

ARCHIVIST

## Vitamin D deficiency and rickets: consensus at last

It is now abundantly clear that rickets should never have been consigned to the history books, and that vitamin D deficiency and its sequelae are far more prevalent in European populations than anyone thought two decades ago. The problem has been how to define, diagnose, manage and prevent the 'new' rickets in all its manifestations, with confusing and wildly differing guidance being issued by various authorities. To rectify this situation, a group of 33 experts from many nations met in May 2014, to thrash out universally acceptable global recommendations for children (Munns C *et al.* *J Clin Endocrinol Metab* 2015. doi: 10.1210/jc.2015-2175 and *Hormone Res Paed* doi: 10.1195/000443136). All the available literature was studied and graded, and consensus was reached on controversial issues. The most important recommendations include:

- ▶ Interpreting blood levels by distinguishing sufficiency (>50 nmol/L), insufficiency (30–50 nmol/L) and deficiency (<30 nmol/L).
- ▶ Confirmation that simple VDD does not increase fracture risk unless there are radiological signs of rickets.
- ▶ Adequate daily Vit D intakes to prevent rickets (400 IU per day for infants, 600 for children)
- ▶ Not to screen healthy children for VDD using blood levels.
- ▶ All pregnant women to receive supplementation with 600 IU/day: with adequate calcium this prevents congenital rickets.
- ▶ All infants up to 12 months to receive oral Vit D supplementation (400 IU/day) regardless of feeding method or rickets risk.
- ▶ High risk groups to continue supplementation thereafter.
- ▶ No benefit to infant from extra Vit D supplementation for breastfeeding mothers.
- ▶ Poor calcium intake in infancy is an additional risk factor, and recommended minimum daily intakes are given.
- ▶ Staple foods to be fortified with Vit D and calcium.
- ▶ Although skin exposure to sunlight (UVB rays) helps prevent VDD, there is no 'safe threshold' of UVB exposure which does not increase skin cancer risk.

There are also dosage regimes for treating symptomatic rickets and VDD. Public health and population monitoring issues are covered.

If fully implemented, these recommendations should go a long way to discourage over-diagnosis and over-treatment while improving the bone health of all children through primary nutritional prevention.

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