Cleanser Choice Matters

Dermatologists consider cleansing an essential component of skin care that removes dirt, oil, bacteria, and contaminants from the skin's surface.[10] While the removal of these items is crucial for maintaining skin health, harsh cleansing practices remove vital lipids and proteins, thus weakening the skin barrier. There is a misconception among consumers and some physicians that all cleansers are the same and do not affect overall skin health; however, there are myriad clinical data that demonstrate the clinical importance of cleanser choice in maintaining a healthy SC.[10,11]

The chemical properties of surfactants can affect the physiological impact of a cleanser on the SC. Anionic surfactants are a common component of cleansers because of their foaming and lathering abilities[12]; however, these surfactants bind to proteins within the SC and cause transient swelling, which leaves the barrier more vulnerable to contaminant penetration into the deeper layers of skin, and irritation. Washing with a harsh cleanser also removes the proteins that compose the NMF, reducing the skin's water retention capacity. In addition to removing proteins, surfactants damage and remove lipids by intercalating within the lamellar layer, causing barrier destabilization. A disorganized lipid barrier allows moisture to more readily escape the SC and contributes to overall dry skin (**Figure 1**).

The physical strength of the skin barrier can also be compromised by harsh cleansing. Corneocytes mature as they move within the deeper layers toward the SC. Mature corneocytes in the SC have a rigid cornified envelope (CE) made up of tightly cross-linked proteins.[2] Transglutaminases are the enzymes responsible for orchestrating this CE-strengthening process, and their activity depends on the water content and pH of the skin barrier. By drying out and alkalizing the SC, harsh surfactants inhibit transglutaminase activity and stunt corneocyte maturation.[13]

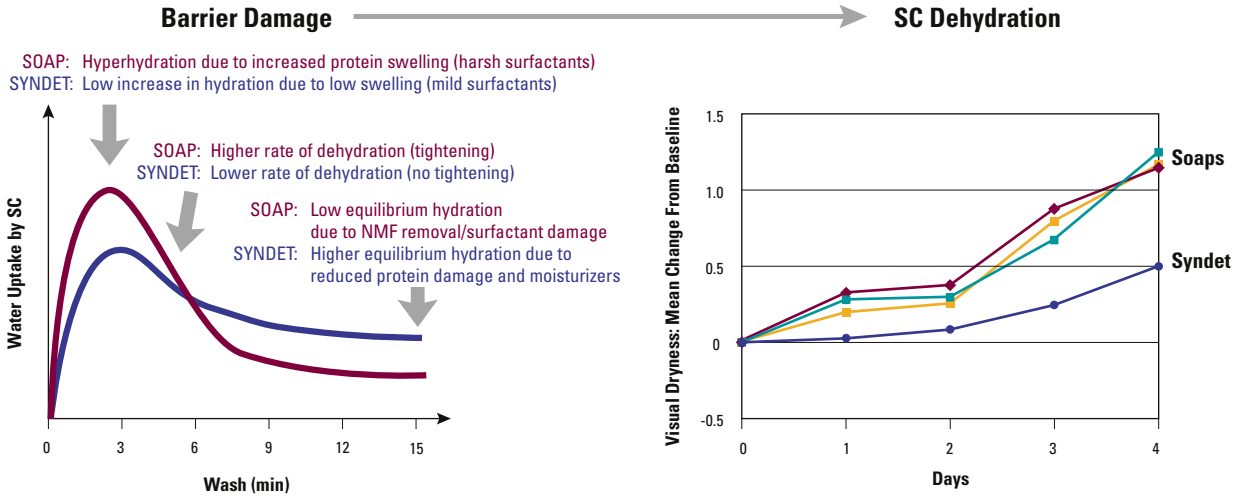
Other enzymatic processes, such as desquamation, are also negatively affected by surfactants. Impaired corneodesmosome degradation inhibits normal desquamation and causes flaky skin. Corneodesmosome degradation is highly dependent on relative SC water concentration.[2]

While all cleansing practices have the potential to perturb the SC moisture balance by damaging proteins and removing lipids, skin care product technology has evolved to help minimize the drying effects of cleansing. For example, synthetic detergents (syndets) are intrinsically milder than their soap counterparts due to minimal interaction with and removal of SC proteins and lipids.[12] By keeping the majority of SC barrier components intact during cleansing, mild syndets enable the barrier to recover from the inevitable water loss experienced during this process. Syndets also have a neutral or slightly acidic pH, which is more suitable for the maintenance of SC integrity than alkaline soaps.[12]

