



## **SACN Vitamin D and Health report National Osteoporosis Society consultation response September 2015**

### **Vitamin D and health**

Vitamin D improves bone health, by helping our bodies to process calcium effectively – it is essential for bone and muscle health as it promotes calcium absorption from our food.

We welcome the report's emphasis on musculoskeletal outcomes of Vitamin D as there is a paucity of data on non-musculoskeletal benefits, and the future requirement for further evidence of Vitamin D effects. The report is also positive about the effect of vitamin D on falls and muscle function.

However, we were surprised that the report says there is an absence of any positive effect on bone strength. Additionally, the full report points out that some of the meta-analyses state that there is evidence for fracture reduction for vitamin D and calcium, whereas the executive summary states that there is no evidence of fracture reduction for vitamin D. This probably reflects the current meta-analyses that have subdivisions of age groups which show positive effects of vitamin supplementation. We feel that having two inconsistent messages about vitamin D and fracture reduction is unhelpful and could be confusing.

### **Vitamin D sufficiency**

There is no universal consensus on the biochemical definition of vitamin D deficiency. The report states that in order to protect musculoskeletal health, it is recommended that the serum 25(OH)D concentration of individuals in the UK should not fall below 25 nmol/L at any time of the year. A measurement of <25 nmol/L would therefore be considered deficient. However, a definition of deficiency for measurements of <30 nmol/L has already been widely adopted in the UK<sup>i</sup> and reflects the Institute of Medicine's guidelines. As the difference between these measurements in practical terms is so small, in comparison to the variability of the assays used to perform the measurements, it may be pragmatic to use <30 nmol/L as the threshold.

### **RNIs**

We welcome the introduction of Reference Nutrient Intake (RNI) for vitamin D in the UK. We believe this is a constructive step which will help people to understand the level of vitamin D they need for good health. However, the level of vitamin D intake recommended by this report is significantly lower than RNIs around the world which tend to be in the range of 600-800 IU.

We welcome the recommendation that exclusively breast fed infants should achieve the same RNI as non-breast fed infants. The report removes the recommendation that there is no need for vitamin D supplements for babies taking more than 500ml of infant formula. While this provides a simpler message, there is the potential that the recommendation of an RNI of 8.5 ug/day from birth could be interpreted as meaning no additional supplements are required by formula fed infants. We would welcome clarification on this point.

### **Vitamin D treatment and high risk groups**

We appreciate that the remit of the SACN report is make public health recommendations. Some consideration needs to be given to how we can ensure the public remain clear about differences between the correct 25(OH)D concentrations for general well-being and 25(OH)D concentrations which may be required to treat vitamin D insufficiency or deficiency, or where a higher dose of vitamin D is required for improvements to bone health. For example, it is standard care to recommend 800 IU/day in the treatment of osteoporosis.

### **Putting recommendations into practice**

The report recognises that exposure to sunlight is not adequate to produce satisfactory vitamin D status all year round in the UK. Recommendations about how RNIs can be achieved in practice are outside the scope of this report. More guidance is needed on how people in the UK can achieve good concentrations of 25(OH)D through safe sunlight exposure, diet, fortified foods and use of supplements. In the meantime, those at high risk of vitamin D deficiency should consider use of supplements in line with Department of Health recommendations (<http://www.nhs.uk/Conditions/vitamins-minerals/Pages/Vitamin-D.aspx>).

It is our view that to achieve the recommended concentrations of 25(OH)D, either population-wide supplementation or fortification of widely-consumed food stuffs will be necessary. A full evaluation of the implications and potential unintended consequences will be vital to successful implementation. We urge prompt execution and good public engagement in this exercise. Some issues which have already come to light in our initial conversations included concern over the potential for high levels of requests for vitamin D prescriptions to GPs; the implications and public acceptance of supplements and fortification; safe levels of fortification; and inequitable access to supplements.

The report makes recommendations for 0-1 year, suggesting that vitamin D supplements should start from soon after birth rather than at 6 months of age as currently recommended by the Department of Health. We welcome this change which we feel will make it easier for health visitors to engage mothers and their babies in the use of vitamin D supplements.

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<sup>i</sup> National Osteoporosis Society 'Vitamin D and Bone Health: A Practical Clinical Guideline for Patient Management' 2013 [www.nos.org.uk/document.doc?id=1352](http://www.nos.org.uk/document.doc?id=1352)