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Dermatological special care
for dry and very dry skin

Product presentation June 2011

DRY SKIN CHILDREN

Exogenous and endogenous factors

- environmentally-induced (exogenous), e.g. due to dry heating air, improper skin care
- endogenous factors like atopic dermatitis, psoriasis, ichthyosis

General care instructions to avoid exogenously induced skin dryness

- Skin Care -

- After cleaning the skin, a suitable cream or lotion should be used to substitute lost lipids and to protect sensitive skin from moisture loss.
- For whole-body care very oily creams are less suitable because they may clog the pores and thus cause pimples. Especially when it is warm, light lotions or cream lotions should be preferred.
- The products should be clinically tested for children and should contain if possible no perfume and no preservatives.

The rules for skin cleansing and care are of general validity. They are especially important, however, when the baby or small child has a predisposition to atopic dermatitis.

What is Neurodermatitis?

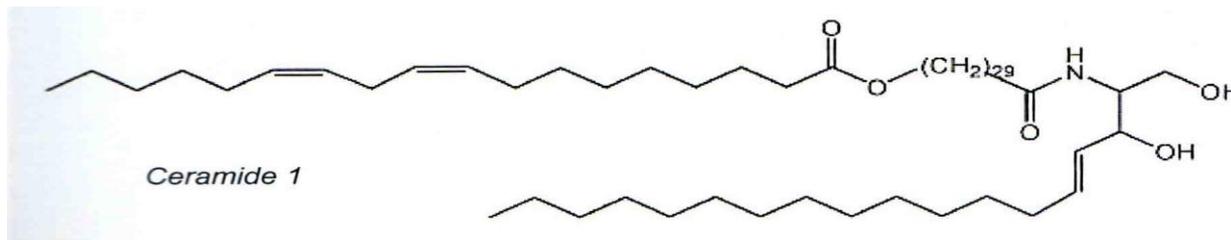
- Atopic dermatitis is genetically determined
- The phenotype is individually quite different and the result of complex interactions between genetic as well as endogenous and exogenous provoking factors (stress, wool, soap....)
- Due to an interfered dermal lipid synthesis, people with atopic dermatitis generally have an impaired epidermal barrier with an increased transepidermal water loss (TEWL g/m²h).

The Impaired Skin Barrier in Atopic Dermatitis

- Due to the impairment of the skin barrier, environmental factors like allergens and toxins can penetrate the skin more easily. In conjunction with frequently present concomitant immune system impairments this leads to a high risk of allergies in people with atopic dermatitis.
- The underlying cause of the impaired skin barrier is a lack of the **essential omega 6 fatty acids linoleic acid and gamma linolenic acid**, which often cannot be metabolized correctly by atopic skin (enzyme deficiency „false ceramides“).

Ceramide 1

- Share: approx. 8 % of total ceramides
- Extremely important for the stabilization of the lamellar double layers of the Stratum corneum
- Characteristic feature: polyunsaturated linoleate chain – the only unsaturated fatty acid in the Stratum corneum
- If linoleic acid is deficient, different fatty acids are used instead:
➡ defective barrier



Consequences of Atopic Dermatitis for the Skin

Characteristic consequences of an impaired skin barrier in all cases of atopic dermatitis:

- Dry or extremely dry skin
- Redness, inflammation, eczema
- Itching skin (pruritus)

Dry Skin in Children (endogenous causes)

- Atopic dermatitis is the most common chronic disease in children
- Most cases are noticed in infants and toddlers
- 13 % (10 - 15 %) of preschool children are affected (R. Fölster-Holst, University Skin Clinic Kiel / Germany)
- Overall 15 - 20 % of the German population has an atopic disposition

Very dry and extremely dry skin requires specific, medically oriented care.

In case of massive impairment of the skin barrier due to endogenous factors – as in the case of atopic dermatitis – a therapy accompanying care to support the skin functions is of utmost importance – particularly in children.

