SACN publishes new recommendations on vitamin D

Everyone over one year of age should consume 10 micrograms$^1$ of vitamin D daily, the Scientific Advisory Committee on Nutrition (SACN) has recommended in its new report, vitamin D and health - published today.

This recommendation includes pregnant women and population groups at increased risk of vitamin D deficiency: people with dark skin from African, Afro-Caribbean and South Asian backgrounds; people who are confined indoors, such as those in care homes, and people who habitually cover up their skin while outdoors.

As a precaution$^2$, SACN recommends that all babies from birth up to one year of age should consume 8.5 to 10 micrograms$^3$ of vitamin D per day.

The report has been prepared in response to a request by the Department of Health in 2010 for SACN to consider whether current recommendations for vitamin D were still appropriate.

The vitamin D recommendations are to ensure that the majority of the UK population has satisfactory vitamin D blood levels throughout the year, in order to protect musculoskeletal health. The recommendations refer to average intake over a period of time, such as one week, and take account of day-to-day variations in vitamin D intake.

SACN also looked at possible links between vitamin D and non-musculoskeletal health outcomes, including cancer, multiple sclerosis and cardiovascular disease, but found insufficient evidence to draw any firm conclusions.

SACN was not able to recommend how much sunlight exposure people would need in order to achieve satisfactory vitamin D blood levels because there are a number of factors that can affect how much vitamin D is synthesised in the skin. The recommendations assume minimal sunshine exposure.

Professor Hilary Powers, chair of the SACN Vitamin D working group, said:

“Following an in-depth review of the scientific evidence and a lengthy consultation process, SACN is recommending that everyone aged one year and over has a dietary intake of 10 micrograms per day of vitamin D in order to protect their bone and muscle health.”

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$^1$ 400 IU/d

$^2$ This recommendation is precautionary due to insecurities in the data for this age group.

$^3$ 340-400 IU/d
Notes to editors:

1. SACN is a committee of independent experts that advises Government on matters relating to diet, nutrition and health. Details of the committee, including working procedures and membership, are found at www.sacn.gov.uk.

2. SACN is chaired by Dr Ann Prentice, Director of Medical Research Council Human Nutrition Research in Cambridge. The SACN Working Group on Vitamin D was chaired by Hilary Powers who is Professor of Nutritional Biochemistry in the Human Nutrition Unit at the University of Sheffield.

3. SACN was asked by the Department of Health in 2010 to review the current recommendations for vitamin D. This entailed consideration of the evidence on the links between vitamin D and a range of health outcomes, including musculoskeletal health (e.g. bone mineral density, rickets, fractures, falls, muscle strength) and non-musculoskeletal health (e.g. heart disease, type 1 diabetes, cancer and multiple sclerosis).

4. Vitamin D is synthesised in the skin by the action of sunlight containing ultraviolet B (UVB) radiation. Skin synthesis is the main source of vitamin D for most people. Dietary sources are essential when exposure to sunlight containing the appropriate wavelength is limited.

5. Regular skin exposure to spring and summer sunshine prior to the skin burning allows for vitamin D synthesis. It is important to protect or cover up the skin before it burns because excessive sun exposure can cause skin and eye damage and increase the risk of skin cancer.

6. Vitamin D plays an important role in the regulation of calcium and phosphate in the body. It is therefore essential for bone health. Without adequate vitamin D, bones can become thin, brittle and mis-shaped. In extreme cases this can lead to rickets in children, a condition involving a softening of the bones that can lead to fractures and deformity. In adults softening of the bones is called osteomalacia, and may cause pain and muscle weakness.

7. Free supplements containing vitamin D are available to pregnant women and children up to and including the age of 4 from low-income families as part of the government’s Healthy Start scheme.

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