

Skin care for the adolescent skin

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During adolescence teenagers increasingly pay attention to their outer appearance and frequently take a look in the mirror. Blemished skin often becomes a problem. Acne, perspiration etc. wreck their nerves. What can be done when the skin goes haywire, particularly at this time when everyone is focused on impressing the opposite sex?

In puberty the hormone production starts to increase whereas the androgens dominate in male and the estrogens in female adolescents. These changes in hormone balance have effects on skin and hair growth. Sebum and sweat production increase. Body odors change and become annoying. The skin care routine is adjusted to this change and the awareness for body hygiene increases. Pimples, blemished skin and acne are major skin problems during this period.

Until puberty starts, male adolescents hardly know more than soap, shampoo and maybe hair gel and female adolescents may also know about make-up. What should adolescents do take adequate care of their skin?

Acne prevention – a challenge

Prevention is an excellent basis to get a grip on acne and related skin conditions. Although comedogenic substances are rather scarce in skin care products, it is a well-known fact that the influence of light and atmospheric oxygen will induce certain fragrance components to develop substances that cause inflammatory conditions at the sebaceous glands. In this respect, polyethylene glycols (PEG) are also considered to be a problem. As a matter of principle, filming consistency agents in creams and re-fatteners in cleansing products should be avoided and the same applies for mineral oils which decrease the TEWL.

Critical ingredients are not easy to identify for young consumers, and the INCI declaration appears to be another form of sign language, similar to Chinese. Hence, professional advice by a qualified expert is rather important.

With regard to hair gels, it is essential that the hair setting components contained are indicated as their chemical structure resembles consistency agents and may involuntarily get onto the front. A warm and moist environment forms below these areas facilitating the colonization with acne bacteria and together with cornification disorders at the exits of the sebaceous glands it boosts the formation of acne vulgaris along the hairline. It is recommended

to select a juvenile skin care that is as “open-pored” as possible.

Since sebum production is at its peak during adolescence, the majority of cases can well do without lipid substances in their skin care products. Or alternatively, the lipid content can be reduced. As lipids are stabilized in water with the help of emulsifiers this would also help reduce the comedogenic potential which is attributed to emulsifiers. Another alternative are emulsifier free lotions. Water-dispersed nanoparticles may contain alpha or gamma-linolenic acid in form of natural oils that are not only effective against cornification disorders but also have anti-inflammatory properties. The carrier substance is natural phosphatidylcholine which has sebum reducing and hence anti-comedogenic effects on oily skin due to its high content of linoleic acid. In the form of liposomes it may even be used purely. Such preparations are not only highly appropriate preventive measures but also therapeutic remedies for the acne-prone skin.

An interesting approach for male adolescents is the treatment with phytohormones gained from soybean or red clover which have lightly estrogenic effects and are offered in a watery liposomal solution. The liposome shell dissolves in the skin barrier and releases linoleic acid in addition to the phytohormones (see above).

Besides individual disposition and inappropriate skin care products also over-treatment of the skin plays a significant part in this context. When exaggerated, even the best skin care can stress the skin and lead to counterproductive effects like pimples and irritations.

Cleansing and disinfecting routines for acne-affected adolescents should be carried out in the professional institute so as to avoid the formation of scars. There is a multitude of products and peeling techniques available in order to prevent scars. The issue has been covered in *Kosmetik International* 2008 (8), 36-38.

Hygiene – an essential condition

Blemished skin generally is associated with a lack of hygiene. That is why persons affected very often tend to fall for the contrary extreme or in other words the use of shampoo or shower gel is skyrocketing. As a matter of fact, this is not very beneficial and only empties the wallet. On the contrary, the sebum glands will work at their best in order to rebuild the external acid mantle (hydrolipid film) of the skin. Even the slightest disorders at the sebaceous glands will increase the pressure in the glands which then causes itching and the scratching that follows will trigger infections.

Just cutting down on the consumption of cleansing products to a regular dosage, well, that is easier said than done. However, starting morning showers with hot water and then finishing up with cold water would do in most of the cases.

