

## Male Grooming

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The author's first laboratory experience was that of working on a range of male grooming products in the early '60s. They included hair cream, shave cream, after-shave lotion, shower gel, deodorant stick and talc. There was also an aerosol shave foam and a pre-shave lotion for those who preferred an electric razor. Anything else that was needed could be found amongst the lotions and potions used by mother or wife, according to one's age and circumstances. Although the products have no doubt improved over the years the basic product range seems little altered with changes in fashion seemingly restricted to length of hair and facial fuzz.

**AkzoNoble** suggest a 6-step male care regime that involves a body wash; styling shampoo; facial washing powder; shaving cream, AP/DEO and a daily moisturiser. However **Seatons** claims that the growth in the number of different product ranges, and the diversity of the products available, show no signs of slowing down. Men care now covers a wide range of products including specifically targeted skin care, hair care, pre and post shaving products, eye and lip care. Clare Goodwin of **Infinity Ingredients** expands this further and writes that the male grooming market sector is still very much on the increase with our image conscious 'metrosexuals' taking more pride in their appearance. It goes beyond shaving and after shave balms, with products specifically targeted at toning the abdomen, fighting hair loss, dark circles and wrinkles. High-tech, high performance actives are very much the order of the day for men's care.

This feature is going to look at the basics and at the more diverse products suggested by suppliers but firstly at men's hair, at ways of prolonging its life and health and at various styling aids.

Well-groomed hair is a fundamental part of the average male's personal presentation but to groom it he must have it! Although male hair loss is associated with middle and old age it can start as early as the late teens. There are many causes, which are outside the scope of this article but various cosmetic treatments have been proposed to retard hair loss; a recent one from **Biospectrum** is to treat the scalp with EMortal Pep, a peptide extracted from *Pisum sativum* (pea) that is said to activate stem cells to stimulate dermal papilla. Redensyl from **Induchem** is claimed to stimulate stem cell production to initiate a new anagen phase using dihydroquercetin-glucoside extracted from larch and epigallocatechin gallate-glucoside from green tea leaves.

Anacryn from **Naturalis Life Technologies** is an aqueous/glycolic extract of *Eclipta prostrata* enriched in wedelolactone, which slows down excessive hair loss, stimulates hair re-growth, protects the hair bulb and improves hair strength. Kapilarine from **Greentech** is a blend of botanical and fruit extracts; kigelia fruit, ginkgo biloba, clary sage and cinnamon, which protect against hair loss by increasing blood flow to the scalp. **Biosil Basics A-30** is a blend of a silicone and the amino acid arginine, which helps stimulate hair growth and provide colour protection, improved wet comb and improved hair strength.

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A different approach is that offered by **Phenbiox** whereby its 2C-Hair Stimulation Complex increases the life span of hair in its anagen or growth phase and telogen or resting phase. It achieves this by increasing the turnover of the dermal papilla cells with a mixture of extracts of *Vitis vinefera*, *Eruca sativa* leaves and *Juglans regia* fruit. Sphingony [INCI: Sphinganine] from **Evonik** also prolongs the life of the anagen phase, thereby keeping existing hair longer.

Another problem besetting males and particularly those in their teens and twenties is excess sebum production. This can result in greasy hair, itchy scalp and acne. **Expanscience** promotes 5-Alpha Avocuta [INCI: Butyl avocadate] as a sebum regulator, which when added at 1% to a shampoo, it inhibits the activity of 5- $\alpha$  reductase, the enzyme responsible for hyperseborrhoea. Trials show that the seborrhoea was reduced by approximately half, while the stinging, pruritus, erythema and desquamation that frequently accompanies seborrheic conditions had practically disappeared.

Unitrienol T-27 from **Induchem** includes three effective molecules aiming at sebum regulation on both skin and scalp when added to a shampoo. Panthenyl triacetate is an acetylated form of panthenol that plays a major role in reducing sebum over-excretion. Farnesyl acetate and farnesol are precursors of farnesyl pyrophosphate, which is directly involved in the synthesis of cholesterol and it helps equalise sebum excretion. They also have intrinsic antifungal and antibacterial properties, which reduces the risk of inflammation due to microorganisms. Farnesol will act instantly and the two acetylated forms improve the long term effect of Unitrienol T-27 so that results continue after stopping any treatment.

