

Male Grooming

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It is accepted that there are differences in human skin between individuals and that changes occur with age however many question if there are any differences due to gender. A review of available literature [Ref 1, 2, 3, 4] shows that male and female skins differ in hormone metabolism, hair growth, sweat rate, sebum production, surface pH and fat accumulation. Male skin is approximately 20% thicker than female skin; women have a thicker layer of subcutaneous fat than men but men have more collagen and lose collagen at a slower rate than women when past middle age. Males sweat more, produce more sebum and are more prone to develop alopecia, acne, and skin cancers although the latter may be due to males generally living a more outdoors lifestyle and taking less care about sun exposure.

The most obvious difference is that men grow significant facial hair so it is no surprise that the majority of skin care products still centre round wet shaving. Wet shaving is an efficient way of exfoliating the skin and it also exercises the facial muscles but it can leave the skin irritated, lacking its natural protective oil content and feeling dry. It can also lead to folliculitis whereby hairs turn inwards and grow back into the skin causing razor bumps. Shaving oils are said to be less aggressive in use and ingredients to soothe the skin after shaving, to reduce inflammation, to restore lost oils and to leave the skin feeling smooth and moisturised are also helpful.

A requirement common to all wet shaving products is the need for smooth razor glide. Lubraslide from **Guardian Laboratories** is calcium stearate, PTFE and stearic acid in extremely fine powder form that can be readily suspended in aerosol shaving gels. It imparts lubricity and water repellent properties to products and leaves a water-repellent film on the skin to act as a protective barrier. Super Sterol Liquid [C10-30 cholesterol/lanosterol esters] from **Croda** has skin repair and moisturising properties that would also be beneficial in shaving products.

Shave oils and serums are an alternative to shave foams and gels. Neoderm IL from **GOVA** is a naturally derived emollient with a light, dry skin feel and touch similar to volatile silicone. It is a mix of isoamyl laurate and isoamyl cocoate and is recommended where a light, dry, non-greasy feel is required. Other oils that appear to be particularly lubricious and therefore suitable for shave oils include Crodamol SCS [DI-PPG-2 myreth-10 adipate] and Crodamazon Maracuja [Passiflora edulis seed oil], both from **Croda Europe**.

Another material that may find application in shave oils and balms is Dermofeel Viscolid from **Dr Straetmans**. It is a hydrogenated vegetable oil supplied as a white powder that may be used to impart soft, creamy textures to oils. The result is an elegant oil paste that is easy to apply on the skin without smearing and dripping. It is compatible with plant oils, esters, mineral oil and silicones. The thickening effect is based on a delicate network of fine lipid crystals that melt on contact with the skin to form a liquid phase with the sensorial profile of the oil mixture used. Transparent gelled oil formulations are also possible with Dermofeel G 5 O [Polyglyceryl-5 oleate] from **Dr. Straetmans**.

Sisterna PS570 is sucrose palmitate and it can be used to form gel-to-milk products, which are anhydrous systems that turn into lotions on contact with water. A transparent gel of glycerin and vegetable oil can be prepared that will liquefy on wet skin to enable shaving without foam. Polymatrix 12AP from **Koda** is a dispersion of

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sodium acrylate/vinyl alcohol copolymer in a moisturizing base that can be used to thicken and gel aqueous and polar materials. It suggests applications in non-foaming shave products and for after shave balms because of its extended moisturising properties.

Ingredients to soothe the skin and to reduce redness and irritation are added to post-shave products to replace lost oils, repair the skin's natural barrier function and to protect and moisturise. Many of these active materials have been derived to counteract skin problems caused by environmental aggression such as UV damage. An example is Abyssine 657 from **Lucas Meyer**, which consists of exopolysaccharides synthesised by a micro organism located in hydrothermal deep sea vents. Comprising an aqueous/glycolic extract of *Alteromonas* ferment it is claimed to soothe and reduce irritation of sensitive skin against chemical, mechanical and UV aggression. Tests show that it has healing properties when added to a post-shaving balm at 3% and it also protects the Langerhans cells against UV damage.

