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# Sunscreen

In the June 1991 edition of WEST WIND, there is an excellent Sunscreen Update by Christine A Johnson M.D. of Pomona, CA. the following are a few key points:

"Our changing environment is a major concern today. It also is on important issue in relation to our health, especially our skin. With thinning of the ozone layer, and an indirect effect from air pollution, there is an increasing potential for sun damage and skin cancer.

Ultraviolet rays are commonly divided into three types: UVA, UVB, and UVC. UVC rays are absorbed in the upper atmosphere by the ozone layer. UVA and UVB reach the earth. UVA rays are referred to as tanning rays and contribute to photoaging of the skin. They penetrate cloud cover, car and home windows, and are present year round at all altitudes and latitudes. UVB rays are referred to as burning rays and are associated with the major photoaging changes and can cause skin cancer. UVB rays are the most intense from 10:00 a.m. to 2:00 p.m. and are strongest in spring and summer.

The best way to protect our skin is by wearing protective clothing (long sleeve jackets or shirts, hats, gloves, minimizing sun exposure during the peak periods) and using sunscreens or sun blocks. Reflective surfaces such as sand, water, and snow necessitate sunscreens. Sunscreens come as creams, gels, lotions, sprays, or in a stick form and protect against the harmful effect by absorbing and/or reflecting the ultraviolet rays.

Sunscreen protection is designated by a sun protection factor: SPF. It is the ratio of the time it takes to develop a minimal burn with a sunscreen to the time it would take to burn without a screen. For example, SPF 2 gives 580% protection, SPF 15 gives 93% protection, and SPF 34 gives 97% protection. The 4% difference is minimal and SPF 15 products are usually sufficient.

Different sunscreen chemicals absorb specific wavelengths of the UVL spectrum. PABA (amyldimethyl) is an excellent sunscreen, but causes burning of the skin during sweating in 20% of the population and since most of us sweat in the sun, this product is not popular.

## Sunscreens are divided into three types:

#### **Physical Barrier**

Ingredients: Zinc oxide, Talc, Titanium dioxide, and Red vet petrolatum Examples: R.V. paque & Zinc oxide Advantages: Good for children and lifeguards Gives good coverage and waterproof Rarely causes allergy Disadvantages: white or mask like appearance and messy to use

## Chemical Screen – Partial - UVB

PABA and esters (padimate O, A or glycerol) Advantages: esters are no staining, formulated in cosmetics Disadvantages: no protection fro UVA. PABA stains clothes and fiberglass Examples: Eclipse, Sundown, Blockout, Clini que Cinnamates: (Octyl methoxycinnamate & Cinoxate) used mainly in Europe Advantages: no staining and usually non sensitive Example: Sundare Salicylates: (Homomentyl, Octyl, Triehtanolamine) Advantages: easy to add to other products Disadvantages: low SPF alone Example: Coppertone lotion

#### Chemical Screen – UVA

Benzophenone: (ocybenzone) Advantages: absorbs daylight Disadvantages: causes sensitivity Example: solbar Parsol: new to U.S.A. Eusolex: Good UVA absorption

Popular sunscreens are usually combinations of the above chemicals such as Bull Frog 18, Neutrogena 15, Presun 15, Shade 15&45, Dupershade 15, Nivea 15, Photoplex 15, Ti Screen and may more. The base (vehicle) of the sunscreen is also important. A greasy base is to be avoided by individuals with acne, and alcohol base may be drying in older people. Fair skinned, blue eyed and red haired individuals with or without freckles, who burn easily and tan poorly, should <u>always</u> use a sunscreen SPF 15 or higher.

In general, a sunscreen should be generously applied to dry, clean skin prior to sweating, i.e. early in the day. Reapplication is recommended after swimming, exercising, or excessive sweating.

Eye irritation resulting from sunscreen and perspiration in the eyes can be solved by using the stick form around the eyes (Super Shade 25, RV PABA II Stick, Neutragena Lipstick, PreSun, Eclipse, etc.) or by using less lotion on the forehead and wearing a hat. By referring to the sunscreen list, an individual can select the product that meets his or her special needs. One must persist in finding a sunscreen that does the job and feels good on the skin.

Blue Lizard Sensitive Mineral Sunscreen SPF 50+ is one that is both an excellent sunscreen and won't sting your eyes.

Lets all be weather wise and let our Hearts SOAR another day!