Progress Glycaprylis from **Prodotti Gianni** is capryloyl glycine in powder form used to reduce the secretion of sebum and scalp irritation and to normalise skin pH and it has anti-dandruff properties. Phytelene Complex EGX 292 BG from **Greentech** is a mixture of extracts of black cohosh, milk thistle, maca and nettle, which regulates and normalises sebum production by the inhibition of 5-alpha reductase. It also has soothing and anti-inflammatory properties and shows anti-fungal, antiseptic and antibacterial activity.

Hair shampooing and conditioning was part of the November issue on hair care but **AkzoNoble** claims that the busy male also wants a shampoo that imparts styling properties. It suggests a combination of Balance CR [INCI: Acrylates copolymer] and highly anionic Flexan II [INCI: Sodium polystyrene sulfonate] will help deeply cleanse and remove build-up caused by cationic conditioners and film forming polymers. The acrylates copolymer adds texture and helps to build style and Aquad PC SV-60 PG [INCI: Soytrimonium chloride] conditioning agent imparts enhanced manageability for hair that looks and feels smooth.

**Ashland** also suggest adding a styling aid to shampoo; in this case it is a copolymer of vinylpyrrolidone and dimethylaminopropyl methacrylamide under the trade name Styleze CC-10 [INCI: VP/DMAPA acrylates copolymer]. When added to a shampoo it leaves the hair feeling

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fuller and gives it a more voluminous, robust appearance, claims Ashland. Continuing the shampoo/styling theme **Croda** offers MiruStyle MFP PE, an aqueous solution of hydroxypropyltrimonium hydrolyzed corn starch to provide a reduction in static and smoother, sleeker hair and a protective film for better hair control.

Visible skin condition contributes to our perception of facial age, health and attractiveness and a decrease in skin colour homogeneity leads to older, less healthy and less attractive ratings of facial skin in both women and men. Research by Fink *et al* [Ref 1] showed that age, health and attractiveness perception of men's faces could be predicted by the ratings of cheek skin only, such that older men were viewed as older, less healthy and less attractive and skin colour homogeneity in particular, plays a significant role in the perception of men's faces.

This research underlies the need for men to protect themselves from solar radiation, to exfoliate dead skin cells and to keep the skin moisturised and supple. The active ingredients to be found in skin care for females will work just as well on men; it is the presentation and perfume that needs to be changed. The presentation includes the product vehicle, which needs to be less oily and more readily absorbed than many products aimed at female skin. Also men are less likely to use a multitude of products so they need to be multifunctional. According to a survey undertaken by **Evonik** the majority of men spend 10 minutes or less a day on their appearance, and that includes showering and shaving.

According to **AkzoNoble** the next stage in men's grooming is facial cleansing and it suggests keeping it simple by using mild surfactants such as sodium cocoyl isethionate that provides a creamy foam used in conjunction with polyquaternium-10 to leave the skin feeling clean, smooth and conditioned. Incorporating tapioca starch and dehydroxanthan gum further enhances the after-use skin feel. All these materials are available from AkzoNoble and can be mixed to form a dry, easily dispersed powder that adds convenience, compactness and portability to the product.

Sometimes washing is not enough and even men who wet shave may benefit from an occasional exfoliation scrub. **Dr Straetmans** offers Dermosoft PP, which is a self-emulsifying PEG-free O/W emulsifier [INCI: Polyglyceryl-3 palmitate] that can be used in anhydrous scrubs containing sugar and/or salt. Upon contact with water it emulsifies to leave a very pleasant and smooth skin feel. Besides sugar and salt scrubbing agents can be almost any particulates other than polyethylene granules, which are now the subject of much environmental concern. Virtually all suppliers of cosmetic ingredients have suggestions to make but the most extensive range of natural scrubbing aids appears to be that from **A&E Connock**.

