

Overdoing skin care – too much of a good thing

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Do you know the typical disease of female flight attendants? Well, it's a rash that develops due to exaggerated skin care! The protective shell of the body suffers with insufficient skin care but obviously also with too much skin care.

A common and ubiquitous phenomenon: doing things in moderation is what matters. Eating is good for you however too much of it makes people sick and overweight. Sport increases performance, extreme sport wears out joints. Sun radiation fills the empty vitamin D depot - too much exposure to UV light soon causes premature aging of the skin. The list of examples could be continued with discretion.

The situation is the same with skin care. Too much skin care can be counterproductive. What sounds paradoxical at first sight happens more often than we would imagine. It is most annoying that the consequences of overdone skin care frequently give rise to product complaints and in the cases at issue, neither customers nor sellers can properly ascribe these consequences to the original causes. People still are unaware that there exists such a phenomenon as overdoing skin care. The following (co-) factors are significant in this context:

- hygiene
- infections
- dosage of lipid substances
- irritations and allergies
- connective tissue disorders
- abrasive treatments
- specific ingredients

Already baby and toddler care can start with too much hygiene: The more often surfactant-based cleansing products are applied, the more likely is a diaper rash. Pure vegetable oils such as avocado oil can be a simple alternative. Avocado oil is an effective cleansing agent and preserves and stabilizes the skin barrier. In the case of neurodermitic skin, exaggerated hygienic routines such as the daily shower with whole body cleansers also promote irritations. Hard water acts as a catalyst in this context. The skin barrier is constantly exhausted. Although the so-called re-fattening substances in shower gels offer excellent sensorial properties they often have surface-active

features – similar to emulsifiers. Hence they are less appropriate for the atopic skin.

It is recommended to avoid re-fatteners and instead apply body oils based on skin-caring triglycerides and phytosterols – with the latter mentioned in the form of shea butter. Priority should be given to a sparing use of shower preparations or better yet, just avoid them at all.

In favour of microbes

With increasing intensity of body hygiene also the risk of infections is augmenting. A natural skin barrier still works more effectively than the best skin care cream. This applies for a variety of symptoms such as for instance dandruff, athlete's foot and infections in the armpits and the genital area. Shaving and epilation have a boosting function due to the incidental micro lesions of the skin. Conclusion: hygiene is a life-preserving achievement. Too much of it however can be counterproductive.

What role do lipid substances play? The skin can be predisposed to react to excessive lipid doses. During puberty, acne bacteria particularly feel comfortable when lipid substances from skin care creams and make-ups come in addition to the natural sebum of the skin. Thus the habitat of the anaerobic trouble makers is optimized since they particularly thrive in airtight conditions. Accordingly, the acne-prone facial skin will sooner or later start to develop its obvious symptoms.

Keeping control

Sebum measurements of the skin after the skin care routine may be beneficial in order to check the total lipid and sebum content so that it is not at the upper limit of the measuring range (100 percent). The situation is similar with disorders of the connective tissue and the superficial blood capillaries or in other words for the rosacea prone skin. Analogous to acne, the same or similar strains of bacteria cause the inflammatory reactions. Particularly in the case of rosacea the individuals are tempted to

overdose lipid substances and make-up preparations. The persons concerned often are hard to convince that a fully pronounced rosacea can best be controlled by a sparing use of lipid substances.

Perioral dermatitis belongs to the same problem area. It tends to flare up after an early and overdosed application of lipid substances – above all if the triggers as for instance persisting germs still are present or if consumers haven't paid enough attention to the essential oils contained in creams and food. Also repeated fruit acid treatments can have a negative influence in this context.

Even normal and undamaged skin can suffer after the application of too much lipid substances, eventually in up to three layers such as in the base care, sun screen and make-up. The resulting and nearly occlusive condition leads to a swelling of the skin from inside, above all if preparations with high hydrocarbon fractions (paraffins) have been applied. Consumers initially perceive the swelling as rather advantageous since the skin seems smoother and wrinkles are reduced or even disappear. Reverse side of the medal though: the natural recovery of the skin is impeded and a long term progression towards atrophic skin may be involved.

