

10 major skin care errors in the cold season

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Year after year the same situation at the end of autumn: leisure activities retreat indoors, sports activities are gradually reduced, heating period begins and the light comes from artificial sources. And every year we are caught off guard that the skin also reacts to the new situation, sometimes sooner sometimes later, depending on the skin condition.

A topic skin usually develops the first symptoms. It becomes irritated and the question arises why such symptoms occur. With approaching winter the difference between inside and outside temperature at a more or less consistent inside temperature (neglecting temperature peaks) can rise up to 30 °C (cf. table). Associated with it, the relative interior air humidity is decreasing from about 70 to about 10 percent.

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And another tip: also in winter the skin en-

Season (month)	Outdoor temperature	Relative humidity of the air outdoors	Indoor temperature	Relative humidity of the air indoors
September	20 °C	70%	20 °C	70%
October	10 °C	100% (fog)	20 °C	50%
November	0 °C	100% (white frost)	20 °C	25%
January	-10 °C	100% (snow)	20 °C	12%
March	0 °C	50% (NE wind: wind chill)	20 °C	12%

Table: Temperatures and humidity of the air in the winter season

1. The humidity of the air directly influences both the transepidermal water loss (TEWL) and skin hydration. A reduced humidity of the air results in increased TEWL and reduced skin hydration. These alterations should be considered in advance and need adequate preventive measures.
2. During winter season more attention should be paid to the moisturizing factors in skin care creams while the dosage of lipid substances as well as the moisture retaining film-forming substances should possibly be increased. Otherwise the skin dehydrates and the barrier is open for the penetration of microorganisms and other foreign substances. It is not a secret that the risk of infection reaches its maximum by end of winter. At the same time also influenza and irritations of the mucous membrane in the respiratory tract have reached their peaks.
3. A factor which tends to be overlooked is clothing. If it is too tight, the barrier substances are rubbed off. In the case that it is incomplete parts of the skin are not protected and become hypothermic. Inappropriate materials transfer impregnation agents onto the skin that can result in irritations or pimples. No air exchange and hot and moist conditions cause a changed microbiome spectrum. The same applies to the feet, or in other words, boots that reach up to the knee and are worn for hours and hours lead to mycosis conditions on the feet.
4. Resuming the topic of a changed composition of skin care products, it has to be mentioned that skin care should not be exaggerated. Too much of it overstrains the sensitive skin prone to rosacea, perioral dermatitis and acne. Besides applying moderate amounts, attention has to be paid to the fact that the growth of anaerobic germs under the protective skin care layer is inhibited. This can be achieved with the strong preservatives listed in the German Cosmetic Directive however with the risk of catching allergenic conditions. In order to avoid such conditions, liposomal azelaic acid sera for the pre-treatment or an azelaic acid content of up to 1% in phosphatidylcholine containing creams and oleogels are excellent alternatives. Phosphatidylcholine, the base material of our cell membranes provides an optimal availability of the active agent.
5. Applying cosmetic products with sun protection factors is not necessarily a mistake in winter but these agents are not

needed. Since they are not physiological chemicals they will not strain the skin. However the cosmetic additives possibly needed when such filters are used can thus be avoided.

Dr Hans Lautenschläger

6. Eyes and lips are frequently overlooked when preparing the skin for the winter season. With respect to the eyes we are talking about the adaption to the artificial light that increasingly is stressful in combination with VDU work and finally can result in dry eye syndrome. Spraying adequate lotions on the closed eyes can prevent the symptoms before the problem develops and then is hard to remedy.
Lips obviously need more product applications in winter; an alternative is to change to skin care products with other ingredients. In the case that facial creams have also been used for lip care then it is recommended to replace the products with gentle phosphatidylcholine-based oleogels without paraffin.
7. A fact that often is underestimated is the influence of daily exercises on skin, connective tissue and microcirculation. When the time spent outdoors is reduced and sporting activities are tailing off, it is recommended to actively resolve the deadlock. It also helps keeping under control the fat stores usually gained around Christmas. A subscription to the gym which can also be booked online can be a great help in maintaining the work out on a regular basis during the year.
8. Concerning skin care creams it should be considered that a more intense barrier protection during the day requires a lighter cream in the evenings to enable optimum regeneration during the night.
9. Finally some words with regard to skin cleansing: during winter season we prefer warmth and rather shun cold water. After a hot shower, cold water however is the ideal treatment to tighten the connective tissue and improve the skin condition as it releases adrenal hormones.
10. What should be done but often is neglected is carefully drying off the areas between the toes. It is significant to allow several minutes of fresh air before the skin again is hidden between different layers of clothing. In this way the ubiquitous fungal spores have less chance to be up to mischief on the still humid skin. In the case that an infection has been triggered, often in the form of tinea pedis (dermatophytes infection), it is recommended to apply an antimycotic preparation, as for instance with the active agent terbinafine, before the pathogens delve deeply into the skin.