A smooth and irritation free wet shave is all about razor glide and the razors themselves have improved substantially over recent years with multiple blades and lubricating strips. **AkzoNoble** suggests a shaving cream containing Structure CEL 4400 E [INCI: Hydroxyethyl ethylcellulose] and 500HM [INCI: C12-16 Alkyl PEG-2 hydroxypropyl hydroxyethyl ethylcellulose] rheology

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modifiers to create a rich foam and impart lubricity to reduce friction for a close and comfortable shave. Adding Hydrovance [INCI: Hydroxyethyl urea] as a moisturising agent will maintain skin condition and hydration levels. **Seatons** suggests using olive oil or blackcurrant oil as pre-shave oils and using coconut oil and sweet almond oils in shave creams to improve skin conditioning and moisturising.

As with women, it is the face that people see and that makes the biggest impression and it is also the area that is most exposed to environmental aggression and which ages the most. Caring for the face of either gender requires protection from solar radiation, moisturising and inhibition of inflammatory responses. Sensitive skin is a general term for hypersensitivity to a variety of stimuli that would not ordinarily produce skin irritation. It can be triggered by a variety of external factors, including environmental conditions and personal care products. A survey of men claiming to have sensitive skin was published in 2013 [Ref 2] and it was found that approximately 30% of men had sensitive skin and exposure to UV light was an exacerbating factor in men's perceptions of sensitive skin. It was also reported that the selection of shaving products can play an important role for men with sensitive facial skin and that shaving-related skin irritation ranks among the most frequently mentioned male cosmetic complaints in Europe and the United States.

Possibly because men are looking for new and less irritating ways to shave, shave oils have gained a market niche and depend on the hair softening and lubricity of the oils used. With its silicone-like sensorial profile and excellent skin compatibility Dermofeel Sensolv [INCI: Isoamyl laurate] from **Dr Straetmans** is of interest when formulating shave oils. It is a polar oil with low surface tension and low viscosity and excellent spreading properties. **Infinity Ingredients** suggests that a mix of Dermofeel Sensolv with Kahai Oil [INCI: Caryodendron orinocense nut oil] with its dry skin feel, good penetration capability and high vitamin E content would make an ideal shave oil. Olifeel TD7575 is olive glycerides from **Amedeo Brasca** that also contributes to razor glide and improved skin feel.

An alternative to conventional shave creams, gels and oils is the gel-to-milk format. This is basically an anhydrous oil-in-glycerin gel, which once it comes into contact with water, it transforms into a lotion that softens the beard and lubricates the razor. The lotion leaves the skin feeling moisturised and cared for. **Sisterna** PS750-C [INCI: Sucrose palmitate] may be used as the emulsifier to create a gel-to-milk shaving product. A basic starting point is to disperse 2% **Sisterna** PS 750-C in 36% glycerin and heat to 75C. The oil phase makes up the balance, which is also heated to 75C and then slowly added to the glycerin mix with homogenising. Colour, antioxidants and perfume may be added as desired and the oils can be sunflower seed oil or any that suit the product claims.

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The final stages in the **AkzoNoble** plan are the application of an antiperspirant or deodorant and a moisturiser. Effective antiperspirants are based on aluminium salts and the main difference is those for men have a higher level of activity and a masculine fragrance. If a deodorant is preferred then is it worth looking at probiotics. Probiophyte fresh from **Greentech** is an example of this approach. It is an extract of lactococcus ferment that supports the beneficial bacteria that are part of the body's defence system while reducing bad bacteria like corynebacteria responsible for body odour.

For moisturising formulations a non-greasy presentation as an after-shave balm and moisturiser works well. It should confer broad spectrum UV protection at a level suitable for the wearer's environmental exposure and the addition of a healing aid because of razor nicks is useful.

Allantoin has long been used for this but as an alternative **Ajinomoto** supply zinc PCA as Ajidew ZN-100 and claims that it helps heal nicks and cuts from daily shaving while moisturising the skin and keeping it clear of bacteria. Blue Agerate from **Pacifique Sud** is an aqueous/glycolic extract of *Ageratum conyzoides* that is attributed with antibacterial and healing powers when used in shave and aftershave products. It is harvested in the Marquessa Islands and the plant and its extracts are used in herbal medicine throughout the Pacific islands.