VariStan PE from **Variati** is an extract of *Garcinia mangostana* peel with antibacterial and anti-inflammatory activity and shows healing properties. Also claimed to protect razor nicks from bacterial infection is Ajidew ZN-100 [Zinc PCa] from **Ajinomoto**. Zinc PCa also appears in Oliglycan from **CR&D**. Other ingredients include Copper PCa, *Tremella fuciformis* (mushroom) extract and *Lentinus edodes* extract and it has antibacterial activity and is said to revitalise the skin. TRIGlyphix Sense from **Tri-K** is an isolate of the *Hordeum vulgare* seeds and when incorporated in an aftershave gel at 5% it is claimed to prevent razor nicks and to reduce the appearance of redness and folliculitis in as little as 3 days.

Hordeum vulgare is also the source of Nutrabel Barley Extract from **Aromtech** that is said to be rich in linoleic and alpha linolenic acids, which are responsible for its moisturising activity when applied to dry and itchy skin. From the same company Fytobel White Peat Extract is described as a low odour extract produced from carefully selected peat, rich in phytosterols and other bioactive components of plant origin, all of which have a beneficial effect on sensitive skin.

The sea is the source of many active ingredients for cosmetic products. Cosmelene Neptune Kelp from **Greentech** is an extract from the brown algae *Laminaria saccharina*. It contains laminarin, which is a polysaccharide that is said to regulate the function of sebaceous glands plus phenolic compounds with soothing and anti-inflammatory properties. It is an effective free radical scavenger due to numerous hydroxy radicals and these also trap heavy metal ions, which are present in polluted urban air and attack sensitive or allergic skins. If 3% is added to an after shave cream the moisture content of the skin is significantly improved.

Anti-oxidants are as effective on male skin as on female and many products with anti-oxidant activity find their way into male skin care. They are particularly useful as free radical scavengers and frequently show soothing and anti-inflammatory properties. Oleoactif from **Oleos** is an extract of cork oak with coconut oil that has significant antioxidant activity and reduces the expression of cytokines, which cause inflammation. **Crodamazon** Maracuja [*Passiflora edulis* seed oil] is a rich source of vitamin A and has antioxidant and free radical scavenging properties.

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Repetitive external factors such as UV light and shaving can cause the skin to release pro-inflammatory cytokines causing vasodilation, oedema and erythema. This process is called neurogenic inflammation and it results in skin hypersensitivity, itching and stinging and also contributes to premature ageing. **Lucas Meyer** has introduced a material trade named Neutrazen, which is described as a neurocosmetic peptide that calms and soothes skin and restores a normal sensitivity threshold. The active ingredient is palmitoyl tripeptide-8 encapsulated in dextran and supplied in aqueous/glycolic solution. In-vivo tests show that it reduces irritation caused by shaving, soothes razor burn and reduces skin redness.

Rosacea is a skin problem more commonly known to affect women but men are also prone to this condition, which manifests itself as a network of broken veins on the cheeks and around the nose and small red bumps or pimples and a thickening of the skin in affected areas. It is triggered by a variety of external factors including shaving, UV radiation, and stress. **Pentapharm**, now part of **DSM**, suggest incorporating Regu CEA for its anti-irritant effects and skin-soothing and antihistaminic properties. It contains spent grain wax, isomerized linoleic acid, behenic acid and palmitoyl tripeptide-5 and it is suggested that from 2% to 5% be added to after-shave balms and creams.

Nio-Kiol from **Naturalis** is also recommended for treating rosacea and related skin problems. Its principal actives are magnolol and honokiol from magnolia and salicin from white willow. **Phenbiox** offers GSH-defense, which contains deglycolated isothiocyanates from rocket salad [*Eruca sativa* leaves] that is able to induce endogenous glutathione tripeptide production within skin cells to protect and repair them and to fight the effects of irritation leading to rosacea and other inflammatory responses.

