

S C R I P T



Preventative skin care

Preventative skincare aims to minimise the impact of various environmental factors through the use of specifically designed products. These products are usually applied in the morning and include: sunscreen, moisturisers, and antioxidants.

Moisturisers

Most moisturisers are a mixture of oil and water and have a day-to-day reparative effect on the skin. Dry skin has the appearance of unhealthy skin, is prone to disease and is best kept moisturised. Skin is more easily wrinkled when dry, but more supple and youthful when moist. Dryness is a sign of ageing, or more particularly photoageing (sun induced ageing), therefore the use of moisturisers becomes a more necessary camouflage as the years pass. Moisturisers work by plumping up the epidermis due to the increased water content, but must be repeated at least daily to maintain this appearance.

Moisturisers work in two broad ways:

Occlusive emollients - These sit on top of the skin helping to reduce skin flaking and assisting in the prevention of water evaporation from the epidermis, thus indirectly trapping moisture in the skin.

Humectants - Humectants are small molecules, introduced to the skin in a moisturiser which attract water from both the atmosphere and underlying layers of the skin and

moisturise the skin without producing excess greasiness. Chemicals such as urea, lactic acid and citric acid work in this way¹.

Sunscreens

Sunscreen is the most important anti-ageing cosmetic that you can utilise². It allows the skin the luxury of time to repair itself without continued sun-produced injury. There are various bases for sunscreens suitable for specific skin types. Non-comedogenic (non-pimple forming) sunscreens exist for acne patients, more moisturising bases exist for those with dry skin, while waterproof and high protection sunscreens suit people who enjoy an active, outdoors lifestyle. There are two main types of sunscreens available.

Physical sunscreens - are effective against almost all ultraviolet and some visible and infrared radiation. They can be made from a number of agents but most commonly zinc and titanium dioxide are used. These sunscreens were once characterised by their visibility to the naked eye but recent advances in micronised and nanoparticle technologies means that often they are now elegant, invisible, high protection sunscreens.

Chemical sunscreens - are those most utilised. For many years these sunscreens only protected against UVB with no effective UVA protection, this was only achieved with physical sunscreens. There has been a recent advent of very good, long range chemical blockers that are effective against the UVA wavelength. These agents largely work synergistically with existing UVA blockers protecting them from being degraded when they are exposed to sunlight. When a sunscreen protects against both UVA and UVB it is termed broad spectrum, and it is these broad spectrum sunscreens that should always be utilised.

Sunscreens in makeup - shouldn't be relied on. Unfortunately, the SPF of suncreening agents in cosmetics is not always stated and it cannot be assumed that the makeup will protect you unless two criteria are met: that the SPF indicated is of sufficient value, and that it is broad spectrum. Ideally sunscreen is best applied under your foundation as the application, when mixed into a makeup, does not usually supply effective protection.

¹ Goodman G. Choosing an emollient or moisturiser. *Aust Fam Physician*. 1997;26:1308-9.

² Bissonnette R. Update on sunscreens. *Skin Therapy Lett*. 2008;13:5-7.

Antioxidants

Topical antioxidants such as vitamin C + E and many plant extracts such as carotenoids, lycopenes, bioflavonoids and various tea extracts have been stabilised into useful forms for the skin. These products help prevent damage to the skin by neutralising free radicals produced by pollution, smoking, sun and other environmental factors. Free radicals cause wrinkles, a loss of elasticity and hardening of the skin as well as promoting an accumulation of pigments which may lead to a darkening of the skin³.

Niacinamide is related to vitamin B3 and is part of a family of substances that are critical to the functioning of all the body's cells, including skin cells. These agents are essential for cellular metabolism and cell renewal. It is a substance that is well tolerated by those with sensitive skin and rosacea.

³ Matsui MS, Hsia A, Miller JD, Hanneman K, Scull H, Cooper KD, Baron E. Non-sunscreen photoprotection: antioxidants add value to a sunscreen. *J Investig Dermatol Symp Proc.* 2009;14:56-9.