Numerous over-the-counter products from skin cleansers to lotions promise “moisturizing” benefits. But what exactly does that mean? Presumably, a moisturizing skincare product is able to increase the hydration of the skin and/or prevent loss of hydration to restore the epidermal barrier. This is an important function of OTC skincare, which can contribute to improved epidermal barrier function, promote skin healing, and reduce susceptibility to insult. Yet the degree to which any individual product achieves these goals varies tremendously from one to another.

Moisturizers contain lipids and ingredients with emollient, occlusive, and humectant properties. Moisturizers can serve numerous important clinical functions. These may include treatment and prevention of clinically “dry skin,” skin protection, reduction of treatment-associated skin irritation, maintenance of benefits of other therapies, and improvement of stratum corneum health and function. Moisturizing products achieve these effects through the combination of moisturizing, occlusive, and humectant ingredients. The quality of moisturizers varies tremendously, and it is important that patients and the physicians who make skincare recommendations thoughtfully assess the merits of products. Use of suboptimal formulations can actually be detrimental—whether they contain irritating ingredients or undesirably shift the balance of moisture in the skin.

Beyond simply moisturizing, many mass-market OTC products now tout anti-aging effects. While most of these products likely provide little appreciable anti-aging benefit, a few potentially beneficial products are available. Patients must recognize that items they can purchase at the pharmacy or in the mall will not perform as well as items dispensed by a dermatologist. Still, for the patient with very mini-
mal signs of cutaneous aging, the patient looking to augment a skincare routine, or the patient who just wants a very good product without high expense, these agents are worth recommending.

To facilitate product selection and recommendation, ahead I highlight some worthwhile but perhaps not as well known moisturizing products that may be suitable for use by dermatology patients. Note that other formulations featuring the same ingredients may be available and of benefit, however, the discussion here is based on the specific formulations mentioned.

**Popular and Pharmacy Brand Moisturizers**

Several popular brands offer moisturizers that are quite effective at a reasonable price point. Aveeno Daily Moisturizing Lotion (Johnson and Johnson Consumer Companies) features colloidal oatmeal (see the article in the October 2010 issue, available online at PracticalDermatology.com), which has a history of use to calm inflammation and itch, as in oatmeal baths, but which is also known to be a natural moisturizer. Specifically, the high concentration of starches and beta-glucans in colloidal oatmeal are thought to attract and hold water. Colloidal oatmeal is also featured in Aveeno Baby Soothing Relief moisture cream and Aveeno Eczema Care.

Also from Aveeno is a product marketed primarily to adult women but certainly suitable for use by individuals of all ages. Aveeno Nourishing 24-Hour Ultra Hydrating Whipped Souffle contains colloidal oatmeal along with shea butter, cocoa butter, and antioxidants, including vitamin E, as well as other exotic plant and fruit extracts. The product’s consistency is similar to that of a light cream; it is non-greasy and may rub into the skin more readily than some other creams.

While cocoa butter has not shown consistent results for treatment of specific conditions, such as reduction or prevention of stretch marks; it has a long history of reliable use as a moisturizer. A very recent study confirms the anti-inflammatory and anti-tumor effects of moisturizing shea butter fat compounds.

Topically applied vitamin E—as well as vitamins C and A (retinol)—have been shown effective for reducing signs of photoaging, as well as for treating inflammatory dermatoses, acne, pigmented disorders, and wound healing. The concentrations necessary to achieve these effects have not been clearly elucidated. Beyond possible cutaneous benefits, antioxidants may be added to skincare formulations to function as natural preservatives.

This formulation contains glycerin (also known as glycerol), a humectant that has been shown to be ineffective or only moderately effective when applied in combination with certain oils. However, the formulation also contains capric/caprylic triglyceride, an emollient ester that has been shown to reduce TEWL. This non-ionic surfactant aids in solubilization of both oil and water phases and likely serves to buttress the glycerin in the product.

Preservatives and fragrance are also included, which may be clinically relevant for certain allergic and “sensitive skin” patients.

Original Keri lotion (Novartis Consumer Health) is now 50 years old and is still a good choice for basic moisturizing. The product features five moisturizers: mineral oil, glycerin, sunflower seed oil, aloe barbadensis (aloe vera is a newer more popular designation), and vitamin E oils. In mouse models of AD, skin treated with glycerin-based moisturizer achieved rapid hydration compared to untreated skin. Aloe is a traditional botanical therapy with anti-inflammatory properties that has been shown beneficial in the management of atopic dermatitis. The barrier repair and maintenance effects of sunflower seed oil were recently demonstrated in a study of preterm infants in Bangladesh. Use of inexpensive sunflower seed oil was associated with 41 percent lower risk of developing nosocomial infections compared to controls.

CeraVe Lotion, Cream, and Cleanser (Coria Laboratories) are ceramide-dominant topical formulations that feature multi-vesicular emulsion (MVE) technology. Similar to liposomes, MVEs are cocentric...
lipid shells designed to facilitate slow release of cholesterol and lipids. The formulations contain three types of ceramides, along with cholesterol, and dimethicone, a commonly-used occlusive. Dimethicone within a product can sometimes contribute to a sticky or tacky residue, but that is not the case with these formulations. One trial showed that use of CeraVe moisturizing cream and cleanser in conjunction with fluocinonide cream 0.05% reduced disease duration, time to disease clearance, and symptoms compared to use of bar soap plus the same corticosteroid.

