



**THE HEALTH SUPPLEMENTS INFORMATION SERVICE COMMENTS ON
VITAMIN D AND BRAIN PERFORMANCE IN LATER LIFE**

May 21, 2009

In response to a paper published in BMJ specialist journal showing that vitamin D may have a key role in helping the brain work well in later life,¹ Dr Carrie Ruxton, independent advisor to the Health Supplements Information Service (HSIS) would like to make the following comment:

"This paper showed that higher blood levels of vitamin D were associated with better mental agility scores in older men and highlights the importance of considering vitamin D supplementation.

"The current findings are based on research involving just over 3,000 European men between the ages of 40 and 79, who all participated in the international European Male Ageing Study, drawn from eight different cities across Europe.

"High blood levels of vitamin D were associated with better scores on memory and information processing tests. In contrast, low vitamin D levels were associated with poor scores, with blood levels of 35 nmol/litre or under marking the threshold for poor performance. The authors say that a possible explanation for this link between low vitamin D and poor mental agility could include vitamin D's role in increasing hormonal activity or the protection of neurons and chemical signaling pathways.

"Many people in older age have inadequate vitamin D levels and the use of vitamin D supplements, such as a daily multivitamin containing vitamin D, could significantly benefit this age group and other groups in the population. The possibility that vitamin D supplementation could delay the effects of ageing on the brain is yet another potential

¹ J Neurol Neurosurg Psychiatry 2009; doi 10.1136/jnnp.2008.165720

health benefit among several recognized to date. Low vitamin D levels have been linked with various health risks such as poor heart health and low bone mineral density.”

Dr Ruxton goes on to point out: “Low vitamin D levels are common in the UK population, particularly in older people. Plasma levels of vitamin D below 25nmol/litre, a figure used by the Department of Health to indicate poor vitamin D status, were found in 37 per cent of older people living in institutions according to the National Diet and Nutrition Survey (NDNS).²”

“The main source of vitamin D is through the action of sunlight on the skin but in northern climates like Britain, exposure to sunlight is minimal, particularly for those who spend much of their day indoors or who cover up when outside. Overall, a quarter of the blood samples collected during the winter months in the NDNS showed blood vitamin D levels below 25nmol/litre.

“The National Diet and Nutrition Survey (NDNS) in people over 65 years also found that 97 per cent of older people had a vitamin D intake below the Reference Nutrient Intake of 10 micrograms/day.

“This current study in older men found better mental scores in older men with blood vitamin D levels over 35 nmol/litre. Many older men in Britain have levels of vitamin D below this cut off. The NDNS found that 52 per cent of institutionalised older men had a blood level below 30nmol/litre while 69 per cent had a blood level below 40nmol/litre. Equivalent figures for free living older men were 11 and 23 per cent respectively.”

In summary, Dr Ruxton notes: “This latest research, together with other evidence, again highlights the fact that many people, especially those of older age have inadequate vitamin D levels. As a result, the use of a multivitamin containing vitamin D, plus consumption of foods rich in vitamin D such as oily fish, milk, breakfast cereals and fortified spreads, could have significant benefits for public health.”

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² Finch S, Doyle W, Lowe C, Bates C, Prentice A, Smithers G, et al. The National Diet and Nutrition Survey: people aged 65 years and over. Vol 1: Report of the Diet and Nutrition Survey. London: The Stationery Office. 1998.