Duraquench Q from **Croda** is a multi-component mixture [INCI: Cetyl alcohol, isostearyl isostearate, potassium cetyl phosphate, cetyl behenate, behenic acid] that forms a structural bilayer on the skin's surface that helps to reinforce the skin's natural barrier. It is said to adapt to the surrounding environment, optimising hydration by regulating water loss from the skin at different temperatures and humidity levels. Croda suggests a formula for a moisturising shaving cream containing 1% Duraquench Q that will leave the skin feeling soft and give all day moisturising.

An active aimed specifically at men is Cellactive Men from **Rahn**; its principal ingredients are taurine, *Chlorella vulgaris*/lupinus albus protein ferment, and *Acanthopanax senticosus* (Siberian ginseng) root extract. Siberian ginseng is an adaptogen which protects the skin against stress due to changing climates so is recommended for men with an active outdoor life. Taurine and ginseng both work to reduce cell death and the amino acid and trace elements content helps bind the cells together and promotes healing of small nicks and cuts from shaving.

Tego Tumerone [INCI: *Curcuma longa* (Turmeric) root extract] from **Evonik** is a purified turmeric oil containing about 27% turmerones, which are powerful antioxidants and that contribute to skin radiance, even skin tone and decrease of wrinkles. Myramaze from **Rahn** is an extract of *Myrothamnus flabellifolia* that protects membrane structures from dehydration and preserves the skin lipid linoleic acid, against oxidation. Also from **Rahn**, Celligent [INCI: *Helianthus annuus* (Sunflower) seed oil, ethyl ferulate, polyglyceryl-5 trioleate, *Rosmarinus officinalis* (Rosemary) leaf extract, aqua, disodium uridine phosphate, tocopherol] was developed

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to protect the skin from the effects of UV irradiation and support the body's own natural repair process to alleviate the symptoms of UV damaged skin.

Skinergium 2 [INCI: Hydrolyzed lepidium meyenii root] from **Laboratories Expanscience** is derived from Maca root to give energy to tired, dull skin. This extremophile lives 11,000ft in the Andean mountains in Peru and was traditionally taken by the natives before battles as a concentrated energy source. For cosmetics Skinergium offers skin firming and anti-wrinkle properties as it stimulates fibroblast cells to produce collagen and elastin and the sugars present impart luminosity and radiance to brighten the skin complexion.

Whatever actives are used to improve male skin care it is important that the product itself is non-greasy and easy to apply. ViscOptima LV and ViscOptima SE from **Croda** are said to be ideal for male grooming products as they have a light fresh feel on the skin. ViscOptima LV [Sodium polyacrylate, isotridecyl isononanoate, trideceth-6] is a multifunctional liquid dispersion polymer that can emulsify up to 20% oils and silicones to create light milks, creams and lotions that are easily applied and leave a dry, non-tacky after-feel. ViscOptima SE [INCI: Sodium polyacrylate, ethylhexyl cocoate, PPG-3 benzyl ether myristate, polysorbate 20] is a multifunctional liquid rheology modifier that can be used to emulsify and stabilise high levels of oils and silicones within a formulation. It's a highly effective thickener that creates viscous creams at low inclusion levels which leave a smooth, silky, silicone-like feel to the skin.

Finally, a well-produced brochure from **Lucas Meyer** looks at the whole subject of male grooming with ideas for the business man; the athletic man; the nature lover; the fashion man and the young adult. All have in common concerns about hair loss, protection for irritated skin and the wish to look young and energetic. The business man needs Sveltessence to counteract the effect of business lunches; the athletic man can use Isocell Slim to tone and firm the abs, biceps and pecs; Liftessence is recommended for the nature lover to restore his youthful appearance; Progerin is said to improve the jaw line of the fashion conscious and Limunine will help keep the skin of the young adult free of spots and pimples.

Ref 1 Fink, B., Bunse, L., Matts, P. J. and D'Emiliano, D. (2012), Visible skin colouration predicts perception of male facial age, health and attractiveness. *International Journal of Cosmetic Science*, 34: 307–310. doi: 10.1111/j.1468-2494.2012.00724.x

Ref 1 Vanoosthuyze, K., Zupkosky, P. J. and Buckley, K. (2013), Survey of practicing dermatologists on the prevalence of sensitive skin in men. *International Journal of Cosmetic Science*, 35: 388–393. doi: 10.1111/ics.12056

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