



UCD Institute of Food & Health

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

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www.ucd.ie/foodandhealth

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 schoolgirls¹ and pregnant women².

¹Vanderpump et al. lancet 2011

² Bath et al lancet 2013

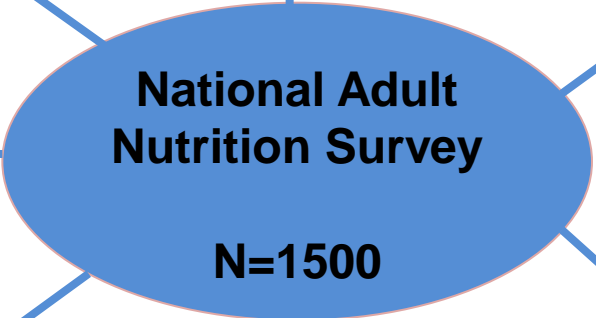


AIM

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



Data Collection



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Dietary Data

Dietary Data for Iodine Updated



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*.



*Ohashi et al Clin Chem 2000

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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.



Acknowledgements

UCD Team



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