Although skin tends to absorb water during bathing, there is rapid SC dehydration immediately after bathing, which can lead to deleterious (drying)

Figure 1. Hydration Changes During Cleansing

Barrier damage, measured as transepidermal water loss (TEWL)—inversely reflected in the water uptake by the SC—was substantially reduced when using a synthetic detergent (syndet) compared with soap (left graph). Increased TEWL and, therefore SC dehydration, caused more visual dryness in subjects who used soap compared with those who used the syndet cleanser (right graph). (The syndet used was Dove White Bar.)



NMF = natural moisturizing factor; SC = stratum corneum; syndet = synthetic detergent.

Source: (left-hand figure) Ananthapadmanabhan K, Subramanyan K, Nole G. Moisturizing cleansers. In: Loden M, Maibach HI, eds. *Dry Skin and Moisturizers: Chemistry and Function*. 2nd ed. Boca Raton, Fla: CRC Press. 2005;405–428. (right-hand figure) Adapted from Abbas et al.[14]

effects. The inclusion of fatty acids and other emollients in cleanser formulations is one way to slow this SC dehydration after bathing.[14] The presence of lipids in a cleanser can benefit the SC in two ways. First, even after rinsing off the cleanser, a subset of these lipids remains on the skin's surface, replenishing those lost during cleansing (**Figure 2**). Second, the lipids deposited onto the SC act as a "sacrificial" fatty acid source. Detergents form micelles in solution, which solubilize proteins and lipids found on the skin's surface, including those that are native to skin and crucial for water retention. By including sacrificial lipids in cleansers, surfactant micelles are less likely to remove native SC lipids during cleansing.

Another effective method for promoting water retention is the regular use of a cleanser that contains humectants and occlusives. Humectants, such as glycerol, attract and retain water, while occlusives, such as petrolatum, help seal water into the SC and prevent evaporation.[15] Although cleansers are designed to wash away debris from the surface of skin, cleanser technology has advanced such that dirt and oils are washed away, and moisturizing and softening ingredients are left on the skin.

Moisturizers

While gentle, emollient-rich synthetic cleansers minimize water loss during bathing practices, they do not ensure that SC hydration will remain at optimal levels in the hours after bathing. In addition, cleansing is not the only source of moisture loss for skin. Low relative humidity, sun exposure, hormonal fluctuations, and increasing age can contribute to dry skin. Therefore, the application of a moisturizer offers additional protection against moisture loss and subsequent SC damage by attracting water to the skin and keeping it there.

An ideal moisturizer is formulated primarily with ingredients that fall into one or more of three categories[15]:

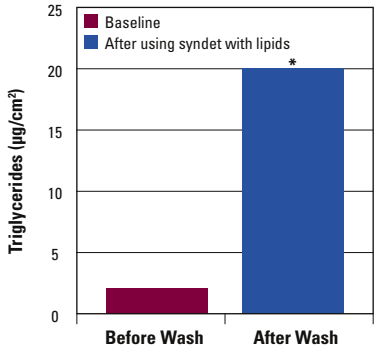
- Humectants, or hygroscopic particles, which attract and retain water
- Occlusives, which form a barrier on the skin's surface to help prevent evaporation
- Emollients, or lipids/oils, which condition skin and provide partial occlusion

One of the most effective moisturizing ingredients is glycerol.[15,16] In addition to its enhanced hygroscopic properties, glycerol can penetrate beyond the outermost layers of skin and help draw water from the skin's surface into the SC. Recent investigations of the function and role of aquaporins, a class of skin proteins, in the transport of glycerol across skin layers suggest that glycerol may play a key role in endogenous skin moisture retention.[17,18] These data support the established benefits of glycerol in enhancing skin plasticity and flexibility, two advantages not offered by other humectant ingredients.