Soothing skin irritated by shaving is important but men also need to moisturise. Pentavitin from **Pentapharm** is an aqueous solution of a saccharide isolate that claims instant, deep hydration and provides a moisture reservoir that lasts for 72 hours. It is also claimed to impart a 50% improvement in skin smoothness and softness and more than a 50% reduction in flakiness and itchiness caused by dry skin after only two weeks of application of creams containing 1 - 5% Pentavitin.

Saccharides feature in Dandrilyls from **Greentech**. It is an extract of *Zizyphus joazeiro* bark containing saponins and oligosaccharides with soothing and calming properties. It has good foaming and cleansing activity and is also said to relieve the itching and irritation caused by dandruff. **Greentech** also offers Xymelys 45, an extract of *Ximenia Americana* bark, as a natural active that quickly soothes and calms irritated skin.

Many shave and post-shave products contain lavender oil and peppermint oils for their soothing and cooling properties. To provide a longer lasting cooling effect **Sino Lion** suggests Koko ML Plus [Menthyl lactate, *Mentha haplocalyx* extract]. **Givauden** suggest Evercool Skin, a mixture of menthyl PCA, lactamide MEA and menthane carboxamide ethylpyridine. It is said to provide all day cooling and freshness if 2% is added to appropriate products. For a prolonged warming effect **Sino Lion** propose SenseHot [Vanillyl butyl ether] in which the vanillyl group induces the warming sensation via the nervous system.

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Solabia has published a formulation guide for men's products sub-titled A Coaching Box for Men. It is in three sections: the first suggests that men should prepare their body for competition and to meet the challenges of the day ahead. This is achieved by **Solabia's** shower for men, which includes Glycofilm 1.5P [Biosaccharide gum-4] that is an anionic polysaccharide, described as a non-occlusive, transparent, and natural shield to protect the skin from the surrounding environment. There is an after-shave gel to counteract razor burn, which incorporates Fucogel [Biosaccharide gum-1] and Resistress based on Sophora japonica flower extract said to stimulate the endogenous anti-oxidative defence systems of the skin. There are many more formulation ideas based around the active ingredients to be found in the Solabia portfolio.

Apparently men can suffer from tired skin as a result of mental stress, environmental factors and poor diets. Its obvious effects are impaired skin cell function resulting in skin sagging, imperfections and dryness and tired skin typically appears dull, lacking vitality and with an unhealthy aspect. **Provital** describes such a fatigued-induced state of the skin as pseudoaging but by improving its energy level it is possible to restore its functional capacity sufficiently to recover a toned, smooth, better moisturised and radiant look. It suggests this can be achieved by adding Energen to face and body care products. It is an aqueous solution of Sapindus mukurossi fruit extract and Caesalpinia spinosa gum, both of which are said to release energy within skin cells.

Also designed to release energy within the skin is Skinergium from **Laboratories Expanscience**. It is hydrolyzed lepidium meyenii root harvested in the high Andes and is said to stimulate fibroblast cells to produce collagen and elastin. The sugars present in Skinergium provide luminosity and radiance to brighten the skin complexion. CellActive Men [Aqua, glycerin, taurine, Chlorella vulgaris/lupinus albus protein ferment, Acanthopanax senticosus (eleuthero) root extract] from **Rahn** is also said to energise skin cells. Italine A from **Akott** is an anti-fatigue extract of Annurca apples from Italy that is rich in polyphenols. In-vivo clinical studies demonstrate its ability to reduce eye dark circles and puffiness and improve the skin tone.

Finally **Phenobiox** claim a revolutionary concept in skin radiance with its Luminescine [Hydrolyzed verbascum thapsus flower] product. It is able to adsorb UV light and emit it as longer wavelength, visible light. This has the effect of brightening the skin and it also works on hair.

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