The Health Food Manufacturers' Association
1 Wolsey Road
East Molesey
Surrey KT8 9EL

t +44 (0)20 8481 7100
f +44 (0)20 8481 7101
e hfma@hfma.co.uk

www.hfma.co.uk

THE VOICE OF THE NATURAL HEALTH INDUSTRY

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Ms Mamta Singh, Dr Vivien Lund and Mrs Emma Peacock
SACN Secretariat
Public Health England
sacn@phe.gov.uk

Dear Ms Singh, Dr Lund and Mrs Peacock

Response to the Consultation on the Draft SACN Report: Vitamin D and Health

Further to publication of the above SACN report, please find below comments from the Health Food Manufacturer's Association.

The report is very thoroughly researched and logically presented.

Our main comment relates to the choice of the threshold serum concentration of 25nmol 25(OH)D/L in relation to vitamin D status. Proposing to maintain the lower limit of serum concentration of 25nmol 25(OH)D/L at the level indicative of increased risk of vitamin D deficiency, as the basis for establishing the RNI, seems highly conservative. The lower limit should at least be set on the basis of risk of inadequacy as opposed to deficiency.

Particularly for adults aged over 50 years, there is adequate scientific justification for the intake and sun exposure required to achieve a 30nmol/L concentration to be used as the basis of the RNI, instead of 25nmol/L. The evidence cited in the SACN report, particularly for adults aged over 50 years, shows that for falls and muscle strength and function outcomes the range of possible thresholds of serum 25(OH)D/L is higher than that for rickets and osteomalacia:

> *Falls* – On balance the evidence suggests beneficial effects of vitamin D supplementation in reducing fall risk in adults over 50 years with mean baseline serum 25(OH)D concentrations over a range of values – for which the widest range is 23 and 82 nmol/L.
>
> *Muscle strength and function* - Overall, the evidence suggests that vitamin D supplementation may improve muscle function in adults over 50 years with mean baseline serum 25(OH)D concentrations over a range of values – for which the widest range is 24-66 nmol/L. Studies with lower values were in hospitalised patients in Japan which may not be applicable to the UK population.

Hence it is not clear that 25nmol/L is sufficiently protective for adults aged over 50 years when considering musculoskeletal health outcomes, as this concentration is typically at the lower end of the ranges quoted. The over 50s are a particularly important group, and it is vital to ensure they are getting adequate protection, as the consequences of a fall in this age group are likely to be more debilitating and most costly to the NHS than the consequences in younger age groups.

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The draft SACN report states that it is not possible to distinguish between 20 to 30nmol/L, reflecting an element of subjectivity in the chosen value. However, the chosen threshold concentration for inadequacy should not be based on an average for all of the outcomes and for all the age groups considered, or set at the lower end of the ranges, as this may not give adequate protection to the most vulnerable groups. For adults aged over 50 years, it should be tailored to reflect the evidence that a wider range of serum concentrations of 25(OH)D was observed to be protective against falls and muscle strength and function. The threshold concentration should thus be set at a higher concentration for older adults, in order to ensure adequate protection for this group as well.

In view of the higher end of the range of serum concentrations of 25(OH)D for falls and muscle strength and function in the over 50s, a threshold of at least 30nmol/L would be more protective.

Hence a higher RNI should also be set for adults aged over 50 years. From Table 4 a threshold of 30 nmol/L would appear to equate to a dietary intake of about 12µg vitamin D/day, which could be achieved without risk of exceeding the upper safe level. This would give greater protection to this vulnerable group in the UK population.

It is noteworthy that the authorised EU disease risk reduction health claim that "Vitamin D helps to reduce the risk of falling associated with postural instability and muscle weakness. Falling is a risk factor for bone fractures among men and women 60 years of age and older", has conditions of use requiring the consumer to be informed that the beneficial effect is obtained with a daily intake of 20µg vitamin D. This is twice the RNI that SACN is proposing for this age group, and underlines the appropriateness of setting a higher RNI for older adults in the UK.

In conclusion:

The evidence suggests that the threshold concentration of 25nmol 25(OH)D/L in relation to vitamin D status for adults aged over 50 years should be higher than that for younger adults, and should be at least 30nmol/L.

The evidence justifies setting a higher RNI for older adults (50+ years), and this should be at least 12µg/day for adults aged over 50 years.

We trust that due consideration will be given to our comments by the Vitamin D Working Group.

With kind regards

MJ Sadler

Dr Michele Sadler
Scientific Adviser
HFMA