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Healthy people, healthy planet

Why dietary advice should incorporate sustainability to improve health and protect the environment

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Summary

The issue: Unhealthy diets cause around 1 in 5 deaths every year. Meanwhile, the global food system contributes over a third of greenhouse gas emissions (GHGE). More than 100 countries have developed dietary guidelines, but only a handful explicitly address the environmental impacts of diet. Poor adherence to guidelines limits how effective they are.

Key insights: Dietary guidelines that incorporate sustainability can improve health and significantly reduce the environmental impact of the food system, while personalising dietary advice can increase adherence. The few existing guidelines that incorporate sustainability often lack specificity and do not account for individual differences.

Policy implications

1. Develop dietary guidelines with a focus on environmental sustainability.
2. Improve adherence to existing guidelines through behavioural supports.
3. Integrate personalised nutrition in future guidelines, tailoring advice to account for individual differences.
4. Use precise, actionable language in dietary recommendations.

Background

What we eat has a profound impact on our health and the planet. Globally, unhealthy diets cause about 1 in 5 deaths every year, while the food system produces over a third of GHGE.

More than 100 countries have dietary guidelines, which advise people on how to have a healthy, balanced diet.

In Ireland, the Food Pyramid is the main tool for conveying these messages. It divides foods into five shelves of different sizes, from those to eat most (fruits and vegetables) to those to eat least (foods high in fat, sugar, and salt).

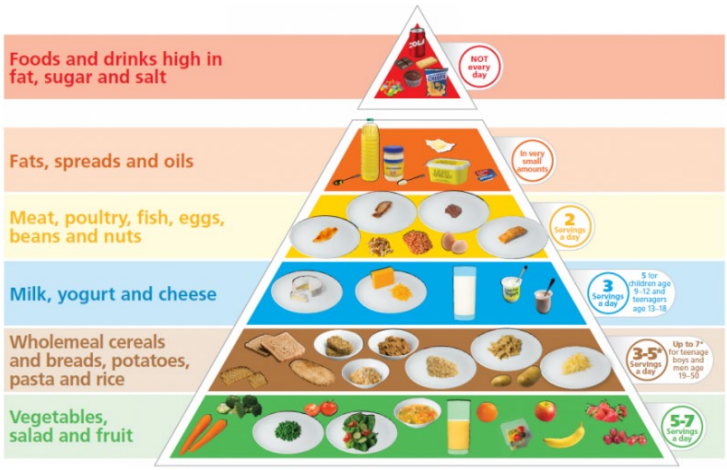

Image taken from Ireland's Food Pyramid, updated in 2016

However, adherence to dietary advice is generally poor, and diet-related illnesses – like heart disease, type 2 diabetes, and certain cancers – continue to rise worldwide.

Earlier guidelines focused solely on human health, but as understanding grows around the environmental impact of food, there's a shift toward promoting 'sustainable diets' — those that benefit both people and the planet.

Previous research has explored how dietary changes can reduce environmental impact, but it remains unclear whether these sustainable diets are nutritionally adequate, nor whether people are willing to adopt them.

Research overview

The MyPlanetDiet project has examined the health and environmental impacts of new sustainable dietary guidelines. The MyPlanetDiet guidelines were designed to be more environmentally sustainable than current recommendations, featuring less meat, slightly less dairy, and more plant-based proteins.

First, the researchers did a comprehensive review of existing dietary guidelines around the world, exploring how they incorporate sustainability.

Based on their findings, and a review of existing literature on sustainable diets, the researchers developed the MyPlanetDiet guidelines, using national nutrition surveys to ensure alignment with dietary patterns in Ireland.

They then conducted a 12-week randomised controlled trial with 355 participants who were randomised into two groups: one group received advice based on the sustainable MyPlanetDiet guidelines; while the other received advice based on the Healthy Eating Guidelines depicted in Ireland's Food Pyramid.

For both groups, dietary advice was delivered using a personalised approach, tailored according to age, sex, physical characteristics, and current diet.

The researchers compared the environmental impact of the two diets by monitoring dietary intake and calculated changes in diet-related GHGE among the participants. They studied the impact on participants' health by monitoring physical characteristics (e.g., weight and BMI), analysing blood samples, and assessing diet quality.

MyPlanetDiet was a collaboration between UCD, University College Cork, Queen's University Belfast and Teagasc, and the guidelines are grounded in the findings of the all-island SuHe Guide project.

Key research questions

- Can we design dietary recommendations that are better for human and planetary health?
- Can people change their diets enough to reduce the environmental impact of food production?
- Can personalised advice support dietary change?

Research findings

Sustainable dietary guidelines reduce emissions: Participants who followed the MyPlanetDiet guidelines reduced their GHGE by an average of 33%, with decreases in red meat, poultry, pork, and dairy, and increases in plant-based proteins, fish, fruits, nuts, and vegetables. Those who followed existing guidelines also reduced their emissions, but by 12%.

Sustainable diets can be healthy diets: Participants in both groups improved their diets, suggesting that sustainable diets need not come at the expense of public health. However, questions remain about long-term micronutrient intake, which will be explored in future research.

People will adhere to guidelines with the right tools: The personalised advice given to participants resulted in diets similar to the recommendations in the Food Pyramid, so people will follow existing guidelines if supported to do so.

National guidelines for sustainable diets lack precision: Several countries (including Germany, Sweden and Canada) now incorporate sustainability recommendations in their dietary guidelines. However, they use vague phrases like "consume more" when referring to plant-based foods, rather than precise, actionable language.

Next steps

Now, the researchers are exploring the topic further with a project called PLAN'EAT, which focuses on developing diets personalised on the basis of people's culture, behaviour and barriers to healthy eating (e.g. access to food, cooking skills, and habits).

Policy implications

1. **Develop dietary guidelines with a focus on environmental sustainability:** It is possible to reduce the environmental impact of the food system by incorporating sustainability in future dietary guidelines.

2. **Improve adherence to existing guidelines through behavioural supports:** Better support for people to follow existing dietary advice would significantly impact GHGE and public health. This could be achieved through a variety of measures, including clearer messaging, behavioural nudges, and better food environments.

   Behavioural support is especially important for helping people manage portion sizes and enjoy a variety of foods within each food group.

3. **Integrate personalised nutrition in future guidelines, tailoring advice to account for individual differences:** Building mechanisms to tailor dietary advice based on people's age, sex, physical characteristics and current diet would be an important step towards achieving health and environmental goals.

   This doesn't need to be resource-intensive; some countries, for example, have developed simple technological solutions, like online quizzes that deliver tailored advice based on people's responses.

4. **Use precise, actionable language in recommendations:** Dietary guidelines should consider more precise language, such as indicating specific quantities, and clearly communicating the importance of eating a variety of foods from each group. This will make it easier for people to follow the diets and help practitioners personalise the guidelines to account for individual differences.

References

Moving towards more sustainable diets: Is there potential for a personalised approach in practice?

Developing and testing personalised nutrition feedback for more sustainable healthy diets: the MyPlanetDiet randomised controlled trial protocol

Adherence to the Healthy Eating Guidelines in the MyPlanetDiet study is associated with healthier and more sustainable diets

Sustainable diets reduce diet-related greenhouse gas emissions and improve diet quality: results from the MyPlanetDiet randomised controlled trial

Contact the researcher

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