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Perceptual and Sensory-Functional Consequences of Skin Care Products

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ABSTRACT

Skin care products are often designed to provide tangible, physical benefits to skin health. Alleviation of dry skin and minimization of the signs of aging and post-injury scarring are important benefits targeted by many products on the market. Equally important to these benefits are favorable, desirable sensory attributes, without which products are unlikely to be used and repurchased. Other products are designed primarily to deliver sensory—or sensual—benefits (e.g., many cosmetic creams). This review considers the tactile sensory experience delivered by skin care products by examining: 1) their instrumentally-measured rheology and tribology; 2) their influence on the skin ' s mechanics (e.g., compliance); 3) their implications for changing sensory function (e.g., tactile sensitivity); and 4) the possibility that skin care products alter their own perception. Products that contain chemosensates (e.g., capsaicin, menthol) or pharmaceutical actives are not considered here. Although numerous perceptual-physical links have been reported, formulation rules by which products can be designed for optimal skinfeels are currently unavailable from the existing literature. This is because of inconsistencies among studies in the perceptual attributes investigated, the physical characterizations chosen to describe the products, and analysis methods employed. To provide a robust method for designing products with beneficial and desirable skinfeels, we propose the use of 1) a consistent lexicon that fully describes the perceptual experience of any product investigated, 2) a means of recording the mechanical events at the fingertip skin that occur when a skin care product is manually applied to the body. This approach contrasts with previous instrumental (*in vitro*) methods that may not generalize well to product-treated human skin (*in vivo*). Ongoing studies that record mechanical events at the skin surface show promise in identifying realistic models of the perception of skin care products.

KEYWORDS

Review; Rheology; Tribology; Perception; Sensory Function; Tactile

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