Dermatologists and patients agree that product aesthetics are an important consideration when choosing ideal occlusive and emollient ingredients.[15,16,19] High levels of emollients and occlusives in a moisturizing product can leave skin feeling sticky and greasy; however, moisturizers can be formulated so that the right combination of humectants, occlusives, and emollients maximize hydrating effects while still contributing to the aesthetically pleasing properties of the product. While each of these moisturizing components provides some benefit to skin, their abilities are enhanced when they are used in conjunction with one another (**Figure 3**). Most dermatologists agree that effective moisturizers do not have to be expensive; modestly priced products can be just as effective as their expensive counterparts, in terms of moisture delivery and retention.[19] ■

Figure 2. Deposition of Lipids/Emollients From Emollient-Rich Body Wash[14]

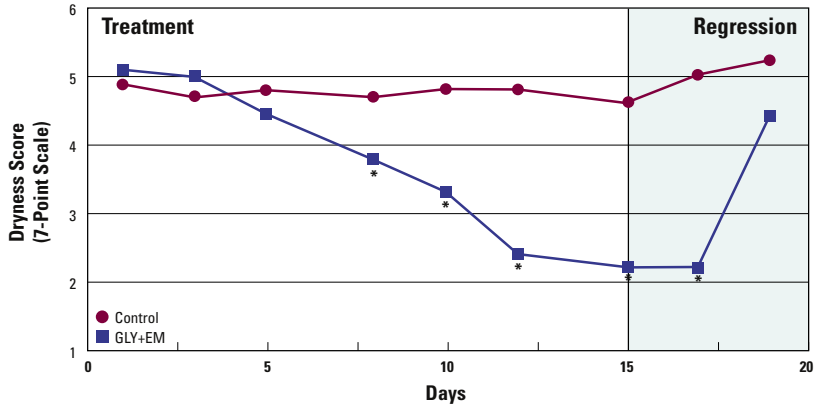
Emollient-rich body wash deposited a significant amount of emollients (triglycerides) onto skin during cleansing. (The emollient body wash used in this study was Dove Body Wash.)



*Significant difference from baseline ($P<0.05$).

Figure 3. Glycerol (GLY) and Emollients (EM) Act Synergistically to Reduce Xerosis Over a 14-Day Period Compared With a No-Treatment Control

Moisturization effect of 1% glycerin/4% emollient



*Significant difference between treatment group and control ($P<0.05$).
Source: Unilever, data on file.

"What kind of moisturizers do you recommend to your patients?"

Dr Cook-Bolden:
We try to give patients a broad range of options at a wide range of price points. This includes office-dispensed products as well as those available over the counter, and always includes a bland emollient without perfumes. We try to make it clear that effective hydration can be achieved with less expensive products as well as with expensive products. Although some patients feel that it is necessary to pay a big ticket price to get a very good product, we stress that efficacy is not always tied to price.

Moisturizers With Sun Protection

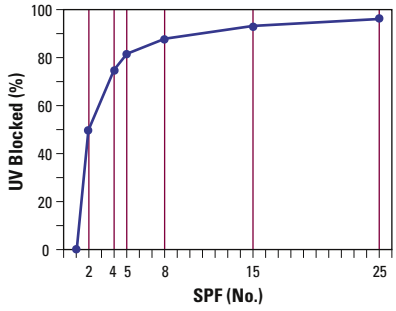
Many moisturizers offer the benefit of sun protection in addition to effective moisturizing properties. Clinical research has demonstrated the value in protecting skin against harmful UV radiation every day, including reducing the risk of skin cancer and minimizing the effects of photoaging. Currently, there are two types of sunblock ingredients on the market: physical blocks, such as titanium dioxide and zinc oxide, which scatter or reflect UV energy, and chemical sunscreens, such as cinnamate and benzephenone, which absorb UV rays and dissipate the energy as heat.

Sun protection factor (SPF) values are inversely proportional to the amount of UV radiation that is allowed to pass through the product after it is applied to the skin.[20] While a product with SPF 2 blocks 50% of UV radiation, increasing the SPF to 15 significantly increases the efficacy because it blocks 93% of UV radiation. Beyond SPF 15, however, the amount of protection added in a product with a higher SPF is minimal. For example, SPF 25 blocks 96% of UV rays, only 3% more than SPF 15.[20] Even using a product with SPF 5 provides a significant amount of sun protection compared with not wearing any sunscreen (**Figure 4**). While dermatologists have varying approaches and recommendations that encourage sun protection within their patient populations, most would agree that daily sun protection is crucial for overall skin health. ■

Figure 4. Protective Value of SPF[20]

The sun protection factor (SPF) is inversely proportional to the amount of ultraviolet (UV) radiation that is allowed to pass through the product.

