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Even mild iodine deficiency causes intellectual impairment in children

Several recent studies have shown that New Zealanders again have as high a prevalence of low iodine status as prior to the 1950s with many of all ages across the population being below WHO minimum levels. Since there has been no obvious recurrence of goitre or functional consequences, one might wonder whether the finding is of real significance, although it has been taken sufficiently seriously that as of the end of September 2009 iodine is added to almost all bread.

Now an intervention study in Dunedin by Otago University shows just how important correction of even mild iodine deficiency can be. 184 Children aged between 10 and 13y were given an iodine supplement or a placebo for 28 weeks and tests of cognitive function were administered. Those receiving the iodine supplement performed significantly better in some tests and the overall scores were improved by supplementation. This study is the first of its kind to show that correction of even mild iodine deficiency can improve children's ability to learn, and challenges the school of thought that there are no functional consequences of mild iodine deficiency.

Low iodine status is a particular concern for pregnant and breastfeeding women and their infants. This is because in foetal life and early infancy brain growth and development is accelerated. Pregnant or breast-feeding women need slightly more iodine as they provide all of their baby's iodine. During pregnancy, the recommendation is 220 micrograms per day and when breast-feeding it is 270 micrograms per day. Although iodine fortification of food has the potential to deliver sufficient amounts of iodine to the general population, for many pregnant and breast-feeding women it does not fully meet their much greater requirements. Pregnant and breast-feeding women may require iodine supplements.



Infant Nutrition Council

Industry supporting both Breastfeeding & Infant Formula

As iodine is especially important for the unborn baby, all women who are pregnant, breast-feeding or considering becoming pregnant should ask their doctor, midwife or dietitian for advice on their individual dietary needs.

Infant formulas are especially formulated to have the minimum regulated levels of iodine in order to provide sufficient iodine levels to infants.

Rosie C Gordon, Meredith C Rose, Sheila A Skeaff, Andrew R Gray, Kirstie MD Morgan and Ted Ruffman: Iodine supplementation improves cognition in mildly iodine-deficient children. Am J Clin Nutr 2009; September advance publication.

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More information can be found here:

<http://www.foodstandards.gov.au/educationalmaterial/factsheets/factsheets2008/mandatoryiodineforti4113.cfm>

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