PROTEXSAN

INDIVIDUAL PROPHYLAXIS FOR SENSITIVE OR EXTREMELY STRESSED SKIN

Occupational Skin Protection with Luteolin

ECARF
Allergy-friendly Quality Tested
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Physioderm®
sensitive nature

HAND ECZEMA: THE MOST FREQUENT OCCUPATIONAL DISEASE

Hands are a human being's most important tool for almost every kind of work. In professional everyday life, they are in constant use – and they are often exposed to special stress. Thus, it is really important to protect the hands from harmful impacts. If strongly stressed hands are not protected sufficiently, the skin will be overburdened and irritated. Severe and chronic contact dermatitis may arise.

Occupational skin diseases are by far the most frequent health risk at work. In 2011, more than 25.000[1] new suspicions of occupational dermatitis have been reported in Germany. The hands were affected in many cases. Especially employees in small and middle-sized companies suffer from hand eczema, since there is often a need for improvement in the matter of skin protection.

[1] Source: DGUV-Statistiken für die Praxis 2011, Editor: Deutsche Gesetzliche Unfallversicherung e.V., S. 56/57

THE RIGHT PREVENTION

In general, the following levels in the prevention of occupational skin diseases can be distinguished:

Primary Prevention

The aim of primary prevention is to avert the emergence of occupational skin diseases among employees with healthy skin.

Secondary Prevention

The aim of secondary prevention is to avert the resurgence or the chronification and exacerbation of already manifested occupational skin diseases.

Tertiary Prevention

At tertiary prevention level, a manifest occupational skin disease already exists and has led to its medical indication. In this case healing by avoiding the causal expositions is intended.

CONTACT DERMATITIS AT A GLANCE

An eczema is an inflammation of the skin and its symptoms are as diverse as its possible causes; various factors are often responsible for the disease. In order to prevent a chronic course, early diagnosis and consequent treatment are essential.

Acute Toxic Contact Dermatitis

In case of direct contact with the skin, many substances, e.g. acids and bases, irritate the skin to such an extent that they directly induce an eczema. This acute toxic contact dermatitis remains exactly restricted to the skin area which has been in contact with the harmful substance. In combination with the immediate reaction, this mostly allows a quick conclusion to be drawn about the inducing substance.

Irritant Contact Dermatitis

The cumulative irritant exposure to water or skin-irritating substances, e.g. surfactants and other degreasing substances, is one of the most frequent causes of occupational skin diseases. In case of direct contact with the skin, the questionable substances often are little harmful, but in the long run, they affect the skin repeatedly and weaken its barrier function. Therefore, harmful substances and potential allergens are able to enter the skin increasingly easy. As time goes by, the damages add up and irritant contact dermatitis may arise.

Allergic Contact Dermatitis

In their professional everyday life, many people encounter potential allergic and sensitizing substances. The repeated contact may induce allergies – even after many years in which the skin has not been sensitive to the respective substance. If the skin is extremely stressed or already irritated, the risk of sensitization will increase. An intact and protected skin is a good possibility to prevent allergic contact dermatitis.

Atopic Contact Dermatitis

Atopically inclined persons react especially sensitive to environmental influences. The danger of eczema inducement caused by substances affecting the skin or worsening an existing eczema has considerably increased. For that reason, it is crucial for atopic persons to protect their skin from contact with harmful substances.

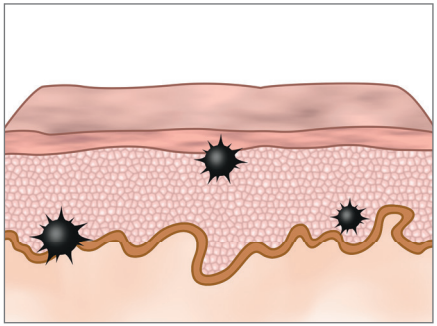
90 percent of all cases of dermatitis are irritant and allergic eczema which are caused by the skin's direct contact with harmful substances.

PREVENTION is the best medicine

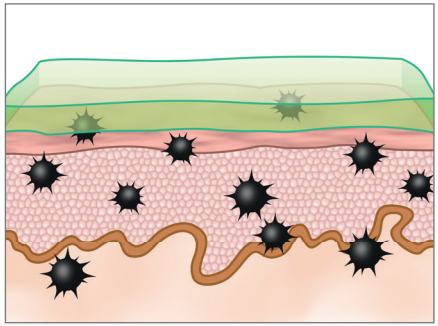
Adequate skin protection prevents people with occupationally extremely stressed hands from developing eczema. Due to appropriate protection, already irritated skin is saved from further damages and is supported in its regeneration process.
Skin protection is a preventative measure and not a therapy in case of an existing disease. However, in the course of therapy, especially while being reintegrated at the workplace, skin protection products can be applied additionally.

