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Sun exposure among young people

Daria Przybylska 1, Michał Konopelko 1, Piotr Przybylski 2, Aneta Szafraniec 3,
Dominik Porada 3

1. Chair and Department of Hygiene, Medical University of Lublin
2. I Department of Medical Radiology, Medical University of Lublin
3. Department of Endocrinology, Medical University of Lublin

Correspondence: Daria Przybylska, Chair and Department of Hygiene, Medical University of Lublin, ul. Radziwiłłowska 11, 20-080 Lublin Tel. +48 81448 6130. E-mail: dr.przybylska@gmail.com

Abstract

We are exposed to ultraviolet radiation every day. The amount of absorbed dose depends on the latitude, time of day, season of the year and the content of melanin in the skin. Deficiencies are the cause of many health problems and deterioration of the course of many disease processes. Negative effects on the cardiovascular system, on the formation of tumors or on the development of autoimmune diseases have been confirmed. In daily consumed foods, the dose of vitamin D is about 10% of the daily requirement. Increased physical activity, sunbathing when using radiation protection and oral supplementation allow you to achieve your goals. The level of vitamin D should be monitored regularly. There was a significant deficiency of vitamin D among athletes regardless of the type of sport performed.

In addition to the benefits of sun exposure, we also get the risk of developing skin cancer. Risky behavior in the sun, the occurrence of erythema can contribute to the future of serious skin problems associated with cancer. We can prevent them by applying prophylaxis and individually selected sun protection. Education of patients, parents with small children families of patients with diagnosed melanoma and people with skin cancer may have positive effects in the future. Smoking and drinking alcohol have an adverse effect on sunbathing and the risk of sunburn. Planning for a pro-health policy should be based on preventive and public education programs. The increase in skin cancer cases around the world is alarming.

Key words: ultraviolet radiation, vitamin D, exposure to the sun, skin cancer.

Aim of the study

Presentation of the current state of knowledge on the impact of ultraviolet radiation on the level and metabolism of vitamin D and the occurrence of the risk of developing skin cancers in the population of young people.

Vitamin D

The influence of solar radiation on vitamin D levels is of interest to researchers around the world. It is an essential ingredient that affects calcium metabolism in the human body. In childhood, it has a significant impact on growth and during adulthood contributes to the prevention of osteoporosis [1]. Daily fluctuations may vary depending on the daytime exposure to sunlight and food intake (rich in vitamin D). Depending on both factors, consumption and time spent in the fresh air, the supplementary daily dose should be determined. The geographical latitude of the patient is also of great importance. In northern countries, the demand will be higher regardless of the time of exposure due to the low amount of sunlight (the literature reports the occurrence of this phenomenon even for $\frac{3}{4}$ year). Also a factor worth noting is the time of sampling blood samples for determining the amount of vitamin D [1,2]. The benefits of taking care of the proper level of vitamin D can not be overestimated. These include the proper functioning of the musculoskeletal system, cardiovascular, hormonal, nervous and other. This contributes significantly to the results of

people practicing recreational sports as well as professionals [3]. Athletes are subject to particularly careful examinations during increased physical exertion. The level of vitamin D is very important in this group of people. Increasing vitamin D concentration may be important in better sports performance. Most often I give a beneficial effect on the muscular system as the most important in this group of people. The relationship between vitamin D supplementation in the period of lower sun exposure in winter is very important [2,4].

As a solution to this problem, you can apply a simple therapy consisting in travel to areas with higher sun exposure in the winter. The biggest deficiencies of vitamin D are observed in athletes practicing sports in enclosed spaces without access to sunlight. The deficiency in the population of people practicing sports is similar to the non-exercising population [3]. The individual nature of the distribution and demand for this vitamin provides many difficulties for researchers and patients with deficiencies. Whether to supplement it and how to do it is still the topic of discussion [1].

Skin cancers

A significant effect on the level of vitamin D in children has physical activity and a period of being in the open air. Necessary when planning the outdoor effort in this age group should be taking into account exposure to ultraviolet radiation and the formation of skin cancers [5].

It has been unequivocally confirmed that the factor preventing skin cancer is reducing the time of exposure to the sun. People who stay outside for long periods of time are particularly vulnerable. The work performed is important for exposure to solar radiation. It should be mentioned that the most frequent skin cancers are basal cell carcinoma, squamous cell carcinoma and melanoma. There was an increase in skin cancer cases worldwide. The unequivocal cause of skin cancer can not be established, therefore it is believed that their cause is multifactorial. The most important are genetic factors, environmental exposure and lifestyle. An important risk factor is exposure at a young age [6, 7]

Lifestyle is a modifiable factor. Disturbances in test results can be introduced by patients who smoke or drink alcohol. In this case, the time of radiation exposure was prolonged and the sunburns reported decreased [8]. It is surprising that patients with pre-existing history of skin cancer have used more stringent principles of protection against ultraviolet radiation. The environment from which the respondents originate has no significant impact on the habits

associated with tanning. Adults who were tanning during childhood have an increased risk of developing skin cancer [8,9].

In connection with the increase in public awareness about the risk of skin cancer, preventive programs are implemented for specific groups of people with higher exposure to ultraviolet radiation in order to protect against its negative effects [10].

Prevention

Prevention is very important in protecting the skin against ultraviolet radiation. Exposure in early childhood and exposure of the skin without using sunblock with filter can result in serious consequences in adulthood. The positive impact of learning how to safely use sunbathing has been confirmed. Parents play a key role in learning and developing their children. In order to properly plan prevention programs, children and their carers should be kept in mind [11]. The use of sunscreen in the form of creams with a filter and proper protective clothing significantly helps reduce the number of new melanocytic nevi in children. The use of built-in swimsuits helps to protect the torso and reduce the number of sunburns. Focusing on the skin protection of children and young people can give satisfactory results in the future [12]. People who have a positive family history of melanoma are a group that has significant exposure to ultraviolet radiation. The risk is about 8-12 times higher probability of developing this type of cancer. The older the child, the higher the risk of exposure to UV radiation (this is due to the greater mobility of children, the willingness to play outdoors and less control by parents) [13, 14]. Information in places where there is a significantly increased risk of exposure can have positive effects and reach most of the target group. The information campaign should be adjusted to the recipient [15,16].

Summary

The beneficial effect of vitamin D on human health is not questionable. The beneficial influence on the athletes' achievements and participation in the process of children's growth can not be overestimated. Lack of contact with sunlight causes negative effects on the human body. However, it should be remembered that sunlight should be used wisely. Lack of protection can cause the development of skin cancers. Their development in adults may be

initiated by excessive exposure during childhood. Particular attention should be focused on the children's and adolescent period in order not to suffer the consequences of bad behavior patterns in the future. Educating society and initiating pro-health behaviors should be a pillar of health policy. During the implementation of prophylaxis, we should know the groups of risk and behaviors that contribute to the increase of disease in order to prevent them better.

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