SEDACTIL, Vitamin D and topical immunity

Besides being a physical barrier the skin is an organ capable of producing its own hormones. To perform such function, cholesterol is critical since it is the precursor for pregnenolone, the mother of all steroidal, feminine and masculine hormones. 7-dehydrocholesterol is the precursor from which cholesterol is formed in the skin being at the same time the precursor for the production of vitamin D_3 in the skin.

Vitamin D is fundamental for the organism in general where appropriate circulating concentration of vitamin contributes to the correct maintenance of calcium levels and bone health. Also for its mediation in initiating topical defense of the skin helping in the production of special antimicrobial proteins AMPs that rid the skin of pathogens and favor the correct balance between harmful and benign bacteria on the skin. This natural mechanism is more effective than any conceivable disinfectant and doesn´t harm the skin

When cholesterol is added to the skin, it will degrade very slowly and its presence will inhibit the synthesis of cholesterol from its precursor. The added cholesterol will replace in the skin the one that wasn`t produced locally and the excess will be cleared by esterification. This will liberate the 7-dehydrocholesterol for vitamin D production mainly, both for local and for systemic use. This is especially true if the skin is exposed to the sun for scarce 5-15 min. This conversion to vitamin D will endure for over 24 hrs after the brief exposure. Increase in vitamin D will mediate the production of AMPs and thus by this action the antibacterial power of the skin is markedly enhanced. This will also augment defenses against skin cancer and the same time beautifying the skin, since more vitamin D will favor repair of collagen modifications that occur in the dermis due to age or excessive solar exposure.

SEDACTIL is designed to provide the skin with precursors so that the diverse local hormonal biosynthetic options can take place, beit towards pregnenolone or either intracrine sunthesis of vitamin D with consequent secretion of AMPs enhancing the natural antibacterial power of the skin. Cholesterol present in the formulation is the optimal natural inhibitor of D7-reductase (converting 7-dehydrocholesterol to cholesterol), fact proved experimentally. Thus the 7-DHC remains available for conversion to vitamin D and particularly if the skin is irradiated by UVB. During the following 24 hrs the increase in vitamin D is matched by a parallel increase in the AMPs and a renewed vigor of the skin to fight harmful bacteria.

After SEDACTIL is applied to the hands, by simply enjoying the usual exposition to solar radiation of an habitual outing the benefit is ensured. Then you have hands that oppose a barrier to adherence of intruders by virtue of the protecting layer formed by the product plus the secreted

balanced natural antibacterial defense favoring the natural relation between beneficial bacteria and the skin. Vitamin D will also creates the microenvironment for the crosslinking of collagen that the organic silicon contained in orthosilicic acid will initiate, conjoining the polymer chains and resulting in collagen fibrils that bear strength and flexibility. Hands can be protected as long as 24 hrs depending on the number of hand washes practiced.

If you intentionally want to expose yourself to sun rays during vacations, apply SEDACTIL to the areas exposed and withstand sun for 5-15 min. Then apply a sunscreen over the SEDACTIL. After the sessions in over and after habitual bathing, reapply SEDACTIL to profit from the residual biosynthes¡s of vitamin D which will endure for more than 24 hrs thus facilitating abundance of precursor. This information should justly place the myths about sun exposure and the demonization that has been lead against it. Cautious and limited sun exposure with facilitating agents of topical vitamin D formation is desirable and very likely will protect the skin contrary to widespread belief.

In case of solar burn of 1st and 2nd degree, SEDACTIL is very efficient in relieving pain and in repairing the immediate damage to the epidermis and the mediate to the dermis, avoiding degradation of collagen and preventing DNA damage.

SEDACTIL is quite useful in topical dermatitis in reestablishing the antibacterial power of the skin by stimulation of AMPs secretion.

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