SPF	Fraction of UV Rays Allowed to Pass	Decimal Equivalent	Blocked UV Radiation (%)
2	1/2	0.5	50
4	1/4	0.25	75
5	1/5	0.167	83
8	1/8	0.125	87
15	1/15	0.067	93
25	1/25	0.04	96



"Does SPF play a role in your moisturizer recommendations?"

Dr Baumann:
Of course I always emphasize the importance of sun protection to my patients. But I often recommend moisturizers that do something else in addition to sun protection. For example, if my patients have pigmentation problems, I recommend a moisturizer that has lightening ingredients.

Talking to Patients About Skin Care

This panel of dermatologists agreed that a discussion about healthy skin care practices is unlikely to happen with every patient because of the high-pressure demands and the time constraints physicians face in today's fast-paced dermatology practices. Instead, most dermatologists use their own discretion when choosing whether to have these discussions with patients who have no apparent skin barrier dysfunction. Some dermatologists may feel that the level of importance for a discussion focused on skin care practices varies from patient to patient, and that this discussion is most likely associated with discussions about the treatment of skin conditions.

Clinical research has shown that particular subgroups of patients (eg, patients with acne, AD, sensitive skin, or aged skin, or patients who have had cosmetic procedures), can benefit from healthy skin care practices such as mild, emollient-based cleansing and frequent moisturization. This suggests a need for more discussions with patients about skin care practices during visits to the dermatologist. To collect pertinent information that is useful for assessing and customizing patients' skin care regimens, some dermatologists use a questionnaire to survey their patients' current skin care practices. The questionnaire can act as a catalyst for the dermatologist to acknowledge and reinforce positive patient habits, and to make suggestions for optimizing patients' regimens, if needed. ■

"With whom do you discuss everyday skin care in your dermatology practice?"

Dr Goldwasser:
Skin care, in terms of hydration and moisturization, comes up with almost every patient in my practice. When I perform a full body exam, especially in the winter, xerosis is almost always evident in the New York area.

Dr Berson:
I discuss skin care with just about every acne patient, rosacea patient, cosmetic patient, and patient with skin cancer, too (in terms of daily sun protection). I think we all know that any regimen that is recommended for a patient will work better and more efficiently if the skin is hydrated.

Dr Goldberg:
As Dr Goldwasser said, skin care questions come up all the time in my practice, so we talk about it with every patient. I have a very strong laser treatment and skin cancer population, and most treatment in these two areas leads to the drying of the skin, which makes this conversation very relevant.

Dr Baumann:
I have a dermatology practice that is cosmetically oriented and frequently uses lasers. Sometimes patients come in to see me just for a skin care regimen and nothing else. In fact, we spend a significant amount of the consult talking about skin care with all of our patients.

Dr Cook-Bolden:
We talk with nearly 100% of our patients about skin care daily regimens, be it for a medical condition, during a cosmetic consultation, or for overall healthier skin. Most times, patients request advice on skin care. We feel that good skin care practices contribute significantly to achieving success with medical treatments and maintaining the benefits of cosmetic procedures. Use of sunscreens is always a part of this discussion year-round.

Importance of a Skin Care Regimen

There is much evidence to suggest that bathing with a mild, emollient-rich cleanser and regularly applying moisturizers is effective in restoring xerotic skin to a healthier state; however, there are data suggesting that patients with a wide variety of skin conditions may also benefit from such a regimen. Incorporating mild and moisturizing skin care products into daily practices can ameliorate the dryness-related symptoms of skin disease and also enhance compatibility with prescription medications used for these conditions.

Acne

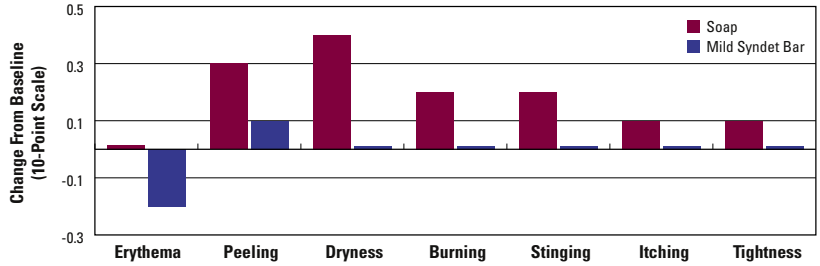
Acne symptoms can flare up when skin is treated harshly or becomes irritated by medications. Prescription-based and over-the-counter topical acne treatments often dry and irritate skin. Popular patient misconceptions are that acne is caused by having dirty skin and that frequent cleansing with harsh or drying cleansers, and excessive, abrasive scrubbing, can help improve the disorder.[19] In addition, acne patients shy away from moisturizer application and sun protection because they mistakenly assume that all moisturizers will have comedogenic effects. Although it may seem counterintuitive to some patients, and even some dermatologists, the gentle cleansing and moisturizing of acne-prone skin has demonstrated efficacy in keeping symptoms at bay. Keeping skin well moisturized may also facilitate medication absorption and enhance treatment efficacy.

