Sun protects against childhood asthma

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Ninety percent of our vitamin D is synthesized through exposure to the sun. Credit: SINC

Vitamin D, which is primarily absorbed from the sun, plays a role in protection against childhood asthma. Now, a new study led by Valencian researchers has shown that children who live in colder, wetter cities are at greater risk of suffering from this respiratory problem, since there are fewer hours of sunlight in such places.

"Prolonged exposure to the sun can cause cancer, but it's also dangerous to avoid it. There has to be a balance between the pros and cons", Alberto Arnedo-Pena, an epidemiologist at the Public Health Centre in Castellón and lead author of the research, which is part of the International Study of Asthma and Allergies in Childhood (ISAAC), led by Luis García Marcos of the University of Murcia, tells SINC.

In fact, 90% of our vitamin D is synthesised through exposure to the sun. This vitamin, which can be found in various cell receptors, is usually found at lower levels in people with asthma. The study results show that there is a higher prevalence of this illness among children in wetter places with less sun (northern Spain).

The research, carried out on more than 45,000 children and teenagers from nine Spanish cities and published in the *International Journal of Biometeorology*, shows that climatic conditions, above all solar radiation, can in many cases explain the high geographical variation in the prevalence of asthma in Spain.

"Although we need more studies on this issue – this hypothesis is not even five years old - it is clear that an average level of sun exposure is important for the assimilation of vitamin D, a compound that is extremely important in preventing illnesses such as asthma, tuberculosis and other infectious diseases", stresses Arnedo-Pena.

The solar vitamin

In northern countries (where there are fewer hours of sunshine than in the Mediterranean), the advice is to spend 20 to 30 minutes' in the sun each day, although not at times within the highest risk period (from noon to 4pm). For now, no similar advice exists in Spain.

Once the benefits of sun exposure are understood, it can be seen that there is a problem in countries at latitudes higher than 40º north, where it is not possible to absorb enough vitamin D during the winter months. "People in these countries should take supplements to ensure they are not at risk", the researcher concludes.

More information: Alberto Arnedo-Pena; Luis García-Marcos; Jorge Fuertes Fernández-Espinar; Alberto Bercedo-Sanz; Inés Aguinaga-

Ontoso; Carlos González-Díaz; Ignacio Carvajal-Urueña; Rosa Busquet-Monge; Maria Morales Suárez-Varela; Nagore García de Andoin; Juan Batlles-Garrido; Alfredo Blanco-Quirós; Angel López-Silvarrey Varela; Gloria García-Hernández. "Sunny hours and variations in the prevalence of asthma in schoolchildren according to the International Study of Asthma and Allergies (ISAAC) Phase III in Spain". Int J Biometeorol (2011) 55:423-434.