

Diets for planetary health – is there a risk of iodine deficiency in the UK?

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Current global food systems threaten human health and environmental sustainability, so in 2019, the EAT- Lancet Commission defined the first global reference diet to improve both areas ⁽¹⁾. It is not clear whether the EAT-Lancet diet, which restricts animal products, would provide a sufficient iodine intake, particularly in the UK where there is no iodised salt policy and animal products, such as milk and fish, provide the majority of iodine intake. Iodine is essential for synthesising thyroid hormones, which are crucial for regulating growth, and brain development, and is especially important for women of childbearing age ⁽²⁾. We aimed to quantify iodine provided by the EAT-Lancet diet and determine if it provides adequate iodine intake for the UK population. The EAT-Lancet diet prescribes daily portion sizes for food groups (e.g., 250 g milk/day). This information was combined with iodine-concentration data from UK food tables to estimate iodine intake per food group. Total daily iodine intake was calculated and compared to the WHO Recommended Nutrient Intake (RNI) for iodine in adults and pregnancy (150 and 250 µg/day, respectively ⁽³⁾). The prescribed EAT-Lancet diet would result in an estimated daily iodine intake of 134 µg/day (89% and 54% of the RNI for adults and pregnancy, respectively). However, if milk was replaced with unfortified plant-based alternatives, the total intake would be just 58 µg/day (39% and 23% of the adult and pregnancy RNI, respectively). Implementing the EAT-Lancet diet in the UK may place consumers at risk of iodine deficiency, particularly if unfortified plant- based alternatives replace animal products. Therefore, those following the EAT-Lancet diet or similar plant- based diet should be mindful of their iodine intake and may consider an iodine-containing supplement to supplement their diet.

References

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