

## Moisturizer Tips

Edmonton's Cosmetic Surgery Clinic

### Question:

My skin frequently feels dry, especially after showers. When I go to the store, I am confused with all the moisturizer choices. How do I choose a good moisturizer for my skin?

### Answer:

Moisturizers &ndash; Are they really needed? The truth is that moisturizers are a growing component of daily skin care and account for one of the most common over the counter products sold in North America. This growth is partly due to the fact that what started as a simple moisturizer has become a sophisticated vehicle for delivery of complex nourishment and regulatory molecules to the skin. The following article introduces the reader to the basic structure of moisturizer as well its potential use for elegant delivery of therapeutic compounds. The moisturizers are mostly used for one of the following reasons:

1 &ndash; To repair the skin's ability to provide an effective barrier against outside pollutants, toxins, bacteria, viruses, fungi and to prevent the essential components of our skin and tissues from escaping our bodies.

2 &ndash; To increase the water content of the skin in both dermis [deeper layer of the skin] and epidermis

[outermost layer of the skin].

3 &ndash; To reduce skin vulnerability against trans-epidermal (through the skin) water loss.

4 &ndash; To rebalance the skin's composition of lipids (fats) both inside and outside the skin cells.

5 &ndash; To deliver nutrients and regulatory substances to the viable portion of the dermis and epidermis.

The anatomy of most moisturizers encompasses at least one of the following components: emollients, occlusive agents, humectants as well as additives designed to add extra benefits to the traditional functions of the moisturizers.

Emollients, such as fatty acids, dimethicone or isopropyl palmitate, improve the visual aspect of the skin by sealing the tiny splits between the components of stratum corneum (outmost, non-living part of the epidermis). These properties account for the resulting skin softness and smoothness when emollients are used in a moisturizer.

Occlusive agents such as petrolatum, lanolin, mineral oil or silicones, block trans-epidermal water loss. Petrolatum is the most potent occlusive agents and, as such, can be used extensively in patients with compromised skin barrier (in patients with atopic dermatitis [eczema]). Even at low concentrations, such as 5% petroleum jelly, it can reduce water loss through the skin by 98%. Because of the powerful occlusive properties, these agents have to be used carefully on the face as acne cosmetica [acne related to the use of cosmetics] can result.

Humectants such as glycerin, propylene glycol and urea, are designed to attract water either from the environment or from the underlying dermis to the epidermis. Since humectants can also draw water from the dermis, they can actually increase the trans-epidermal water loss. The water that is moved from the dermis to the epidermis can evaporate from the skin's surface paradoxically resulting in dry skin. It is for this reason that most humectants are used in combination with an occlusive agent. This accomplishes two functions: moisture retention and prevention of water loss.

The era of newer, much more sophisticated moisturizers is upon us where scientifically formulated delivery systems can offer additive benefits of supplementing and modulating skin cells for their optimal function and differentiation. As such, these new moisturizers offer a cutting edge frontier where therapeutic benefits are combined with the moisturizing qualities of topical products. Vitamins, minerals, growth factors, peptides, enzymes and co-enzymes are some of the few categories of molecules currently in use in the latest fight to prevent skin deterioration and optimize its functioning.

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