

Comparison of the nutrient contribution of the EAT-Lancet diet to Canadian nutrient recommendations

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Introduction: In 2019, the EAT-Lancet Commission on Food, Planet and Health assessed approaches to minimize impacts on the environment. They proposed “The Planetary Health Diet” which is modeled on four energy-balanced dietary patterns: flexitarian, pescatarian, vegetarian and vegan. The nutrient contributions of these dietary patterns were evaluated using a single nutrient target value based on an average recommended level. It is important to determine how these dietary patterns align with Canadian recommendations for essential nutrients.

Objectives: To compare nutrient contributions of the four proposed dietary patterns, as assessed by the EAT-Lancet Commission, with current Canadian recommended nutrient intakes based on Recommended Dietary Allowances (RDAs) by life-stage and gender.

Methods: The most recent RDAs, based on the recommendations from the National Institutes of Health, were compared to the nutrient analysis carried out by the EAT-Lancet Commission. RDAs for individuals 9 years and older, as well as for pregnancy and lactation, were considered.

Results: The EAT-Lancet Commission’s analysis indicated that all 4 dietary patterns do not meet their recommended target nutrient value for riboflavin. The vegetarian and vegan diets do not meet their target for vitamin B₁₂ and the vegan diet does not meet their target of 520mg per day for calcium. When compared to the RDAs, these aforementioned nutrients, as well as iron, zinc and vitamin A, do not meet the recommendations. For example, calcium ranged from 489mg (vegan) to 660mg (pescatarian) which is well below the RDAs for all life-stage and gender groups. Iron and zinc were also below RDAs, especially for the vegetarian and vegan dietary patterns. For individuals following these dietary patterns, the RDAs for iron and zinc are 1.8 and 1.5 times higher respectively, due to the lower bioavailability of these nutrients in plant-based foods.

Conclusions: The dietary patterns proposed by the EAT-Lancet Commission do not meet the RDAs for several key nutrients, namely calcium, iron, zinc, riboflavin, vitamin A and vitamin B₁₂ across many life-stage and gender groups. Calcium is of particular concern as there is currently widespread calcium inadequacy in Canada.

Significance: Nutrition is an important consideration when selecting and proposing dietary patterns and a key factor for defining a sustainable healthy diet.

Funded by: No funding is associated with this project which was part of a dietetic internship carried out at Dairy Farmers of Canada.