

# Topical Products for the Aging Face



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## KEYWORDS

• Cosmeceuticals • Retinoids • Antioxidants • AHAs • PHAs • Anti-aging • Botanical extracts

## KEY POINTS

- Facial topical treatment vehicles and product forms.
- Core antiaging cosmeceutical ingredients.
- Choosing topical cosmeceutical antiaging technologies.
- Combinations of topical cosmeceuticals.
- Clinical evaluation techniques for antiaging topical treatments.

## INTRODUCTION

Each year there are scores of branded cosmetic product lines and hundreds of new and existing cosmetic products distributed through various retail, Internet, direct sales, and professional or physician-dispensed points of sale to the consuming public. The plastic surgeon and his or her staff are well positioned between the companies offering topical skin care products and the patients seeking treatment for age-related facial issues. As such, plastic and reconstructive surgeons and aesthetic office staff are able to preview and screen the plethora of available topical antiaging products and technologies so as to recommend the product or product treatment regimen that best fits the particular needs of each patient. In doing so, the professional staff has the opportunity to augment in-office facial procedures by guiding the

patient toward the optimal home-use product regimen that addresses each patient's particular facial appearance-related concerns.

It is clear that topical treatment with cosmeceuticals can help improve facial aging issues and extend the treatment effects of in-office treatment procedures; in particular, improvements in discreet or uneven pigmentation and overall skin tone, surface roughness, fine and course rhytides, diffuse redness, and blotchiness. Additionally, sunscreens and antioxidants can add a level of daily protection from reactive oxygen species to help prevent further photodamage and dermal malignancies.

The scope of this article is relatively narrow and is focused mainly on nonprescription home-use topical treatment technologies for the aging face. The article is intended to serve as a guide to the core cosmeceutical technologies currently used

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Conflict of Interest Statement: Mr J.P. McCook is a partner in CHL Industries, LLC, which licenses topical skin care technology based on patented compositions containing sodium copper chlorophyllin complex. This compound is mentioned in this article.

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and to help educate and assist the selection of topical antiaging products by the professional staff and their patients. References in cosmetic dermatology are available that cover cosmeceutical technologies in much greater detail if there is interest in a more intensive review of this subject.<sup>1-3</sup>

### **PATIENT PROFILE AND TOPICAL COSMECEUTICAL PRODUCT PERFORMANCE**

Facial skin aging affects us all but significant changes in facial surface topography begin in middle age and are exacerbated with the accumulation of UV damage from unprotected sun exposure, smoking, and age-related hormonal changes.<sup>4-6</sup>

Most patients seeking aesthetic facial treatments are women and perimenopausal. However, the cosmeceutical technologies described in this article are not gender specific and are generally appropriate for topical facial treatment of both men and women. The terms “cosmeceutical” and “antiaging” are used interchangeably in this summary for the description of topical treatment products, ingredients, or technologies for the aging face.

The professional selections of home-use topical cosmeceutical treatment products are more likely to receive high patient satisfaction ratings if the following product qualities are achieved:

- Nonirritating
- Compatible with patient skin type (oily, normal, dry, combination; Fitzpatrick type, sensitive skin)
- Effective in the visible improvement in the signs of facial skin aging specific to patient needs in a reasonable time period
- Complementary to surgical and minimally invasive office procedures
- Aesthetically elegant

First and foremost, cosmetic products should be nonirritating for all skin types. A UK epidemiologic study showed most women self-classify their skin as “sensitive” with similarly high rates in a survey of an ethnically diverse female population in the United States.<sup>7</sup> Test methods for measuring facial skin sensitivity with lactic acid solution or other probes have been studied but may be somewhat impractical for screening patients in the office.<sup>8-10</sup> Companies offering cosmeceutical products typically evaluate the final product formulation before sale in standardized human patch tests (Human Repeat Insult Patch Test [HRIPT]) to document that

each product is nonirritating and nonsensitizing.<sup>11</sup> However, to further insure compatibility of product formulations with a broad range of the population, products may avoid the inclusion of fragrance, formaldehyde-donor preservatives, or other ingredients that can be irritants or sensitizers to a small segment of the population.

The patient’s Fitzpatrick scale skin type is of course an important consideration regarding susceptibility to UV damage and photoaging.

As skin ages, susceptibility to dryness increases, mainly through loss of water-binding ability of the stratum corneum, and regular use of antiaging products that hydrate and help protect and reinforce the skin’s barrier properties become more important.<sup>12</sup> Patients who regularly experience xerosis also may have areas of the face that are normal or even oily, and these patients increasingly seek “oil-free” cosmetic formulations.

Most patients are not novices in terms of prior usage of topical antiaging products. They will have developed a refined sense of preferred product aesthetics. The visual characteristics, ease of application, immediate and longer term sensory qualities, and product odor (or lack of odor) will be important considerations for initial acceptance and continued patient use.

Daily use of the topical cosmeceutical products should show marked (visible) improvement in the signs of aging, particularly those issues of most concern to the patient. Patients expect products to work quickly and some benefits, such as softer and smoother skin, can occur in minutes after a single application through increased hydration of the stratum corneum. However, changes in color and tone, skin tightness and elasticity, and sustained reduction in perioral and periorbital rhytides require one or more complete turnover and restructuring of the related facial epidermal and dermal tissue. Daily use of antiaging topicals typically requires treatment for several weeks or more for improvements to be evident.

Last, the daily use of topical products for the aging face can contribute significantly to the global facial improvements of the minimally invasive procedures discussed in the various articles of this issue. For example, procedures that include energy-based devices or chemical peels for the treatment of hyperpigmentation can be augmented with daily use of products containing a high level of broad-spectrum sunscreen protection and use of topical formulations with skin-lightening activity.<sup>13-15</sup>

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