In a recent study, patients with moderate facial acne using topical medications (benzoyl peroxide/clindamycin plus adapalene) were instructed to wash their faces daily with either a mild syndet cleanser or soap for 4 weeks.[10] Patients who used the mild syndet cleanser showed an improvement in physician-assessed skin irritation parameters (**Figure 5a**), as well as a statistically significant improvement in self-assessed acne attributes (**Figure 5b**). ■

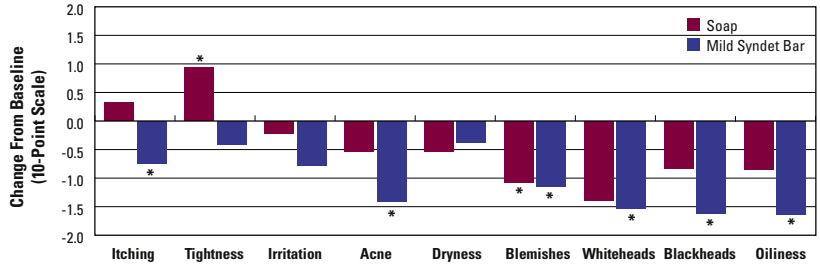
Figures 5a and 5b. Dermatologist's Assessment of Acne Patients (5a) and Patients' Self-Assessments of Acne (5b)[10]

The syndet cleanser used in this study was Dove Sensitive Skin Bar.

5a. Changes in Dermatologist's Assessment of Skin Condition (Baseline to Week 4)



5b. Changes in Patients' Self-Assessment (Baseline to Week 4)



*Significant difference from baseline ($P<0.05$).

"What value do you see in recommending a daily regimen to your patients that includes the combination of a gentle cleanser and moisturizer?"

Dr Goldwasser:

Gentle cleansing and moisturizing regimens are particularly important for patients who are using topical acne and rosacea treatments, as such treatments can be quite irritating to skin. Patients are not going to improve unless they stick to their regimen, and very often they, especially younger patients, give up when their skin becomes too irritated or if they do not see rapid results. Minimizing irritation from topical acne products (through healthy daily skin care practices) is key for ensuring that patients continue with their treatment regimen so that they can achieve the desired results.

Atopic Dermatitis

The highly pruritic, recurrent inflammatory response associated with AD is often accompanied by xerosis.[10] Current patient management includes preventing and avoiding symptom trigger factors such as irritants, heat, and stress, as well as immunosuppressive therapy, anti-inflammatories, and/or antibiotics. It should be noted that underlying xerosis alone can trigger disease flare-ups in atopic patients.

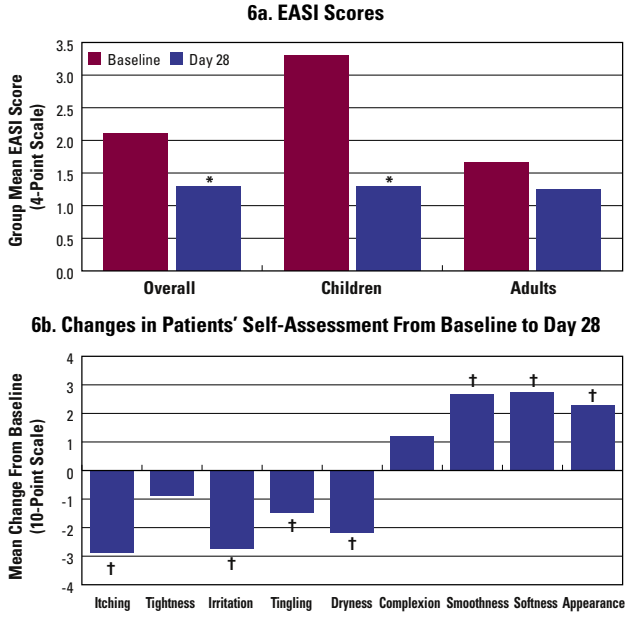
The use of a mild cleanser and frequent moisturization may help inhibit AD outbreaks by preventing dry skin. A 4-week, double-blind, parallel-group comparison was a preliminary demonstration of the benefits of mild cleansing for AD therapy in children and adults.[11] When patients used a mild syndet bar for showering or bathing and continued their usual medication for AD, overall significant improvements in eczema area severity index scores (**Figure 6a**) and, as shown in a similar, previous study,[10] self-perceived skin attributes (**Figure 6b**), were observed.

