

BTA Research Team: UK is now Iodine Deficient



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A new study suggests that the UK is now iodine-deficient, indicating an urgent need for a comprehensive investigation of the UK iodine status and recommendations to safeguard public health.

The findings, presented this week at the Society for Endocrinology annual conference in Birmingham, demonstrate iodine deficiency in a sample population of 14-15-year-old girls. They provide the only current data on the UK's iodine status.

Iodine deficiency is the most common cause of preventable mental impairment worldwide.

The study, which was the first of its kind in the UK, was led by **Dr Mark Vanderpump** (Royal Free Hampstead NHS Trust) and colleagues on behalf of the British Thyroid Association (BTA) with the support of the British Thyroid Foundation (BTF), and funded by the Clinical Endocrinology Trust. Researchers measured the amount of iodine in urine samples from 737 14-15-year-old girls from nine UK centres. Factors that might skew the results, such as diet and ethnicity, were assessed using a questionnaire. Variations due to season and location were corrected for via measurements taken in summer 2009 and winter 2009/2010 and water samples from each area were measured for iodine content.

Nearly 70% of the samples were below 100ug/L (the acceptable minimum level defined by the World Health Organisation) and 18% of samples showed very low iodine levels below 50µg/L.

These findings are consistent with a fall in iodine status recently reported in Australia and USA.

In a press release issued Tuesday, 12 April, the Society for Endocrinology said: 'Iodine is an essential trace element which helps the thyroid gland function properly. Most people get their iodine from their diet. The World Health Organisation (WHO) has conducted a global programme of salt iodisation since 1993. The UK does not yet require salt producers to add iodine to their salt.

'Young women of child-bearing age are the most susceptible to the adverse effects of iodine-deficiency and even mild deficiency may have an impact on the developing brain of foetuses and young children. It can also cause goitre. According to the World Health Organisation, iodine-deficient communities have IQs up to 13.5 points lower than similar but iodine-sufficient communities.'

Researcher Dr Mark Vanderpump, Consultant Physician and Honorary Senior Lecturer in Diabetes and Endocrinology at the Royal Free Hampstead NHS Trust, said:

'Our data suggest the UK is now iodine-deficient, indicating an urgent need for a comprehensive investigation of the UK iodine status. We need to look into this now to decide whether public health bodies need to step in.'

'The WHO has made iodine deficiency a global priority and has been campaigning for at-risk countries to add iodine to their salt, a campaign which has been very successful. If it turns out that we do have a problem, this could be the most viable solution.'

'We are very concerned about these findings as the consequences of iodine deficiency are grave: iodine-deficient communities score lower in IQ tests, and even mild iodine deficiency during pregnancy can cause serious mental impairments in children.'

Milk is an important source of iodine in the UK. Presenting a preview of the study results at the BTF London local group's information meeting at the Royal Free Hospital on Saturday, 9 April, Dr Vanderpump said: *'One cup of milk contains about half the amount of iodine needed per day. A possible explanation for our findings may be that teenage girls are drinking less milk and are less likely to have milk and cereal for breakfast. The solution could be to add iodine to the salt used in products such as bread as has been done in for example Denmark.'*

Sources

Society for Endocrinology. New study suggests UK is now iodine-deficient. Press Release. 12 April 2011.

Vanderpump M Lazarus J Smyth P Burns R Eggo M Han, T et al. *Assessment of the UK iodine status: a national survey*. Endocrine Abstracts. Presented at the Society for Endocrinology BES 2011: 11 April 2011-14 April 2011

Further reading

[BTF News](#). *Study to assess UK iodine levels*. BTF News. 2009: 69:1.

[Medical News Today](#). Retrieved 14 April 2011

Roberts M. [Worrying levels of iodine deficiency in the UK](#). BBC News Health. 12 April 2011. Retrieved 14 April 2011