National Institute of Environmental Health Sciences

High nutritional quality is not associated with low greenhouse gas emissions in self-selected diets of French adults

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Abstract:

BACKGROUND: Healthy diets are supposed to be more environmentally friendly because they rely mainly on plant-based foods, which have lower greenhouse gas emissions (GHGEs) per unit weight than do animal-based foods. OBJECTIVES: The objectives were to estimate the GHGEs associated with the consumption of self-selected diets in France and to analyze their relation with the nutritional quality of diets. DESIGN: For each adult in the national dietary Individual and National Survey on Food Consumption (n Euro Surveillance (Bulletin Europeen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin) 1918), the GHGEs of his or her diet were estimated based on the GHGEs of 391 foods. Highest-nutritional-quality diets were defined as those having simultaneously 1) an energy density below the median, 2) a mean adequacy ratio (MAR) above the median, and 3) a mean excess ratio (MER, percentage of maximum recommended values for nutrients for which intake should be limited) below the median. RESULTS: MAR was positively correlated and MER was negatively correlated with diet-related GHGEs. High-nutritional-quality diets contained more plant-based foods, notably fruit and vegetables, and fewer sweets and salted snacks than did low-quality diets. After adjustment for age, sex, and energy intake, the consumption of sweets and salted snacks was negatively correlated with diet-related GHGEs, whereas the consumption of animal products and of fruit and vegetables was positively associated with them. After adjustment for energy intake, high-nutritional-quality diets had significantly higher GHGEs (+9% and +22% for men and women, respectively) than did low-nutritional-quality diets. CONCLUSION: Despite containing large amounts of plant-based foods, self-selected diets of the highest nutritional quality are currently not those with the lowest diet-related GHGEs.

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Resource Description

Communication:

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience:

audience to whom the resource is directed

Public

Exposure : ☒

weather or climate related pathway by which climate change affects health

Unspecified Exposure

Geographic Feature: ☒

resource focuses on specific type of geography

None or Unspecified

Geographic Location: ☒

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country : France

Health Co-Benefit/Co–Harm (Adaption/Mitigation): ☒

specification of beneficial or harmful impacts to health resulting from efforts to reduce or cope with greenhouse gases

A focus of content

Health Impact: ☒

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

Mitigation/Adaptation: ☒

mitigation or adaptation strategy is a focus of resource

Mitigation

Resource Type: ☒

format or standard characteristic of resource

Research Article

Timescale: ☒

time period studied

Time Scale Unspecified