

## Rational Use of Moisturisers

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**M**oisturisers are topical formulations that help maintain skin hydration, allowing for an efficient protective barrier function. In healthy skin, the stratum corneum—the outermost layer—permits some evaporation and trans-epidermal water loss (TEWL). However, a balance is maintained to ensure adequate moisture in the epidermis, which is essential for skin flexibility and the enzymatic processes involved in desquamation. TEWL facilitates replenishing water in the stratum corneum from deeper layers of the epidermis and dermis and is an essential indicator of skin barrier integrity. Normal skin has low TEWL, whereas increased TEWL is associated with ageing, irritation, dryness, and inflammation.<sup>1</sup> Clinically, skin with increased TEWL may present as flaking, roughness, itching, tightness, pain, and stinging, negatively impacting quality of life.

Moisturisers enhance or restore hydration in the epidermis, improving barrier function, appearance, and texture. They either prevent water loss or add moisture to the epidermis through various mechanisms.<sup>2</sup>

### Types of Moisturisers

Moisturisers contain actives and excipients (emulsifiers, antioxidants, preservatives).<sup>2</sup> Types are emollients, occlusive, humectants and rejuvenators. Emollients smooth and soften the skin by filling in the gaps between skin cells. Common ones are ceramides and naturally occurring essential fatty acids such as Shea butter, coconut oil, palm oil, and flaxseed oil. Occlusive moisturisers form a physical barrier on the skin surface, reducing evaporation and trans epidermal water loss (TEWL). Typical examples are petrolatum and mineral oil. Humectants attract water to the skin, thereby increasing its water content. Common ones are glycerin and hyaluronic acid. Rejuvenators are peptides such as elastin, collagen and keratin.

With a better understanding of the pathogenic mechanisms involved in skin barrier dysfunction, moisturisers are now formulated with therapeutic agents targeting specific skin conditions.<sup>3</sup> For example, ceramide—and cholesterol-containing moisturisers benefit patients with atopic dermatitis, while urea-containing formulations are effective for chronic dermatitis. Vitamin C and niacinamide-containing moisturisers are useful in patients with hyperpigmentation. Sunscreen is also added to moisturisers to improve compliance while targeting hydration.

### What are the things to consider when choosing a moisturiser?

**Skin type.** Individuals with dry skin may require creams or ointments containing Shea butter, glycerin, and ceramides, while someone with oily skin will require oil-free gel-based moisturisers containing hyaluronic acid and glycerin. Those with combination skin require an oil-free moisturiser that adequately hydrates their skin, such as dimethicone and glycerin, without clogging pores. Those with sensitive skin should avoid fragrance-containing moisturisers, while older women may require creams or ointments containing retinol and peptides.<sup>4</sup>

**Formulation.** Moisturisers combine emollients, occlusives and humectants and exist as lotions (oil in water), creams (water in oil), ointments and gels. Lotions are non-greasy, used for daytime face and body moisturisers and hairy areas, creams, night time moisturisers, and occlusion is not required; ointments are used when occlusion is required, and gels can be used in intertriginous areas, or face.<sup>5</sup>

Moisturisers are essential in daily skincare and are best applied on damp skin to enhance absorption. Given the wide variety available, individuals, especially those with skin disorders, should seek professional guidance when selecting a suitable moisturiser.

### References

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