Products for Dry Skin

- Creams and lotions containing UREA, a natural moisture binding factor, are important medical care products.
Example: EUBOS DRY SKIN UREA.
- UREA is contained in products in concentrations of approximately 3 % to more than 10 %.
- The positive properties of urea cannot always be used in baby and child skin care, because in cases of very sensitive skin it often gives rise to a „stinging effect“ (burning sensation of the skin).

DRY SKIN IN CHILDREN



Requires particular care

- ✓ The addition of special lipids, which strengthen the skin barrier and prevent drying out
- ✓ Anti-inflammatory, skin soothing active agents which prevent skin lesions and itching
- ✓ Moisture retention agents and vitamins to support healthy skin function

To minimize the risk of allergies,
products for DRY SKIN IN CHILDREN
should possibly be
free from fragrances,
free from preservatives
and free from other substances that have
an elevated allergenic potential.

DRY SKIN IN CHILDREN

Basic causes

In principal, the underlying cause is always an impairment of the skin barrier.

The content of lipids and moisture is not balanced.

Particularly in the case of atopic dermatitis, ceramides (important cementing substances of the Stratum corneum or corneal layer) lack the proper structure, thereby compromising the barrier layer; the essential fatty acid metabolism is impaired.

HAUT RUHE

Based on the knowledge of the underlying causes, the following products were developed specifically for children's dry skin by EUBOS Research:

- HAUT RUHE LOTION (O/W emulsion)
Basic whole body skin care for daily use
with 6 % evening primrose oil, shéa butter and extract from St. John's wort
- HAUT RUHE CREAM (W/O emulsion)
Intensive care for particularly stressed areas of the skin
with 10 % evening primrose oil, and skin calming agents with extract from St. John's wort
- HAUT RUHE FACIAL CREAM (O/W emulsion)
Daily care for very sensitive, dry facial skin
with omega 6 and omega 3 lipids from 6 % evening primrose oil and Echium oil, Cardiospermum extract.

HAUT RUHE CREAM and LOTION: The Lipids

LOTION (Basic care):

- 6 % evening primrose oil plus
- Sweet almond oil
- Jojoba oil (liquid wax ester with excellent skin feel)
- Shéa butter (Beurre de Karité), soothes and protects the skin



CREAM (Intensive care):

- 10 % evening primrose oil plus
- Purcellin oil = biomimetic ester oil, fashioned after the secretions of water birds, for a fine, non-greasy protective film
- Dicaprylyl ether, a plant-based component for better spreading



- HAUT RUHE FACIAL CREAM (O/W emulsion)
With omega 6 and omega 3 lipids from evening primrose oil and echium oil as well as skin soothing agents with cardiospermum extract

Why a special facial cream?

Since the face is nearly always exposed and thereby more affected by environmental influences than the rest of the skin.

This is why a special combination of active agents is used to protect and soothe the sensitive skin which has an anti-irritant effect (Défensil).



Evening Primrose Oil

CREAM, LOTION, FACIAL CREAM



- Is an extremely valuable oil that is extracted from the seeds of the yellow flowering evening primrose. About 10,000 seeds are needed to obtain 1 gram of the oil.
- Is particularly rich in the essential omega 6 fatty acids cis-linoleic (70 %) and gamma linolenic acid (approx. 10 %)

Essential: An important substance for the body, which the body is unable to synthesize and must therefore be obtained from the outside.

Essential Fatty Acids and their Function in Skin

- Linoleic acid is important for building an intact protective skin barrier function.

In healthy skin, it is a component of ceramide 1, an important barrier lipid. Healthy skin also uses linoleic acid for enzymatic conversion to

- Gamma linolenic acid  an important precursor for further biochemical conversions. Their end products (prostaglandins) are essential for the skin's natural barrier function against toxins.

 In case of atopic dermatitis, these conversion processes are endogenously impaired.

Evening Primrose Oil

with its high content of

linoleic acid and gamma linolenic acid

- supports the protective barrier function of the skin
- in particular also of atopic skin, which has a genetically determined lack of these essential fatty acids