



Good sun – bad sun?!

News to protect against skin cancer

For many people sunlight is a source of well-being. Especially after the long winter we like to stay outside. Sunlight provides positive effects such as heat, stimulation of vitamin D synthesis and release of “feel-good-hormones” such as serotonin - a neurotransmitter of happiness. Many people still underestimate the risk of the sun and its potential to cause skin cancer. Meanwhile, skin cancer is the most common cancer of the Caucasian population, with around 240.000 people diagnosed yearly. This is roughly the population of Kiel in Germany. The incidence of skin cancer is rising rapidly.

The ozone layer protecting the earth from dangerous ultraviolet rays is 30 percent thinner in April and it was 40 percent thinner this year. The radiation being under the ozone hole means an exposure similar to a midsummer day. Hence, people do not yet expect a sunburn so early in this year. Therefore, a good sun protection is extremely important.

Sun protection Factor

Two areas are relevant in the radiation spectrum of sunlight: the ultraviolet rays A and B (UVA and UVB). The ultraviolet radiation stimulates the pigment production. A natural skin protection is the tanning effect which protects against sunburn for a while depending on the skin type. The long-wave UVA radiation penetrates deeper into the skin and causes changes in the connective tissue. The result is premature skin aging.

Good sunscreen products have to be effective in both types of radiation. They are marked with a sun protection factor (SPF). This is determined according to the so called COLIPA standard. The level of SPF means how long you can stay in the sun without getting a sunburn. For example, a SPF of “20” means that you can spend 20 times longer in the sun than it allows your own self-protection time of your skin. The self-protection time refers to the period of the first sun bath in the European midday sun without getting a sunburn. In Europe, the skin types are divided into four categories: very light (I) to light brown (IV). The average self-protection time is 15 minutes for skin type I up to 45 minutes for skin type IV.

Study of sunscreen lotion

Very few people realize that optimal sun protection for the skin is achieved only when the correct amount of sunscreen (2 mg / cm²) with the appropriate type of skin protection factor is applied and renewed at regular intervals.

Studies have shown that most people use only one quarter of the amount recommended on average and apply the lotion on the skin very unevenly. The UV-protective effect is minimized by a fraction of the sun protection

Contact details

ESCF - European Skin Cancer Foundation
c/o Kaiserin-Friedrich-Haus
Robert-Koch-Platz 7
10115 Berlin, Germany

Head

Univ.-Professor Dr. med. Eggert Stockfleth
Tel. +49 (0)30 - 450 518 266
Fax +49 (0)30 - 450 518 966
e.stockfleth@escf-network.eu

Manager

Birgit Hinrichs
Tel. +49 (0)30 - 450 518 358
Fax +49 (0)30 - 450 518 935
b.hinrichs@escf-network.eu

Public Relations

Stefanie Schnarr
Tel. +49 (0)30 - 450 618 375
Fax +49 (0)30 - 450 518 935
s.schnarr@escf-network.eu

Foundation board

Univ.-Professor Dr. med. Eggert Stockfleth
(Chairman)
Univ.-Professor Dr. med. Wolfram Sterry
Univ.-Professor Dr. med. Helmut Kerl
Dr. Markus Heuel
Peter Schouten

www.Facebook.com/ESCF.Network

Account details

Account holder:
Stifterverband für die
Deutsche Wissenschaft

Bank: Deutsche Bank AG, Essen
Bank code: 360 700 50

Account number:
247 190 210

IBAN: 48 360 700 500 247 190 210
BIC: DEUTDEDE



factor, marking on the packaging. Instead of a supposed protection it is a dangerous trap.

On the one hand, the highly protective sunscreen lotions are mostly under-dosed, and on the other hand are often misused for “tanning extension”. In recent years, the requirements of modern solar and light therapies are no longer “tanning help” or “sunburn protection”. Instead, the lotions intend to prevent skin cancer and photodermatoses (skin diseases caused with or by sunlight) and the delay of UVA associated skin aging. Therefore, the use of effective concentrations of the UV filters are of increasing importance.

New dispensing systems make it easier for people to apply the lotion correctly, because they can measure the lotion exactly and they will be better protected against UVA and UVB radiation in the future. With the help of the dispensing systems the exact amount of the lotion for the body, head and hands is possible to apply. This will set a new standard for the medical unprotective preparations.

Studies from the Skin Cancer Center Charité in Berlin (SCCC) in cooperation with the field of skin physiology are now being shown that sunscreen lotions with dispensers provide not only the effective concentration of 2mg/cm² applied to the skin, but also distribute it on the skin more evenly.

Sun protection for children

According to the worldwide increase of skin cancer, other UV-related skin diseases, and the desire for delay of skin aging, primary prevention by the use of sunscreen is more and more important.

This also means the protection of children’s sensitive skin: a sunburn in childhood is the biggest risk factor for the development of skin cancer. Surveys of the ESCF at 3400 families have shown that about 21 percent of the children had one to five sunburns already. Therefore, the project “SunPass” was developed by the ESCF and implemented with the help of partners in February 2009. “SunPass - Healthy Sun Fun in the Sun for kids” is a project to honor day care centers for their active efforts in sun protection. Since 2009, 55 day care centers in Germany received the award. The main idea is to ensure a healthy and proper use of the sun for kids, parents and educators.

Skin Cancer Screening

Germany is the first country which offers skin cancer screening as a standard benefit of the public health insurances. The aim is early detection of non melanoma skin cancer and malignant melanoma. As a result, the forecasts can improve substantially, the mortality rate can be reduced, and most importantly the screening can save lives. Meanwhile, the screening has a high reputation within the population. Socially deprived people also have access to high quality prevention methods.



In Germany, about 13 million people went to the screening in the past two years . This represents 29 percent of the beneficiaries. About 80 percent of skin cancer screenings were done by dermatologists.

According to the Forsa survey commissioned by the Deutsche Dermatologische Gesellschaft (DDG) in March 2011, 88 percent of Germans over 18 years old think skin cancer screening. Is important, 45 percent of the respondents say that skin cancer is a topic they are interested in, and 76 percent wish that the screening is done by a dermatologist.

Skin cancer therapy

Skin cancer has become the most common cancer of the world. In recent years the number of skin cancer cases has exceeded all other cancers combined, an alarming development. In Germany there are 300.000 new cases of non melanoma skin cancer (actinic keratoses, squamous cell carcinoma and basal cell carcinoma). The actinic keratoses (AK), a change caused by chronic light damage to the keratinized upper skin, is an early type of skin cancer. Up to five percent of all cases can lead to a squamous cell carcinoma.

AK occurs mostly in the parts of the body that are exposed to sun (forehead, neckline, arms, back, neck and head). Modern treatment methods for AK include a therapy with creams and gels. Now these new, local forms of therapy can replace the surgery.

In addition to the modern laser scanning technology for the diagnosis of skin cancer by "optical biopsy", the treatment of non melanoma skin cancer remains more and more exciting because new local treatment methods are expected.

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