Small dietary swaps with alternative proteins for healthier and more sustainable diets in Europe

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Summary for practitioners

Objectives

GIANT LEAPS examined whether the environmental impact of European diets can be reduced without expecting consumers to become fully vegetarian or vegan. The project combined national dietary surveys with nutritional, health and environmental modelling to test realistic substitutions of meat and dairy foods with plant-based, hybrid and other alternative-protein products.

Results

The results show that meaningful change can begin with a limited number of substitutions rather than a complete dietary overhaul. Across the modelled diets, replacing approximately one to three animal-based foods per day was often sufficient to increase the contribution of plant and alternative proteins while keeping utilisable protein intake above adult requirements.

The most promising short-term options were familiar foods that fit existing meals and national food cultures. However, environmental improvement does not automatically guarantee nutritional improvement. Depending on the product replaced, particular attention may be needed for calcium, iodine, vitamin B12 and vitamin D. Some meat and dairy alternatives may also contain high levels of salt, sugar or saturated fat.

Practical implications

Food companies should prioritise alternatives that are easy to integrate into familiar meals, acceptable in taste and texture, and affordable for regular use. Product developers should assess the complete nutritional profile of substitutes, not only their protein content, and use fortification where justified.

Dietitians, retailers, caterers, public procurers and policymakers can support gradual change by promoting clear and achievable swaps rather than presenting the protein transition as an all-or-nothing choice.

The main implementation costs are product reformulation, nutritional assessment, sensory testing, fortification and possible labelling changes. The benefits include lower greenhouse-gas emissions

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and land use, easier consumer acceptance and a practical pathway towards healthier and more sustainable diets.

Additional dissemination and exploitation materials

www.giant-leaps.eu

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Geographical location

Europe. The detailed dietary modelling focused on Finland, Germany, Italy and Serbia, representing different dietary patterns and food cultures. The broader analysis and recommendations address the European food system more widely.

Additional information

A key enabling condition is the availability of alternatives that work within everyday food practices. Consumers generally make choices at the level of meals, shopping routines and household budgets - not at the level of protein categories. This means that a substitute is more likely to be adopted when it can replace a familiar product without requiring new cooking skills, major changes in taste or substantially higher spending.

Food manufacturers, retailers, caterers and public procurers therefore have an important role in making suitable alternatives visible, affordable and easy to use. Gradual substitution may be particularly effective in mixed meals, canteens and public catering, where familiar recipes can be adapted without presenting the change as a complete rejection of meat or dairy.

The main barriers are taste, texture, price, convenience and uncertainty about nutritional equivalence. Fortification practices also differ between countries and product categories. A product may provide adequate protein while still failing to replace nutrients normally supplied by the animal food it substitutes. Communication should therefore avoid treating “plant-based” as automatically healthier and should explain both the benefits and the nutrients requiring attention.

Future work should test substitutions in real-life settings, including households, schools, hospitals and workplace canteens; assess affordability across income groups; and improve European guidance on the nutritional design and fortification of meat and dairy alternatives.

Key messages for practitioners: Start with realistic swaps, not perfect diets. Design substitutes for the meal in which they will be eaten. Check the whole nutritional profile. Protect affordability and sensory quality. Adapt recommendations to local food cultures. Small, repeated changes can be more scalable than radical shifts that few consumers maintain.

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About this practice abstract and GIANT LEAPS

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