

23rd September 2015

RE: Response to Scientific Consultation on the draft 'Vitamin D and Health' report

Dear SACN Vitamin D Working Group,

A number of active vitamin D researchers from the Northern Ireland Centre for Food & Health (NICHE) recently met to review the Scientific Advisory Committee on Nutrition (SACN)'s draft report on 'Vitamin D and Health'.

Firstly, we would like to thank the Committee for preparing this review of the data on vitamin D and bringing together the extensive evidence in order to review the dietary reference values for vitamin D. This was particularly timely given the significant amount of new research that was available since the 2007 update and we welcome this report, including its recommendations, to act as a future resource (for research and teaching purposes) and to help inform future research in the area.

As a group we are actively involved in ongoing vitamin D research across a broad range of disciplines, involving healthy adults as well as various patient groups. Specifically, we particularly welcome the Committee's recommendation for future research into the role of vitamin D in the following non-musculoskeletal health outcomes (which align with our ongoing research within NICHE):

- Pregnancy & lactation (points 356-83)
- Cancers (e.g. prostate cancer, point 400)
- Autoimmune disease (e.g. systemic lupus erythematosus, points 463-4)

We also welcome and fully support the Committee's acknowledgement that "*it is difficult to achieve the RNI/Safe Intake from natural food sources alone*" and their recommendation "*that consideration is given to strategies for the UK population*" to help achieve the RNI/Safe Intake (point 806). This is also an area of ongoing research within our department, where we are specifically investigating the efficacy of cow's milk as a vehicle for vitamin D fortification or enrichment to help improve the vitamin D intake and status of the population. Such a fortification strategy would not only have an impact on milk consumers, but also for those consuming other dairy products that are produced from fortified/enriched milks.

We also fully support the Committee's acknowledgment of the importance of the method of measurement of vitamin D status (points 148-150) and the need for all laboratories to comply with standardisation programs to help reduce both current and historical inter-laboratory/assay specific differences in status.

We would also like to draw the Committee's attention to a recently validated vitamin D food frequency questionnaire ([Weir et al. 2015](#)) which may be useful for future research wishing to determine the contribution of natural dietary sources, fortified foods as well as supplements to total vitamin D intake and status. This is of growing importance in vitamin D research given the reliance on such exogenous

sources that will be required to achieve the revised RNI/Safe Intake, and we hope the committee will find it useful for inclusion within the report.

We welcome acknowledgement of the potential adverse effects of high serum concentrations of 25(OH)D, with U-shaped or reverse J-shaped relationships noted for outcomes including offspring being born small for gestational age (point 368), all-cause mortality (point 430) and prostate cancer (point 584). We feel this is an important consideration for future research.

Lastly, we noted that the Institute of Medicine (IOM) 2011 report was used extensively by the Committee to update the review on vitamin D, as well as evidence published since this report. However, it is unclear why the cut-off for deficiency was set at <25nmol/L for the UK, as opposed to <30nmol/L as suggested by the IOM. We felt that clarification of this within the report would be useful, especially as setting this at a lower concentration will have implications for how data is interpreted within UK studies and compared to that from elsewhere.

Once again, thank you to the Committee for preparing this report and for allowing us to respond. We look forward to the hearing the outcome of this Scientific Consultation and the publication of the final report in due course.

Yours sincerely,

Drs Kirsty Pourshahidi, Pamela Magee, Mary McCann, Emeir McSorley, Maria Mulhern & Paul Thompson (NICHE, Ulster University, Coleraine) and Dr Eamon Laird (Trinity College Dublin)