In collaboration with the Workshop Executive Committee (WEC) of the 18th Vitamin D Workshop

Sessions 6 and 7: vitamin D nutrition with a focus on the prevention of rickets and vitamin D deficiency in pregnant women

18th Vitamin D Workshop
Date: 21-24 April 2015
Location: the Theatre “de Veste” in Delft, the Netherlands

SCOPE AND PURPOSE

Vitamin D is active in the regulation of calcium and phosphorus which supports cellular processes, bone mineralization and neuromuscular function. Evidence has shown that adequate levels of vitamin D may prevent multiple bone disorders such as rickets in children; and osteoporosis in adults. Vitamin D deficiency is thought to be a widespread public health problem globally; being more prevalent in places with limited sun exposure.

Evidence has suggested that vitamin D plays a critical role in calcium and bone metabolism and maintaining serum calcium levels. Vitamin D promotes intestinal calcium absorption through induction of the synthesis of calcium binding protein and stimulates bone mineralization; along with the parathyroid hormone it stimulates osteoclastogenesis to enable the mobilization of calcium from bone reserves and to promote reabsorption of calcium filtrate in the renal tubule, decreasing its urinary excretion.

Despite the numerous studies about the association between vitamin D and different health outcomes, there are still controversies defining the adequate vitamin D status, daily intake needed and the potential adverse health consequences of its deficiency. To date, there are various reports suggesting its impact in autoimmune processes, several cancers, cardiovascular diseases, obesity, metabolic syndrome and pregnancy complications; however conclusive evidence about a causal relationship is still missing.

Additionally, serum 25-hydroxy vitamin D concentrations are being used to define vitamin D deficiency but the diagnostic test accuracy of these measurements and the reference standard used are not clearly stated. There appears to be a wide variability between different essays for its determination in different laboratories and there is not yet international consensus on the optimal concentrations in different population groups.

The Evidence and Programme Guidance, Department of Nutrition for Health and Development, World Health Organization in collaboration with the Workshop Executive Committee of the 18th Vitamin D Workshop are convening two sessions in the Vitamin D workshop. These two sections are session 6: prevalence, diagnosis and prevention of rickets and session 7: vitamin D deficiency during pregnancy.
OBJECTIVE

The overall objective of the workshop sessions is to discuss the existing controversies on vitamin D nutrition with a focus on the prevention of rickets and vitamin D deficiency in pregnant women.

The workshop will consist of three specific objectives:

1. Discuss the worldwide prevalence of vitamin D deficiency and rickets in infants, children and adults
2. Discuss the known health consequences of vitamin D deficiency in pregnant women
3. Present WHO research strategy for addressing vitamin D-related public health problems
   a) Process for the development of evidence-informed policy options on vitamin D interventions in diverse populations
   b) Use and accuracy of biomarkers (including assays to measure 25(OH)D) of vitamin D status