

# Sensitive skin – identifying symptoms and causes

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Besides the fact that simple causes often have major consequences for the skin, cosmetic practices are also confronted with complex issues when it comes to sensitive skin. Identifying the complex problem is a major prerequisite for a causal and successful cosmetic treatment.

In industrialized countries we have been observing an increasing trend towards sensitive skin for years. This phenomenon is attributed to cultural and behavioral influences. The term "sensitive skin" is quite comprehensive, though. But can low-fat skin already be defined as sensitive skin? Well, possibly, if it is due to barrier disorders with the consequence that irritating substances can penetrate from outside into the skin. Yet, if the skin barrier is intact and we are only dealing with a reduced sebum production, there shouldn't be problems. This rather simple example can indicate how difficult it is to diagnose this specific skin condition in the cosmetic practice. In order to provide competent consultation and a professional and individual treatment, the subjective feeling of the customer, measurement-based skin data and the visual appearance have to be considered. All in all, the following questions should be taken into account:

- What are the symptoms of sensitivities?
- What sort of influence is involved?
- When did the skin start to develop symptoms?
- What kind of treatment is available?
- What can be done to prevent sensitive skin?

The overall aim is to correctly interpret all signs of sensitivity in order to take adequate measures in the cosmetic practice – both, as a preventive as well as acute therapy.

## Symptoms

Most of the symptoms of sensitive skin can be visually recognized. Some of them, as for instance erythema or dry skin, can also be quantified with the help of measuring devices. In particular, we are dealing with

- **temporary erythema:** flush (medical drugs, alcohol, spices), retention of substances in the horny layer with im-

pacts on the microcirculation (e.g. anti-rheumatic ointments), irritations due to cold weather conditions

- **permanent erythema including disorders of the connective tissue:** rosacea, couperosis
- **photodamage:** sun burn, actinic keratosis
- **inflammations:** acne, neurodermatitis, perioral dermatitis
- **barrier disorders** including NMF deficits
- **itching**
- **keratoses** (cornification disorders): psoriasis, ichthyosis
- **pigment disorders:** hyperpigmentation, vitiligo
- **atrophy:** aged skin, influence of medical drugs

## Influences

A crucial factor in detecting the root cause of the symptoms is to narrow down the exact point in time when the first symptoms started to develop. Basically, there are physical, chemical and biological factors:

### Physical factors

- temperature (heat, cold)
- radiation: sun radiation, cancer therapy, phototoxic conditions
- clothing and shoes: occlusion, mechanical pressure and friction, impaired microcirculation

### Chemical factors

- working substances: irritation, sensitization, multiple chemical sensitivity (MCS)
- water and dissolved substances: hard water, chlorinated water, tensides
- dust and atmospheric aerosols: pollen, radicals, nitrosamines
- clothing: waterproofing, preservation, softeners, dyes
- pharmaceutical drugs

- cosmetics: preservatives, perfumes, softening agents, emulsifiers, different forms of peelings, excessive skin care

#### Biological factors

- germs, infections
- nutrition: fatty acids, vitamin deficits, alcohol, nicotine, diets
- hormone balance: puberty, menopause
- hereditary conditions

#### Treatment alternatives

The protection of the skin is an indispensable part of the treatment. As important as skin protection, if not even still more important is a maximum support of the natural recovery of the skin. Both the principles correspond with the maxims of corneotherapy originated by Professor Albert M. Kligman. Important supplementary measures are modern transport systems as for instance liposomes or nanodispersions used for the transport of cosmetic active agents in order to achieve excellent efficacy with low concentrations of actives. Regarding the selected active agents, the focus is on such substances which influence skin hydration and TEWL, skin barrier and sebum, cornification disorders, erythema, irritations, microorganisms, blood vessels and connective tissue, itching as well as free radicals.

#### Prevention

As a matter of fact, an optimal treatment of the skin will also support the prevention of sensitive skin. Besides, there are various additional aspects to consider as for instance: hygiene, skin cleansing, perspiration, sun protection but also the prevention of phototoxic reactions by PEG, essential oils etc. (with due regard to INCI and Cosmetic Decree lists) as well as makeup. Among others an indication-oriented skin care is recommended for skin conditions like perioral dermatitis, rosacea and couperosis, perianal barrier disorders as well as radiation therapy.

#### More detailed information is provided in the following articles:

- H. Lautenschläger, Korneotherapeutische Hautpflege bei Rosacea, Ästhetische Dermatologie (mdm Verlag) 2010 (3), 16-20
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- H. Lautenschläger, Nanopartikel in Kosmetika - Gut oder schlecht?, Beauty Forum 2009 (5), 44-47
- H. Lautenschläger, "Ich vertrage das Produkt nicht" - Einfluss von Arzneimitteln auf Haut und Hautpflege, Kosmetische Praxis 2009 (2), 11-14
- H. Lautenschläger, Haut im Stress - Juckreiz & Co - Ursachen und Lösungen, Beauty Forum 2008 (10), 106-108
- H. Lautenschläger, Wenn die Haut reagiert - Kosmetika und ihre Wirkungen, Beauty Forum 2008 (9), 114-116
- H. Lautenschläger, Hautpflege bei Strahlentherapie - Beruhigen, stärken & schützen, Beauty Forum 2008 (8), 32-34
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- H. Lautenschläger, Wirkstoffe für sonengeschädigte Haut – Von Aloe bis Weihrauch, Beauty Forum 2007 (9), 78
- H. Lautenschläger, Liposomes, Handbook of Cosmetic Science and Technology (A. O. Barel, M. Paye and H. I. Maibach), 155-163, CRC Press Taylor & Francis Group, Boca Raton 2006
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