

## Autumn Newsletter 2016

**About:** The *Cork Centre for Vitamin D and Nutrition Research* at University College Cork, led by Professors Mairead Kiely and Kevin Cashman, is co-ordinating the EC-funded integrated ODIN project. The project involves 30 partners, including 9 industry partners, from 18 countries. ODIN is in the final year of a 4-year programme of research and will finish in October 2017. ODIN is working to develop safe, effective and sustainable solutions to prevent vitamin D deficiency and improve vitamin D related health outcomes using a food first approach.

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### **New data on vitamin D requirements in children and adolescents**

ODIN have recently published the data from two new randomised control trials (RCTs) on dietary requirements in children and adolescents. The main finding from the Danish RCT is that vitamin D intakes between 8 and 20  $\mu\text{g}/\text{d}$  are required by white 4-8 year old children during winter in northern latitudes to maintain serum 25 hydroxyvitamin D (25(OH)D) (best indicator of vitamin D status)  $>30\text{-}50$  nmol/L, depending on the chosen 25(OH)D threshold. For a link to the publication click [here](#). The RCT on adolescents carried out in the UK found that vitamin D intakes of between 10 and  $\sim 30$   $\mu\text{g}/\text{d}$  are required by white adolescents during winter to maintain serum 25(OH)D concentrations  $>25\text{-}50$  nmol/L, depending on the serum 25(OH)D threshold chosen. Click [here](#) for a link to the publication. To read the recent American Journal of Clinical Nutrition editorial in which these ODIN publications were discussed click [here](#).

#### **New data on vitamin D fortified cheese**

ODIN has published key data from a new randomised controlled trial showing reduced-fat Gouda cheese enriched with vitamin D<sub>3</sub> effectively prevents vitamin D deficiency during winter in postmenopausal women in Greece. Click on the links to read a [summary](#) or to access the full [publication](#).



#### **New data on vitamin D-enhanced eggs**

New randomised controlled trial data from the *EnhanceD* study carried out by ODIN PIs at the *Cork Centre for Vitamin D and Nutrition Research* and funded by the Irish Government Department of Agriculture shows that vitamin D-enhanced eggs can protect against vitamin D deficiency in winter. Click on the links to read a [summary](#) or to access the [publication](#).



### Save the date! International Conference

**“Vitamin D & Health in Europe: current and future perspectives”**

**5-7th September 2017, University College Cork, Ireland**



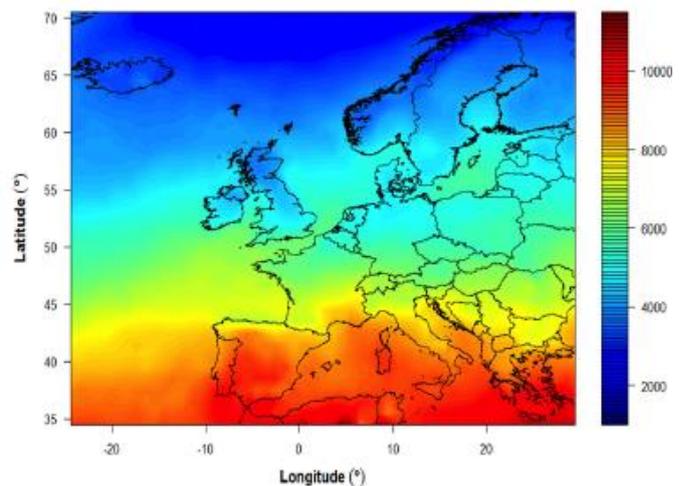
This project has received funding from the European Union's Seventh Framework Programme (FP7/2007-2013) under grant agreement no. 613977 (ODIN).

## ODIN High vitamin D status is associated with lower risk of pregnancy complications

A new publication by ODIN's Prof Mairead Kiely and colleagues has shown that high vitamin D status is associated with lower risk of pregnancy complications such as pre-eclampsia and small-for-gestational age (SGA) birth. The findings come from analysis of vitamin D status in the SCOPE (Screening for Pregnancy Endpoints) Ireland study, a project led by Professor Louise Kenny (INFANT, UCC) which was established to predict and prevent the major complications of late pregnancy, such as pre-eclampsia, SGA and spontaneous preterm birth. The study analysed blood samples and data from 1786 mothers in Cork and was designed to explore whether there was a connection between vitamin D status in early pregnancy and any major pregnancy complications. The study also showed that 17% of the pregnant women were at high risk of vitamin D deficiency, compared with 12% of non-pregnant women of the same age. It also reported a lower risk of pregnancy complications among women with high vitamin D status. To read more, click [here](#).

### New data on UVB availability in Europe

ODIN published new data on seasonal changes in modelled pre-vitamin D<sub>3</sub>-effective UVB availability in Europe. The data show a clear trend of decreasing UVB availability moving from South to North with an almost six-fold difference in average modelled UVB availability between the two latitude extremes, (Crete in Greece (35°N) and Tromsø in Norway (69°N)). The data highlight very clearly the increasing length of "vitamin D winter" within Europe as one moves from 35°N (which has essentially no vitamin D winter) to 69°N, which has eight months of "vitamin D winter". Much of mid-Europe has a "vitamin D winter" of four to six months during which time very little, if any, UVB of sufficient strength is available for vitamin D production in the skin. Click on the links to access the [publication \(PDF\)](#) or for a [summary](#).



Mean monthly modelled UVB doses effective for pre-vitamin D<sub>3</sub> synthesis ( $\text{Jm}^{-2}$ ) across Europe for June, based on average data from years 2003-2012. Scale begins at  $1000 \text{ Jm}^{-2}$ .

**Conferences** ODIN researchers made a significant contribution to the **4<sup>th</sup> International Vitamin Conference** in Copenhagen in May 2016. Prof Kevin Cashman was an invited keynote speaker while Profs Mairead Kiely and Christian Mølgaard, and Dr Jette Jakobsen gave plenary lectures. There were oral presentations given by ODIN participants Ellen van Heuvel and Manfred Eggersdorfer. In addition, two posters were presented by ODIN researcher, Jelena Milešević from Eurofir.

Profs Kevin Cashman, Rolf Jorde and Lars Rejnmark were invited speakers at the **17<sup>th</sup> International Congress of Endocrinology in collaboration with the 15<sup>th</sup> Annual Meeting of the Chinese Society of Endocrinology**, Beijing, China, August 2016.

ODIN Profs Mairead Kiely and Claire Mills were invited to speak at a conference in Amsterdam in October 2016 which was hosted by Elsevier to celebrate the **40<sup>th</sup> Anniversary of the International Journal of Food Chemistry**.