Sensitive Skin

Sensitive skin, which is characterized by erythema, pruritus, and xerosis, is prone to irritation from contaminants.[21] A regimen that consists of gentle, emollient-rich cleansing and consistent moisturization with a bland product has been shown to reduce sensitive skin symptoms. In one study, 25 subjects with very sensitive facial skin were instructed to use a sensitive skin-formulated, emollient-rich facial cleanser followed by a bland facial moisturizer. After 4 weeks, this regimen produced a significant reduction in dermatologist-assessed xerosis and erythema, an improvement in overall skin health, a patient-assessed decrease in negative skin attributes, (**Figures 7a and 7b**) and significant improvements in softness, smoothness, and overall appearance.[21] ■

Figures 6a and 6b. Eczema Area Severity Index (EASI) Scores (6a)[11] and Patient-Perceived Changes in Skin Attributes (6b)[10] in Atopic Dermatitis Patients Using Syndets

The syndet cleanser used in this study was Dove Sensitive Skin Bar.



*Significant difference from baseline ($P<0.02$).
†Significant difference from baseline ($P<0.05$).
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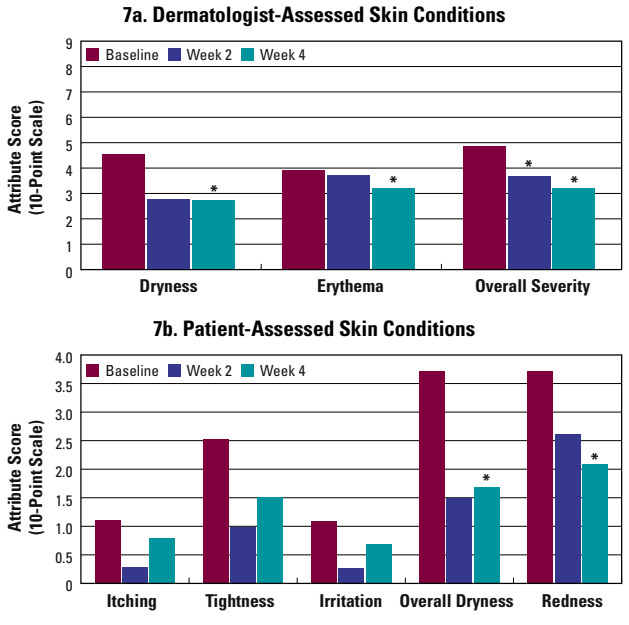
Figures 7a and 7b. Dermatologist-Assessed Skin Conditions (7a) and Patient-Assessed Skin Attributes (7b) in Patients With Sensitive Facial Skin[21]

The products used in this study were Dove Sensitive Skin Foaming Facial Cleanser, Nonfoaming Cleansing Lotion, Day Cream/Lotion, and Night Cream.



*Significant difference from baseline ($P<0.05$).

"Which patients, in particular, do you think would benefit from a daily skin care regimen that includes gentle cleansing and moisturization?"

Dr Goldberg:
I think patients who receive cosmetic treatments would definitely benefit from a postprocedural skin care regimen. A lot of cosmetic procedures make skin healthier from beneath, but they also make it more irritated on top. Some of us are still not talking to our patients about gentle, moisturizing skin care to combat this irritation. The dermatologists and aestheticians who perform these procedures need to be re-educated about the importance of this, especially for postprocedural skin.

Dr Berson:
It has been my experience that patients who have chronic conditions, such as AD, benefit from developing healthy skin care habits at a young age. They learn how to care for their skin and how important it is to moisturize all of their life to prevent disease flare-ups.