CeraVe PM facial moisturizing lotion is the newest addition to the line. It contains glycerin, caprylic/capric triglycerides, and niacinamide along with ceramides and cholesterol. Niacinamide has been used for the management of hyperpigmentation and is shown to reduce signs of photoaging, including yellowing, wrinkles, blotchiness, and dark spots. It is anti-inflammatory with evidence of benefit in acne and rosacea. It appears to support barrier function by reducing TEWL.

The product also contains hyaluronic acid, a...
A humectant that increases stratum corneum moisture content. It may be worthwhile to address possible confusion among patients regarding topically applied HA and HA fillers. In so far as it attracts water into the stratum corneum, topical HA may temporarily reduce the appearance of very fine lines, but it will not remotely approximate the effects of HA injection. Furthermore, good skincare is advised to enhance and maintain outcomes of cosmetic procedures. An HA-containing formulation—which may be appropriate for post-procedure skincare—poses no advantage over other suitable options simply because it contains HA.

**Specialty Brand Moisturizers**

Trixera Selectiose Emollient Cleansing Bath (Avene) is an oil-based, hypoallergenic, and paraben-free bath oil containing Avene thermal spring water, ceramides, sterols, and essential fatty acids to restore the hydrophilic barrier and protect skin from moisture loss. It also contains glycerin, coconut oil, and castor oil. It is hydrating, non-sticky, and easily absorbed and may be particularly beneficial for patients with atopic dermatitis, psoriasis, ichthyosis, xerosis, and lichen simplex chronicus. Selectiose is a proprietary ingredient said to reduce hypersensitivity and irritation. Recent studies with topical coconut oil show that it has anti-inflammatory and antioxidant actions and that it increased the rate of wound healing in mice. The bath gel can be rinsed off or left on the skin. Emollient Cream, Balm, and Cleansing Gel are also available in the Trixera line.

**Specialty brand Kiehl’s Crème de Corps**

Lightweight Body Lotion offers a patient-friendly alternative to the company’s original Crème de Corps, a moisturizer that is very thick and potentially leaves a sticky residue. The Lightweight Lotion formulation has a light scent and the benefit of providing broad spectrum (UVA and UVB) SPF 30 photoprotection. Moisturizing ingredients are primarily botanically derived and include sesame seed oil, olive oil, jojoba oil, apricot oil, and avocado oil. Topical jojoba is anti-inflammatory, and there has been substantial study of the beneficial effects of olive oil on the skin, both as an ingested nutrient and as a topically applied moisturizer. Comprised primarily of triglycerides and olive oil, it also contains alpha-tocopherol, phenol compounds, carotenoids, squalene, phytostersols, and chlorophyll. Rich in vitamins A, D, and E, avocado oil has been studied as a wound-healing agent in rats, in which it was shown to increase wound healing by three days relative to controls.

Topical antioxidants in the formulation may work synergistically with sunscreens to enhance photoprotection. Because of the number of ingredients, including fragrance, the product may be a second-line option for patients with very sensitive skin.

Hydrofilia Fluid Body Cream (Lierac) is a good moisturizer for very dry, keratotic skin. The formulation rubs in well, making it suitable for use on various body sites, including the hands, feet, and neck. With urea, mineral oil, glycerin, dimethicone, and vitamin E, it contains both emollients and humectants. Often applied topically as an anti-aging therapy, topical vitamin E is also an anti-inflammatory antioxidant. Urea has concentration-dependent keratolytic effects. These desquamating properties may provide a smoother skin surface feel and possibly facilitate the delivery of other topical agents. Urea is associated with decreased transepidermal water loss and some protective effects against known skin irritants. Formulated with three essential fatty acids, Philosophy’s When Hope is Not Enough Omega 3-6-9 Replenishing Body Lotion is a lightweight, hydrating formulation suitable for use all over the body, though not on the face.

Fatty acids have demonstrated numerous cutaneous benefits and have been used as adjuncts in the treatment of atopic dermatitis, psoriasis, acne vulgaris, systemic lupus erythematosus, non-melanoma skin cancer, and melanoma. They are shown to promote barrier function and wound healing and inhibit inflammation. The formulation also contains peptides, which have been investigated for possible anti-aging benefits, though the clinical relevance of peptides in many formulations is unclear. Other ingredients include glycerin, olive oil, sunflower seed oil, squalane, linseed oil, vitamin E, lethicin (an emulsifier and emollient), soy-
Allantoin  Glycerin  Stearic Acid
Botanicals  Glyceryl Stearate  Stearyl Alcohol
Carbomer  Mineral Oil  Titanium Dioxide
Cetyl Alcohol  PEG-100 Stearate  Tocopheryl Acetate
Colorants  Petrolatum  Water
Dimethicone  Preservatives
Fragrance  Propylene Glycol

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Supporting Patients’ Needs
Despite the quality and benefit of cosmeceutical products and prescription moisturizers, the vast majority of patients continue to rely on OTC products for their skincare needs. The patient/consumer confronts a nearly overwhelming array of options across a wide price range. The reality is that beneficial formulations are available at different price points, and patients can find very good options on the market. Dermatologist should be prepared to provide product advice to their patients to facilitate meaningful product selection and use.

Jeanine Downie has served as a consultant/lecturer or researcher for Allergan Inc., Johnson & Johnson, SkinMedica, and Stiefel/GSK.