



PHOTOBIOLOGY AND PHOTOPROTECTION

RELATIONSHIP BETWEEN USE OF PHOTOPROTECTOR AND VITAMIN D SERUM LEVELS IN A SPANISH PEDIATRIC POPULATION

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Introduction: The high exposure to ultraviolet radiation during the first years of life is associated with a greater risk of melanoma and other skin cancer in adults. The use of photoprotection helps to prevent this risk but it has also been associated with a reduction of vitamin D (VD) serum level expressed as 25-hydroxy vitamin D (25OHD).

Objective: To know the use of photoprotection in children and analyze their impact on their serum 25OHD levels.

Material and methods: A cross-sectional study was conducted in children from Huesca and Madrid (Spain, latitude 42°N) to evaluate age, gender, hair and eyes color, melanocytic nevi number, freckles on face and shoulders, sunburn history and the use of sunscreen and other photoprotection measures. For this purpose, a validated questionnaire was used and a physical skin examination was performed. Also 25OHD serum levels were determined.

Results: The study comprised 244 children, 51.9% males, average age 5.83 (SD 4.33) years. Children who used SPF > 15 showed higher levels of 25OHD (27.9, SD 11.1 ng / ml) than those who used SPF < 15 (25.0, SD 10.6 ng/ml), being the differences statistically significant only during the summer (36.0, SD 13.1 ng/ml vs 25.0, SD 12.8 ng/ml respectively (p=0.007)). The number of hours of sun exposure was higher in children who used SPF > 15 (median 10 hours per week, P25-P754-15 hours) than those who used SPF <15 (median 5 hours per week, P25-P753-10.1 hours) (p > 0.05).

Conclusions: Children with phototypes I, II and III used FPS > 15 more frequently compared than phototypes IV, V and VI and suffer sunburn in a lower proportion. The 25OHD levels were higher in children who used SPF > 15 than those who used lower SPF, possibly because they were more hours exposed to the sun.

