PSORIASIS

CAN SUNSCREEN USE LEAD TO VITAMIN D DEFICIENCY?

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Vitamin D is produced when the skin is exposed to sunlight. Vitamin D production depends on time, latitude, altitude, clothing, skin pigmentation, age and, according to some Authors, sunscreen use, which could be related to a decreased production of vitamin D.
UV radiation from the sun is involved in skin aging and it damage skin's cellular DNA, creating genetic mutations leading to possible skin cancer. The use of solar protection factors (SPF) is recommended for their prophylactic action on photocarcinogenesis, being designed to filter out most of the sun's UVB radiation However, some evidence suggests that there might be a correlation between solar filters and vitamin D deficiency but how sunscreens influence the vitamin D levels remains debated. A recent study about the effect of sunscreens on vitamin D production wanted to investigated the effect of 50+ SPF sunscreen on cutaneous vitamin D production and circulating 25(OH)D3 levels, according to different body surface areas (BSA). BSA were classified in four groups: head and hands (group I), head, hands and arms (group II), head, hands, arms and legs (group III) and total body (group IV). The study showed a reduction of cutaneous vitamin D production ranging from 75,7% to 92,5%. The levels of circulating 25(OH)D3, instead, decreased from 7,7% to 13,2%. Therefore, in spite of a great decrease of cutaneous vitamin D, the circulating 25(OH)D3 levels were only minimally affected. The Authors conclude that short term use of sunscreens is probably not related with an effect on circulating 25(OH)D3 levels but it remains to be determined that is true during chronic use of high SPF sunscreens. In conclusion, the debate on high SPF and deficiency of vitamin D is still open and lacking so it would be desirable to carry out further studies about the association between these two variables.