Not by its own efforts

The reduced natural recovery also plays a significant part with individual pharmaceutical formulations. In the case of acne for instance again and again highly effective antibiotics and antiseptics are prescribed in paraffin-enriched bases. The inappropriate pharmaceutical base creams cause relapses shortly after discontinuing the ointments when the persons concerned then start with their cosmetic skin care. Described relapses are not limited to acne and rosacea indications though.

Irritations and allergies

Preparations with too many different active agents stand for another and particular type of overabundant skin care. Adverse effects can also develop when several preparations are used at the same time. In this case, an interaction of different substances may occur. On the other hand, the statistical probability is increasing that the multitude of substances may contain an irritating or allergenic agent. Few active agents, well selected and applied in adequate dosage after a thorough analysis of the skin definitely mean a plus in skin care and tolerance.

Additives such as polyethylene glycols (PEG) may contribute to another problem – for in-

stance if the skin gets into contact with nickel-containing fashion jewellery. PEGs are related with the crown ethers in chemistry and can solubilise the oxide layers of the metal and then directly transport the so released nickel ions into the skin. Other complexing agents (see below) show similar reactions.

Oil-in-Water emulsions (O/W) can be counter-productive when they are more and more copiously applied after the first positive results with the objective of further improving the already excellent performance. After the water evaporated, the hydro-soluble substances will accumulate in the superficial skin layers in such a way that the predisposed skin can develop irritations. This frequently applies in the case of rosacea and perioral dermatitis. It is based on the incapability of the skin to adjust the differences between extra and intra cellular concentration. A similar effect occurs when salt is poured into a wound. That is the reason why the individuals concerned usually also react to dried sweat and salt residues from sea water. The irritation will disappear immediately after reducing the amount of the skin care preparation.

A recommended alternative is the change to water-in-oil emulsions (W/O) or non-aqueous creams. Due to the high lipid content though – as already mentioned above – it is suggested to apply them sparingly. Quite a number of the above-described reactions will not appear immediately after the first application of the preparations but within a delay of several days. Accordingly, the customers complain that they first had tolerated the preparations and then started having problems. In other words, a certain cumulative effect is required before reactions start to develop. Since certain active agents have conditioning effects, evidence suggests that the daily amount of application should not be augmented but rather be reduced. This for instance applies to wrinkle-reducing substances that trigger muscle relaxing effects (Botulinum principle).

Abrasive treatments

How often should you apply peelings or a microdermabrasion, or generally speaking, abrasive procedures? Actually it is a frequently asked question. Here too, a trend becomes obvious which makes sit up and take notice. It is no longer a secret that customers with years of regular fruit acid treatments more often tend to develop rosacea and perioral dermatitis. So far the details involved have not yet been figured out. It is assumed though that the regenerative properties of the skin are limited as in the case of sun burns and that the skin becomes increasingly prone to connective tissue

disorders as well as infections and allergies. Overdoing skin care hence does not only apply to the dosage but also to the chronology and intensity of treatments. In the case of peelings, the less spectacular removal of already loose superficial cell structures eventually is the better choice – as for instance by using preparations containing wax beads or enzymes.

Specific ingredients

Consumers appreciate preparations that are easy to apply and provide extensive protection against any potential contingency. This resulted in the fact that within the past decades day creams often have been equipped with UV filters. These filters however are useless during winter season but also during summer when staying in closed rooms. For their leisure or beach activities the consumers already use additional sun protection products with high filter performance. Since the light protection factors of the skin care preparations also impede minimal but in physiological respect beneficial doses of radiation, the respective day creams mentioned contribute to the widespread vitamin D deficit. This deficit inevitably

needs to be compensated by adequate vitamin preparations.

Adverse effects

Overabundant skin care also involves the issue antioxidants that are again and again emphasized as an imperative in preventing the premature skin aging process. This certainly is correct. In some cases however adverse effects can appear as for instance in cases where oxidations can be a physiologically necessary reaction. The melanin formation from tyrosine should be mentioned as an example in this context. It also is a fact that small amounts of the disreputable natural hydrogen peroxide of the body belong to the physiological redox buffer and function as a membrane-permeable signalling molecule. High dosages of potent antioxidants in cosmetic skin care creams can disturb the physiologically necessary processes. The same applies for potent complexing agents such as EDTA which besides exogenous also can bind the endogenous heavy metals that are important for the oxidoreductases.

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