Re-fattening cleansing products and cleansing milk should be avoided if not a specific problem as for instance atopic skin requires the use of cleansing milk. In case of sensitive skin it is recommended to use products without aggressive tensides like lauryl and lauryl ether sulfate in order to avoid irritations. Anyhow, irritations in the mouth and neck area become more frequent when adolescents try to wet shave or experiment with trinkets. These cases can be treated with astringent hamamelis, tea or horsetail products. After shaving, essential fatty acids as e.g. linoleic and alpha linolenic acid have anti-inflammatory effects. A mix of the vitamins A, C and E together with D-panthenol in emulsifier free base stimulates the recovery of the skin.

Hands damp with sweat are quite an annoying problem with regard to friends, yet for the person directly affected it definitely adds up to emotional stress. An appropriate remedy in this case are hand creams with active agents like sage, farnesol and aluminum salts.

As a matter of fact, these substances can also be integrated into deodorant creams. Cyclo-dextrins form channel-shaped cavities and thus additionally absorb unpleasant body odors. Although deodorant creams are quite effective they are not too popular as they have to be applied manually in contrast to the customary easy-to-use roll-on deodorant.

Fashionable parameters

Skin-tight clothing has the same effects as a superficial film. The moisture is retained, microcirculation deteriorates and this micro climate will favor germs etc.

How sensitive the skin will react can be observed at depilated armpits or the genital area

where skin rubs on skin and a deodorant product then becomes indispensable. Sweat secretion leads to an increased desire for cleansing which in its turn causes recurrent disorders of the natural bacterial flora of the body which then supports the colonization with pathogenic germs.

Accordingly, foot odor is caused by boot and sneaker-style shoes. Astringent and antibacterial cosmetic products can be beneficial in this case. Antibacterial active agents, and it should be mentioned at this point that the preservatives in cosmetic products belong to this substance group, should also be safe for the use on sensitive skin. In a 2007 press release, the Federal Institute for Risk Assessment (Bundesinstitut für Risikobewertung – BfR) warns consumers of allergic contact eczemas caused by the chromate (chromium-VI) contained in leather products and particularly shoes that are worn bare foot (sandals). Erythema, itching and weeping blisters are the consequence.

Trinkets and inexpensive accessories have a high allergenic potential and symptoms frequently develop on contact areas. In most of these cases sweat and skin care products additionally interact causing corrosion with the effect that traces of the nickel salts can be transported into the skin.

Hair dying products with their content of aromatic amines can also result in efflorescences of the skin.

Nutrition, pharmaceutical drugs and Co.

Beginning with puberty the adolescents also start to follow beauty ideals which often interfere with the needs of the individual body. Diets and unbalanced nutrition have their effects on health and skin. In this context though it is less the lack of vitamins that plays an essential role but rather the type and quantity of the essential fatty acids absorbed which then form prostaglandins that are tissue hormones and influence the inflammatory and pain processes in the body. In combination with their start on contraceptives a multitude of different skin reactions can be observed with potential further implications caused by drugs against headaches and migraine up to psychotropic drugs against stress at school. Based on this general set-up a multitude of different skin reactions as e.g. acne and pigment disorders may develop. In that case a well-funded medical advice is required to find out causes and effects. As experience has shown, however, the problem frequently ends up at the cosmetician who can only treat the visual symptoms on the skin.

With sensitive skin, a careless handling of fruit peels may lead to perioral dermatitis which is caused by essential oils. Calming and anti-inflammatory vegetable extracts gained from boswellia and echinacea which are applied in pure form may be a quick and effective remedy here.

Due to its 5-lipoxygenase inhibiting effect, boswellia is also helpful in case of inflammatory acne.

Besides the essential fatty acids, further anti-inflammatory active agents like acetoside (ribwort), berberine (mahonia), chamomile and hamamelis (with additional astringent activity) have to be mentioned. Salicylic acid, algae and azelaic acid have anti-microbial effects. The latter mentioned can be used as consistency agent without filming property.

Make-up – but avoid air-tight sealing

The same principles that apply for the skin care also have to be observed for the make-up. The skin must be able to breathe. A well covering foundation may perfectly conceal skin impurities; however, it will not cure but rather support them. There is need for a compromise here in order to achieve long-term positive results. Skin care and make-up have to be applied in a way that the anti-microbial and anti-inflammatory active agents of the skin care products may properly work below the foundation and the transport of humidity from the inside to the outside is not impeded. It should be pointed out that powders consisting of nothing but mineral pigments and anti-itching urea often can replace the foundation.

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