Abstract

Solar ultraviolet (UV)-radiation is the most important environmental risk factor for the development of non-melanoma skin cancer (most importantly basal and squamous cell carcinomas), that represent the most common malignancies in Caucasian populations. To prevent these malignancies, public health campaigns were developed to improve the awareness of the general population of the role of UV-radiation. The requirements of vitamin D is mainly achieved by UV-B-induced cutaneous photosynthesis, and the vitamin D-mediated positive effects of UV-radiation were not always adequately considered in these campaigns; a strict "no sun policy" might lead to vitamin D-deficiency. This dilemma represents a serious problem in many populations, for an association of vitamin D-deficiency and multiple independent diseases has been convincingly demonstrated. It is crucial that guidelines for UV-exposure (e.g. in skin cancer prevention campaigns) consider these facts and give recommendations how to prevent vitamin D-deficiency. In this review, we analyze the present literature to help developing well-balanced guidelines on UV-protection that ensure an adequate vitamin D-status without increasing the risk to develop UV-induced skin cancer.

PMID: 22536771 [PubMed - indexed for MEDLINE]