Patient Compliance: Practical Tips

There are clinical data suggesting that a daily regimen of healthy skin care practices can reduce dryness and improve the overall health of skin. The effects of a skin care regimen, however, are more beneficial if these steps are practiced daily. In a study on the effects of a regimen on visual dryness, the daily application of a moisturizer was significantly more effective at reducing signs of clinical dryness than moisturizing every two days or once per week (**Figure 8**).[22]

Other groups of dermatologists have reached a general consensus that a combination of fundamental skin care steps—mild cleansing, moisturizing, and sun protection—is essential for a healthy skin care routine.[16,19] In dermatology, patient compliance presents a challenge in terms of adhering to medical advice given by physicians.

Dr Goldwasser:
Compliance in children can be difficult; it's a rare child who will put lotion on himself after bathing. In my experience, it's so unlikely that I recommend that these patients use a moisturizing body wash to ensure that they minimize skin damage caused by bathing, in addition to providing some emollient ingredients to help seal hydration into the skin. Of course, using a moisturizer after the bath would lead to even greater improvement, but at least they are receiving some benefits through their cleanser.

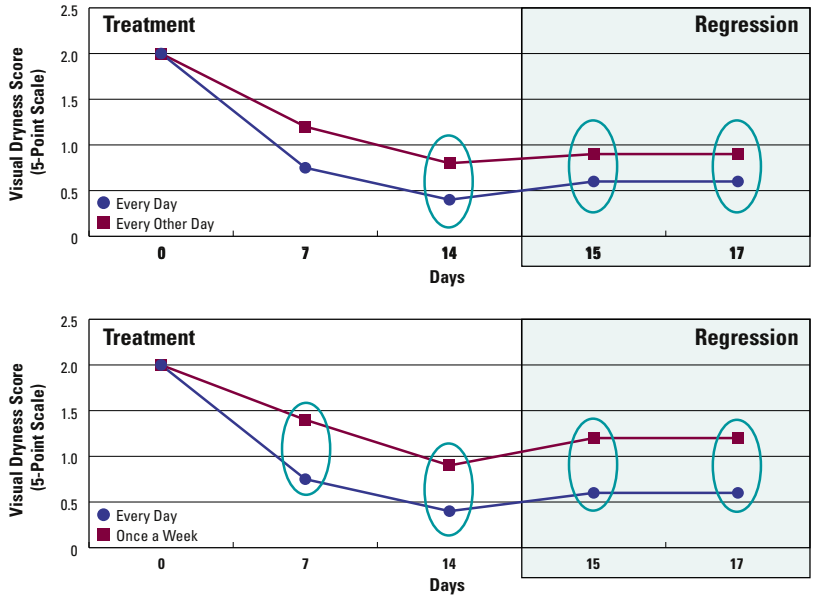
The group of dermatologists at the Skin Hydration Summit agreed that patient education about the benefits of a daily skin care regimen is a critical factor in increasing compliance. Previous expert panels,[16,19] as well as this panel, discussed some practical tips that other dermatologists can learn from and pass on to their patients to improve patients' compliance.

Dermatologists' Practical Tips for Increasing Compliance

- Advise patients to place moisturizer next to their kitchen and bathroom sinks for application after hand washing.
- For patients who do not like to apply moisturizer regularly, using a mild, emollient-rich cleanser will minimize moisture loss and the SC damage that occurs during regular bathing.
- Patients with acne who take prescription medications should use a moisturizer with sunscreen to alleviate dryness caused by treatment, as well as to protect against the sun-sensitizing effects of the medication.
- Encourage regular communication between allied staff and patients to help educate patients on the benefits of a mild and moisturizing daily skin care regimen. ■

Figure 8. Effectiveness of Moisturization Varies With Treatment Frequency[22]

The product used in this study was Dove Moisturizing Body Lotion.



○ Circled points indicate significant difference between treatment groups ($P<0.05$).

Additional Skin Conditions

Aging skin is prone to xerosis due to hormone fluctuations typical of the aging process. There is also scientific evidence suggesting a decline in NMF levels related to age.[8] In principle, decreased levels of NMF reduce the amount of water attracted to and retained in the SC, which is an effect that can lead to dryness.