EFFECTIVE PROTECTION AGAINST WORKING MATERIALS AND FREE RADICALS

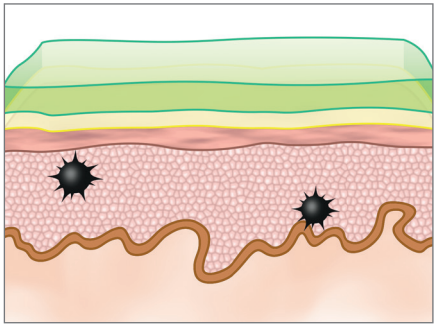
Occupationally extremely stressed hands are in need of comprehensive protection – this will be even more necessary if the skin is already stressed and irritated. The innovative skin protection cream PROTEX*SAN* protects sensitive or extremely stressed hands in an especially efficient way. The cream does not contain emulsifiers and regenerates the skin's barrier because of skin-related ceramides and a new lamellar structure which is similar to the structure of the epidermis. Moreover, the cream uses the antioxidant properties of the natural substance luteolin in order to counteract aggressive oxygen radicals effectively. Additionally, PROTEX*SAN* does not only protect hands from the working materials they are in contact with in professional everyday life. The luteolin contained also reduces the inflammation risk which is caused by the formation of free radicals.



In unstressed skin, free radicals form to an extent which can be reduced by the body's own antioxidants.



The increased formation of free radicals in occupationally extremely stressed skin overexerts the skin's repair mechanisms. The cell damages resulting from this overexertion are co-responsible for the development of eczema.



A skin protection cream containing luteolin prevents the excessive formation of free radicals in occupationally extremely stressed skin.

A Main Reason for Skin Cell Damages: Free Radicals

Free radicals rank among the most important reasons for skin damages on a cellular level. According to the latest scientific findings[2], free radicals contribute to the pathogenesis of irritant and allergic contact dermatitis as well.

The Formation of Free Radicals Inside of the Skin

Free radicals are atoms or molecules which have at least one unpaired electron.
Due to ordinary metabolic processes, they arise from molecular oxygen inside of the body. Different factors contribute to their occurence inside of the skin – next to UV radiation, especially the impact of detergents, allergens and other skin-irritating substances is an important aspect.

Due to their high reactivity, free radicals damage proteins, lipids and important molecules such as RNA and DNA. Healthy cells are able to render dangerous particles harmless. However, a concentration of free radicals, which is too large, overexerts the repair and detoxication capacities of the cells and results in oxidative stress: an injury of cellular and extracellular macromolecules.

[2] cf. Senaldi G. et al. (1994), J Invest Dermatol 102: 934-937 and Willis CM. et al. (1998), Eur J Dermatol 8: 8-12

HIGHLY EFFECTIVE NATURAL ANTIOXIDANT

The natural substance luteolin is extracted from the medicinal plant Reseda luteola and it is one of the most effective antioxidants in the plant kingdom. Luteolin does not protect sensitive or extremely stressed skin from free radicals only, it also protects the skin from the irritation caused by irritant and potentially allergenic substances. Furthermore, luteolin operates in an anti-inflammatory way, it absorbes UV radiation and it stimulates the formation of collagen.

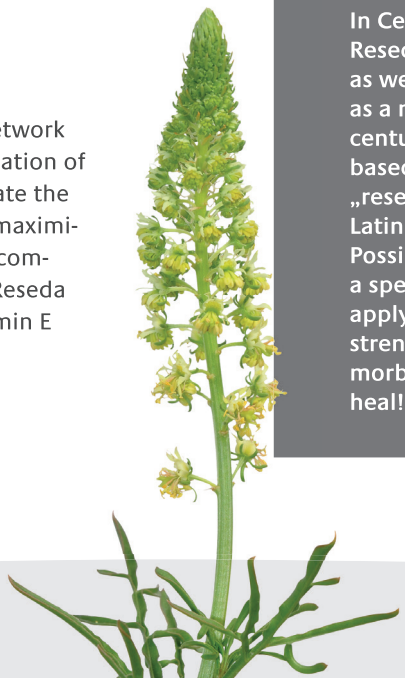
A skin protection cream containing luteolin is ideally suitable for people whose hands are repeatedly exposed to water and water-soluble working materials in the course of their professional activities.

