

Eating Red Meat is Associated with Higher Vegetable Intakes and Better Nutrient Adequacy

THINKBEEF

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Studies show vegetables and red meat are often consumed together, and higher quality diets tend to include more of each. Increasing vegetable intakes is an important public health priority. This nutrition report highlights growing evidence that shows how red meat, like beef, can help build a healthy plate.

Key Take Aways:

- **People who eat more red meat, like beef, tend to eat more vegetables.**
- **People who eat more red meat are also more likely to meet recommendations for key essential nutrients.**

1. A study of 17,611 adults showed those who ate red meat more frequently, ate vegetables more often as well.¹ This study examined food frequency and health data from the U.S. Third National Health and Nutrition Examination Survey (NHANES III).

Adults who ate red meat more frequently:¹

- ate vegetables more often
- had a smaller waist circumference
- had a lower body mass index
- were less likely to have hypertension

2. A study of 1,700 adults with higher quality diets with lower environmental scores found they ate more vegetables and red meat.² Their diets were more nutrient-dense, and they were more likely to achieve recommended nutrient intakes. They were lower in energy-dense, nutrient-poor discretionary foods and calories compared to the population average (1,899 vs 2,500 calories/day).

Adults who ate more vegetables also ate:²

- more red meat
- less bread and grain products
- a greater variety of vegetables
- less nutrient-poor discretionary foods

3. A study in middle-aged non-vegetarian women found higher unprocessed red meat, chicken, and fish intakes were associated with higher vegetable intakes.³
4. Food group analysis in girls 9 to 16 years of age also found associations between red meat and vegetable intakes.⁴

Girls (9-16 years) who ate more red meat and vegetables:⁴

- had higher protein, fibre, and micronutrient intakes
- ate more fruits, whole grain breads, and low-fat dairy products
- consumed less take away foods and soft drinks
- tended to perform more physical activity

5. A study of children found that beef, veal, and lamb were generally accompanied by more vegetables compared with other meat, poultry, or fish.⁵
6. Studies in adolescents,⁶ pregnant and lactating women,⁷ and older adults (60+ years)⁸ found those who eat beef had higher intakes of key nutrients such as iron, zinc, calcium, and B vitamins.

CANADIAN RESEARCH SHOWS THE MOST NUTRITIOUS DIETS INCLUDE BOTH ANIMAL AND PLANT PROTEIN FOODS

Analysis of the latest Canadian national nutrition survey data confirmed the most nutritionally adequate diets include both animal and plant protein foods.⁹ Dietary patterns with more than 75% of protein from either may compromise nutritional adequacy.

Canadian researchers concluded:⁹

- “Balancing plant- with animal-based protein foods leads to healthier dietary patterns with more favourable nutritional properties.”
- “Combinations of animal- and plant-based proteins improve nutrient quality of Canadian diets.”

GLOBAL PURE STUDY FINDS MOST HEALTHY DIET HAS MORE UNPROCESSED RED MEAT, VEGETABLES AND FRUIT

The large global PURE study evaluated the diets of adults in 21 countries on 5 continents.¹⁰ This study found the ‘most healthy’ diet includes more unprocessed red meat as well as more vegetables and fruit than the ‘least healthy’ diet.

PURE Study – Most Healthy Diet vs Least Healthy Diet		
Food Categories	Most Healthy Diet (grams/day)	Least Healthy Diet (grams/day)
Vegetables and Fruit	563.1	130.6
Legumes	48	21
Nuts	28.2	3.9
Dairy Foods	185.5	31.2
Red Meat (unprocessed)	54.5	24.1
Fish	26.1	6.1
White Meat (poultry)	22.1	10.3

AVOIDING MEAT IS ASSOCIATED WITH HIGHER CONSUMPTION OF ULTRA-PROCESSED FOODS

1. A study of over 20,000 adults in France found those who avoided meat ate more ultra-processed foods (UPF).¹¹

Percent of total energy supplied by UPF:¹¹

- 33% in meat eaters
- 33% in pesco-vegetarians
- 37% in vegetarians
- 40% in vegans

2. Health Canada reported that many plant-based ‘alternative’ products introduced to the Canadian marketplace after the launch of the 2019 food guide are high in sodium, saturated fat, and, or sugar.¹² It’s worth noting that Health Canada concluded, “although plant-based, many of these products are not in line with Canada’s food guide recommendations.”

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