Intended for healthcare professionals

Rapid response to:

Practice Uncertainties

Should we treat subclinical hypothyroidism in obese children?

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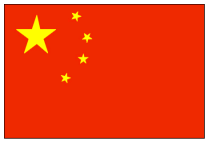

Chinese translation

该文章的中文翻译

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Rapid Response:

Iodine deficiency, not excess, is the cause of autoimmune thyroid disease

The link between iodine intake and thyroid autoimmunity is more complex than Neeru Gupta suggests (Response, 08 April 2016), but increasing evidence implicates iodine deficiency, not excess, as the cause of autoimmune thyroid disease.

'…several cross-sectional studies have reported that thyroid autoimmunity is increased in populations with deficient iodine intakes…Major benefits of increasing iodine intakes in populations with iodine deficiency…[include] a decrease in the prevalence of…thyrotoxicosis in adults.'(1)

'Chronic iodine excess does not apparently increase the risk of autoimmune hyperthyroidism, suggesting that excessive iodine intake may not be an environmental factor involved in the occurrence of autoimmune hyperthyroidism.' (2)

'Concern has been raised suggesting that iodination of salt led to the emergence or increase in prevalence of autoimmune thyroiditis. In regions where chronic excess consumption of iodine occurs, studies have not found an association between iodine intake and prevalence of this disorder.' (3)

A study to determine if the introduction of iodized salt induces thyroid autoimmunity in iodine-deficient, goitrous children (baseline median UI was 17 mcg/L), found that none developed clinical or ultrasonographic evidence of thyroid autoimmune disease and/or iodine-induced hypothyroidism or hyperthyroidism. The authors concluded that rapid introduction of iodized salt does not provoke significant thyroid autoimmunity in severely iodine-deficient children followed for 1 year. (4)

In Japan, where dietary iodine intakes are high, it has been shown that ‘The incidence of Graves’ disease and Hashimoto’s disease does not appear to be affected by high intakes of iodine.‘ (5)

Evidence is also accumulating that iodine deficiency is able to precipitate thyroid autoimmune reactivity in humans.’ (6)

‘Iodine deficiency precipitates a mild (physiological) form of thyroid autoimmune reactivity.’ (7)

Whilst it is recognised that iodine supplementation carries a small risk of iodine-induced hyperthyroidism (IIH), this condition usually results from autonomously functioning thyroid nodules (which arise as a result of iodine deficiency and then produce excess thyroid hormones when iodine intake is increased). IIH is thus considered to be one of the iodine deficiency disorders; it is not an autoimmune condition. Ultimately, though, ‘the benefits of correcting iodine deficiency far outweigh its risks.’ (8)

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Competing interests: No competing interests

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