Strong Combination: Luteolin, Q10 and Vitamin E

Various antioxidants protect each other and create a network inside of the skin which absorbs free radicals. A combination of luteolin and other radical scavengers is able to potentiate the ingredient‘s effect many times over. Thus, PROTEX*SAN* maximizes the protection against free radicals because of the combination of the patented flavonoid extract taken from Reseda luteola (Luteolin) and the body‘s own antioxidants vitamin E and coenzyme Q10.

Reseda luteola: Healing power from nature

In Central Europe, the plant Reseda luteola, which is also known as weld or wild mignonette, is used as a medicinal plant since the 18th century. Even the plant‘s name is based on its effectiveness, because „reseda“ is the imperative of the Latin verb “resedare“, “to heal“. Possibly, the name traces back to a spell which was spoken while applying the plant in order to strenghten its effect: “reseda morbos, reseda!“ (“Heal the disease, heal!“).



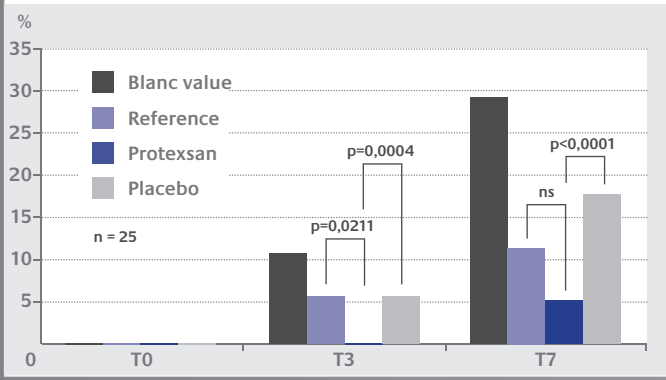
FROM A SCIENTIFIC PERSPECTIVE

Dermatologically Proved Protective Effect of Luteolin

In the course of a project which has been granted by the German Federal Ministry of Economics and Technology, the Department of Dermatology at the University of Freiburg developed an innovative skin protection cream containing luteolin. As a result of this project, Prof. Dr. C. Schempp and Prof. Dr. W. Gehring observed that luteolin is able to protect human skin effectively. The dermatologists ascribe the natural substance's outstanding protective effect to properties which are UV-absorbing, DNA-protecting, antioxidant, anti-inflammatory and which protect the skin's extracellular matrix[3].
In the repetitive washing test, the skin protection cream PROTEX*SAN* with luteolin showed a superior protective effect – also in comparison with other preparations. During the test period, PROTEX*SAN* was the only product which even improved the hydration of the skin's horny layer.[4]

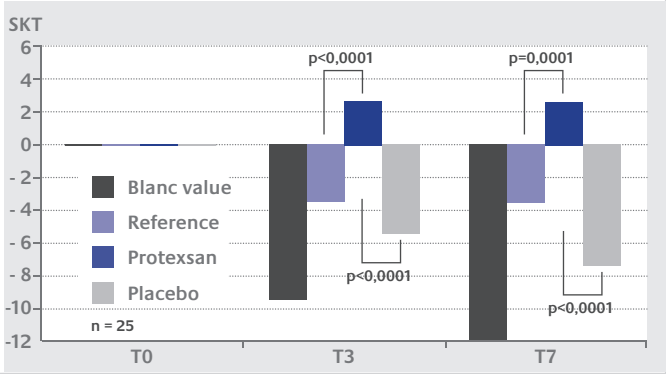
Anti-Inflammatory Effect

The repetitive washing test on untreated skin led to an increasing inflammatory reaction which was documented as an increase of the cutaneous blood flow.
PROTEX*SAN* prevented the increase of cutaneous blood flow completely on day three and reduced it in the clearest way on day seven.[5]



Protection Against Transepidermal Water Loss

The repetitive washing test on untreated skin led to a statistically significant loss of stratum corneum moisture. Despite of the repetitive washing, PROTEX*SAN* was the only formulation which improved stratum corneum moisture at both observation points.[6]



[3] cf. Zentrales Innovationsprogramm Mittelstand (ZIM), AiF grant no. KF2556501SK0, „Entwicklung einer Hautschutzserie mit patentiertem Flavonoid-Extrakt aus Reseda luteola für den gewerblichen Hautschutz im industriellen Umfeld", Final Report of the Department of Dermatology, University Medical Centre Freiburg, Prof. Dr. C. Schempp and Prof. Dr. L. Bruckner-Tuderman. 2012.