To reduce the signs of aging and photodamage, some commonly used cosmetic procedures are designed to improve the layers of the dermis; however, the same procedures that improve conditions within the deeper layers of skin do so at the cost of SC health and hydration. Many of these procedures compromise the skin barrier, leaving skin irritated and dry. The dryness and irritation associated with both aging skin and postprocedural skin can be alleviated by gentle cleansing, followed by moisturization. These practices would help deliver moisture to skin to help it recover from the iatrogenic effects of rejuvenating procedures, as well as to combat the age-related decline in SC moisture retention. ■

Summary

A fundamental skin care regimen consisting of gentle, emollient-rich cleansing, regular moisturization, and sun protection benefits patients with many different skin types and conditions. In particular, patients with acne, AD, or psoriasis, those who live in dry climates, and those who suffer from iatrogenic effects of dermatologic treatments (eg, laser resurfacing, chemical peels) benefit the most. Discussing skin care regimens with patients is an important component of a dermatologic consultation, particularly with patients who are receiving treatment for a disease or cosmetic enhancement that may cause dry, irritated skin. Dermatologists should be aware of the basic physiological and relevant clinical evidence that clearly demonstrates a role for hydration in a healthy skin care regimen, and which further supports the importance of discussing daily skin care with patients. Skin research that bridges the science between supporting gentle, moisturizing skin care practices and practical daily recommendations can help dermatologists better communicate this critical information to their patients.

The dermatologists on this panel agreed that there is a growing need to educate patients (and even some dermatologists) about the tangible benefits of a daily skin care routine. Although the opportunities to discuss skin care with patients can be limited due to time constraints and other factors, dermatologists can employ alternative methods to convey the value of healthy skin care to patients. This panel recommended educating dermatology practice support staff (eg, nurses, physician assistants, and other medical assistants) about the benefits of a daily skin care regimen, so that they, in turn, can educate patients about those benefits. In addition, dermatologists should utilize simple tools, such as a patient questionnaire, to gather information about patients' cleansing and moisturizing habits in order to facilitate discussion about improving and optimizing those practices. A sample patient questionnaire has been provided with this supplement that may be used for patient distribution.

With a reinforced perspective on the importance of hydration in SC health, dermatologists will be well equipped to advise their patients about their daily skin care routines. ■

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Pediatric News®

How Important Is Skin Care Advice: What Do Your Patients Want to Know?

Patient Questionnaire

What Is Your Daily Skin Care Routine?

You probably know that your skin's health and appearance depend on how you take care of it each and every day. But did you know that the type of skin care products you use can make a difference in how your skin looks and feels? Help us help you by taking a few minutes to answer the questions below to tell us about your daily skin care practices.

1. How would you describe your facial skin?

- **a.** Very dry
- **b.** Dry
- **c.** Normal
- **d.** Oily
- **e.** Very oily
- **f.** Other:_____

2. How would you describe the skin on the rest of your body?

- **a.** Very dry
- **b.** Dry
- **c.** Normal
- **d.** Oily
- **e.** Very oily
- **f.** Other:_____

3. Has your skin ever become irritated (symptoms include redness, itchiness, inflammation, rash, or acne) from any cleansing, moisturizing, or cosmetic products?

- **a.** Yes
- **b.** No

4. If your answer is yes and you stopped using the product as a result, did the irritation subside within a few days' time?

- **a.** Yes
- **b.** No

5. Have you previously been diagnosed by a physician with any of the following skin conditions?
(Please circle all that apply)

- **a.** Acne
- **b.** Rosacea
- **c.** Sensitive skin
- **d.** Eczema/atopic dermatitis
- **e.** Other:_____

6. How often do you wash your face?
(daily, twice daily, etc.) _____

7. Please list the products you use to wash your face:

_____
_____
_____

8. How often do you shower or bathe?
(daily, twice daily, etc.)_____

9. Please list the products you use to wash your body:

_____
_____
_____

10. How often do you use a facial moisturizer?
(daily, twice daily, never, etc.) _____

11. Please list the products you use to moisturize your face:

_____
_____

12. How often do you use a body moisturizer?
(daily, twice daily, never, etc.) _____

13. Please list the products you use to moisturize your body: _

_____
_____
_____

14. How often do you apply sunscreen, including products such as a foundation makeup or moisturizer with SPF, to your face?

- **a.** Never
- **b.** Only when I am outdoors for a while
- **c.** Once or twice a week
- **d.** Daily
- **e.** Other:_____

15. How often do you apply sunscreen, including products such as a moisturizing lotion with SPF, to your body?

- **a.** Never
- **b.** Only when I am outdoors for a while
- **c.** Once or twice a week
- **d.** Daily
- **e.** Other:_____