Iodine in the Irish population: Is there a cause for concern?

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Introduction – Why is Iodine important?

• Iodine an important mineral for health
  – Synthesis of thyroid hormones – important role in brain and neurological development.
  – Critical during pregnancy for foetal brain development
  – Essential for neurodevelopment early in life
Introduction – Why is Iodine important?

• A change in sterilisation practices and the introduction of supplementation of iodine to dairy cows increased iodine in the Irish food chain.

• Inadequate iodine intakes were vastly reduced, and Irish diet were thought to be iodine sufficient.

• Recent research has indicated that within the UK mild iodine deficiency exists in schoolgirls\(^1\) and pregnant women\(^2\).

\(^1\)Vanderpump et al. lancet 2011
\(^2\)Bath et al lancet 2013
AIM

Using the National Adult Nutrition Survey - investigate the dietary intakes and status of iodine in the Irish population
Data Collection

National Adult Nutrition Survey
N=1500

UCD Institute of Food & Health

www.ucd.ie/foodandhealth
Dietary Data

Dietary Data for Iodine Updated

Food Codes - updated TDS → Merged back in Food File → Dietary Data Analysed

TDS Data – Supplied by FSAI
Biochemistry Analysis

- Urinary Iodine (UI) – reflects dietary intake.

- Sample = spot urine sample.

- Measured by a multiple persulphate digestion method follow by Sandel-Kolthoff colorimetry*.

Results - Summary

• Ireland – NANS 2008-2010
  – Similar to UK intakes
  – Lower than USA intakes

• Milk is the main food source of iodine within Ireland
Results - Summary

• Dietary intakes seem to be adequate, with only 10% below EAR.
• Population status of iodine indicates we are adequate.
• At risk groups – children and pregnant women should be monitored.
• Milk consumption is driving iodine intakes and seems to be having an effect on status.
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UCD Team

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