[4] cf. Schempp, C. M., Meinke, M., Lademann, J., Ferrari, Y., Brecht, T., Gehring, W.: „Topical antioxidants protect the skin from chemical-induced irritation in the repetitive washing test: a placebo-controlled, double-blind study.", Contact Dermatitis 67: 234-237. 2012.
[5] cf. ibid.
[6] cf. ibid.

SKIN PROTECTION CONCEPTS FOR DIFFERENT PREVENTION LEVELS

Effective skin protection is essential for a long and healthy professional life. In order to operate optimally, the protection product in use has to be exactly adapted to the respective occupational situation and for the respective needs of the skin to be protected. In addition to the kind of working material the hands are in contact with in professional every day life, the skin‘s sensitivity, its preload and its degree of stress are an important factor in chosing the optimal protection program.

Physioderm® sensitive nature: Skin Protection System for Sensitive and Extremely Stressed Skin

The product line Physioderm® sensitive nature, which includes PROTEX*SAN* - the innovative protection cream with luteolin - has been especially developed for persons with extremely stressed, atopic and already irritated skin. If the sensitive nature products are applied consequently they will even be able to prevent the irritation of sensitive and extremely stressed skin. The product line is characterized by the fact that all formulations are based on natural active ingredients. Using the Physioderm® sensitive nature products offers companies a sustainable alternative to protect the environment and their employees‘ skin at the same time.

Complete Program for Efficient Primary Prevention

As one of the leading providers in the field of occupational skin protection, we also hold a comprehensive product range for primary prevention. The complete Physioderm® program offers solutions precisely fitting for all requirements. For further information please visit: www.physioderm.com

Physioderm® sensitive nature at a glance

- suitable for primary prevention in case of sensitive skin
- therapy-concomitant concept for skin protection, skin cleansing and skin care
- especially skin-compatible
- natural and biological ingredients
- fragrance-free and colorant-free
- free from mineral oil and silicones
- without preservatives and emulsifiers whenever possible
- NATRUE and without preservatives and emulsifiers whenever possible

INDIVIDUAL PROPHYLAXIS FOR SENSITIVE OR EXTREMELY STRESSED SKIN

PROTEX*SAN*: Effective Protection with Luteolin

The skin protection cream PROTEXSAN offers permanent protection in case of frequent contact with skin-irritating substances. The cream strenghtens the skin's barrier function and protects it effectively from free radicals and from water-soluble working materials.
In doing so, PROTEX*SAN* protects very sensitive, extremely stressed and already irritated skin. Luteolin, a natural antioxidant whose effect is potentiated by coenzyme Q10 and vitamin E, is an important factor with regard to the cream's outstanding effectiveness. Furthermore, luteolin is the reason why PROTEX*SAN* operates in an anti-inflammatory way, absorbs UV radiation and supports the formation of collagen.
The skin protection cream's innovative galenic system makes an important contribution to its effect as well. PROTEX*SAN*'s lamellar structure is based on the construction of the barrier inside of the skin's horny layer. Due to its skin-similar membrane structure, the cream protects and supports the skin's barrier function very effectively. Moreover, the cream's special production method makes the usage of emulsifiers redundant. For that reason, there is no opportunity for emulsifiers to build up inside of the epidermis and for the skin to lose important natural lipids due to the wash out effect.

STEPHALEN® *PURE*: Gentle Cleansing in Case of Light Dirt

The skin cleansing gel STEPHALEN® *PURE* is soap- and alkali-free and cleans sensitive skin gently and thoroughly. It contains the antioxidant sallow thorn in order to protect the skin from free radicals. STEPHALEN® *PURE* is fragrance-free and does neither contain colorants nor classic preservatives.

ACTIVE PEARLS® *PLUS*: Gentle Cleansing in Case of Heavy Dirt

The fragrance-free, gentle skin cleanser ACTIVE PEARLS® *PLUS* removes oil, soot, graphite and other heavy dirt effectively from the hands. It does not contain colorants. Non-abrasive, soft wax pearls made of hydrogenated castor oil (Active Soft Pearls®) serve as dirt-binding agent.

CARE *PURE*: Intensive Care

The intensive skin care cream CARE PURE cares for very dry and extremely stressed skin with natural oils. It also contains the antioxidant sallow thorn in order to protect the skin from free radicals. The cream is fragrance-free and does neither contain colorants nor classic preservatives. CARE *PURE* supports the skin's own regeneration process and its lipid percentage is 22.6 %.

06/2014

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