

British Nutrition Foundation response to the consultation on the SACN report on vitamin D

The report is very comprehensive and clearly written.

Our comments are focussed on chapter 9, *Review of DRVs for Vitamin D*. Despite the complexity of the information covered in this chapter, it is written in an accessible manner. It is of interest that the SACN review has used a different approach to establishing the RNI than that used in the USA and Nordic countries (NORDEN); in particular that a population protective serum level was identified and used to derive the RNI rather than the population mean approach used in the US.

We understand that the decision to propose 25nmol/L was as a result of the systematic review of the evidence undertaken and the selection of appropriate health outcomes in this context. We note the decision to include aspects of muscular health, where the evidence has strengthened in recent years, and to exclude some of the health outcomes used by the IOM in the USA, which presumably influenced the serum level adopted. We also note the approach adopted by SACN of defining a population protective level rather than a population mean level.

A strength of the approach taken by SACN is that it explored various ways to establish an appropriate serum 25(OH)D level and RNI, including a detailed analysis based on sunlight exposure. Although the latter proved to be too difficult owing to the many factors that can influence exposure, the detailed discussion of this approach in the report is nevertheless really valuable.

Another strength of the SACN approach is that it makes use of RCTs commissioned by the FSA which focus on populations in the UK or of direct relevance to the UK in terms of latitude. The modelling to determine sunlight exposure time is also useful as it considers ethnic variation.

In Chapter 9 and earlier in the report, detailed comparisons are made between the approaches used by SACN and by the IOM in the US. This critique is very useful in understanding the reasoning behind the different approaches. We note that the German Nutrition Society and NORDEN have also recently established new vitamin D recommendations. It would be helpful if the final report from SACN were to include more discussion about any points of consistency and difference in the approaches used. For example, it is noted in SACN's draft report that the German Nutrition Society used the same RCT evidence as SACN but used 50 nmol/l as the serum level; so the resultant dietary recommendations are higher. Discussion of the German Nutrition Society's approach to identifying an appropriate serum 25(OH)D level (and also that adopted by NORDEN) would have been informative. This would seem to be important as it appears from the discussion that the choice of 25nmol/L by SACN excluded the opportunity to use the meta-regression approach (as used by the USA and NORDEN) as there were no RCTs with intervention arms that resulted in mean/median levels of serum 25(OH)D below 25nmol/L (or even 30nmol/L).

The methodology and approach used aside, the choice of 10ug/day as a figure that lies between 9ug and 12ug, identified by immunoassay and LC-MS/MS respectively, seems an appropriate pragmatic approach, and is aligned with recent recommendations in some other countries (although recommendations vary as different approaches have been used) .

Noting the considerable complexities involved , we are supportive of the overall approach and its conclusion, i.e. identification of a population protective level of 25nmol/L and an RNI of 10ug/ day from age 4 years (and Safe Intakes of 8.5-10ug for <4 years).

As a final point, it would be useful for readers if the quality of some of the figures could be improved in the final version of the report, e.g. Figure 9 on page 116.

JB/ September 15 2015