

Major public health problem in Luxembourg : More than 80 % of adults likely to suffer from inadequate vitamin D status.

Vitamin D, synthesised by the skin when exposed to UVB, is essential to our health and well being. Although vitamin D deficits were already suspected among the national population, an important wake-up call based on data from the ORISCAV-LUX health survey is given by the Department of Population Health of the Luxembourg Institute of Health (LIH).

Vitamin D is synthesised by the skin when exposed to UVB (ultraviolet B radiation) from sunlight and provided, to a lesser extent, through food intake. Already known to play an essential role in bone health, vitamin D status has been an increasing focus in studies covering a wide range of health outcomes over the last few years.

Luxembourg, despite its geographic location and climatic conditions generally unfavourable to UVB exposure, was previously one of the few European countries that did not have national data on vitamin D levels.

In the framework of the ORISCAV-LUX study, conducted by the Epidemiology and Public Health Research Unit of the Department of Population Health, an assessment of vitamin D levels on a representative sample of the population has been made for the first time. 'The study has been conducted between 2007 and 2008 on a sample of 1432 healthy adults. In more than 80% of the cases, an inadequate status of vitamin D (<75 nmol/L) was detected' states Dr Alkerwi, principal investigator and project leader of the ORISCAV-LUX study for LIH.

This result, combined with socio-demographic and clinical data and with information on the participants' lifestyle, allowed identifying population groups that are particularly at risk. 'Smokers appear to be two times more likely to suffer from vitamin D deficiency than non-smokers' says Dr Alkerwi. 'Overweight people and residents of Portuguese origin or from non-European countries were also among the vulnerable groups' she explains further.

'Interestingly, people who considered themselves as being in a poor health condition had generally lower vitamin D levels', notes Dr Alkerwi. 'This suggests that vitamin D deficiency may also represent a marker of poor general well being.'

These findings are of utmost importance for physicians and public health authorities, considering that an optimal level of vitamin D can be a marker for healthy aging.

'Vitamin D insufficiency, in addition to being involved in osteoporosis or muscle fatigue in the elderly, is thought to be associated with common chronic diseases such as cancer, immune disorders and cardiovascular diseases' points out Prof Saverio Stranges, co-author and Scientific Director of the Population Health Department of LIH.

It is thus essential to increase awareness on the importance of vitamin D, among the population as well as among healthcare professionals, and to develop specific recommendations on health behavior to address what the results of the study highlight as a major, and yet not well known, public health problem in Luxembourg.

The relevance of oral supplementation as a potential solution would, on another hand, still have to be confirmed.

About ORISCAV-LUX

The ORISCAV-LUX survey (Observation of Cardiovascular Risk Factors in Luxembourg) has been conducted between November 2007 and January 2009, on a representative sample of the population living in Luxembourg. It is an epidemiological survey aimed to establish baseline information on the prevalence of potentially modifiable and preventable cardiovascular risk factors related to lifestyles.

It has been designed as a public health tool, providing the authorities with reliable data on the health of the population living in Luxembourg, thus allowing them to adapt public health recommendations and prevention programmes.

Notes

The scientific paper “Prevalence and Correlates of Vitamin D Deficiency and Insufficiency in Luxembourg Adults: Evidence from the Observation of Cardiovascular Risk Factors (ORISCAV-LUX) Study”, co-authored by Dr Ala’a Alkerwi, Nicolas Sauvageot, Dr Georges Gilson and Prof Saverio Stranges has been published in the international journal “Nutrients” and is available [online](#).

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