

Personalized nutrition is better than a 'one size fits all' approach in improving diets

August 16 2016

People receiving personalised nutrition advice develop healthier eating habits including consuming less red meat and reducing their salt intake, a study has found.

A website has also been shown to be effective at helping people make important changes to their eating patterns.

Publishing in the *International Journal of Epidemiology*, the pan-European study, led by Newcastle University, UK, surprisingly found there was no evidence that personalisation based on more complex information made any difference to the outcome.

The "personalised nutrition" approach

The "personalised [nutrition](#)" approach is based on the idea that by "individualising" [advice](#) and support, each of us can, and will be motivated to, make the dietary changes necessary for our individual needs.

Instead of providing generic advice such as "[eat](#) at least five portions of fruits and vegetables daily" or "eat two portions of fish, one of which is oily fish, per week", a personalised nutrition approach uses information to derive specific advice and support relevant for the individual.

Lead of the intervention study, Professor John Mathers, Director of the

Human Nutrition Research Centre at Newcastle University explains:

"Many of us know that we could improve our health and wellbeing if we eat better - however, we find it really difficult to change our eating habits and to maintain those improved eating patterns.

"In this study we found that personalised nutrition advice helped people to make bigger and more appropriate changes to their diets than the conventional healthy eating advice which was followed by our control group."

Three food goals

To help them focus on the aspects of their individual diets needing most change, each participant was given three personalised food-based goals. For example, an individual might be recommended to choose wholegrain versions of breads and breakfast cereals to increase their intakes of dietary fibre. Another might be advised to reduce, or even avoid, specific high fat dairy products to lower their intakes of saturated fats.

Professor Mathers added: "Six months after they started, those participants in the personalised nutrition groups had improved their eating patterns significantly more than those in the [control group](#). They were eating a healthier diet overall including less [red meat](#), saturated fat and salt and were eating significantly more of the B vitamin, folate, found in vegetables and fruits.

"The important message is that, compared with the Control group, the Personalised Nutrition groups had about double the improvement in overall healthiness of their diets measured using the Healthy Eating Index. We would expect this to translate, eventually, to bigger improvements in health and wellbeing."

Web success

The study, called Food4Me, was innovative in that participants were recruited online and then reported their dietary and other data via the web. Participants collected their own blood samples using kits provided.

In the study, 1,607 adults across seven European countries joined through the Food4Me website and were randomised to one of four treatment groups. In addition to a Control group who were given conventional dietary advice, they were allocated to one of three different personalised nutrition options;

- personalised nutrition based on analysis of current diet
- personalised nutrition based on diet and phenotype (adiposity (body fatness) and blood markers)
- personalised nutrition based on diet, phenotype and genotype (five genes were examined for which there was strong evidence of diet-gene interactions and the opportunity to tailor dietary advice based on genotype)

At the end of six months, 80% of the participants completed the study successfully and the researchers discovered that those randomised to the personalised nutrition treatment groups had significantly bigger improvements in their eating patterns than those randomised to the Control group. To their surprise, the researchers found that there was no evidence that the different bases for personalisation made any difference to the outcome.

Reaching out

Professor Mathers said the Food4 Me intervention study provides proof of principle for an approach which could have much greater public

health benefits.

He added: "What is exciting about this study is that we now know that the internet can be used to deliver personalised nutrition advice to large numbers of people. People find this approach convenient and it is better at improving people's diets than the conventional 'one size fits all' approach.

"People were able to use the internet to upload relevant information about themselves and about their current eating patterns, which was then used to work out the personalised advice relevant to each participant.

"Importantly, they stayed with the intervention for the 6 months of the study so that the research team could find out if the dietary changes made were being sustained. Taken together, the evidence suggests that this approach could be scaled up to help much larger numbers of people chose healthier eating patterns and this could be a valuable tool for improving public health."

More information: Carlos Celis-Morales et al, Effect of personalized nutrition on health-related behaviour change: evidence from the Food4me European randomized controlled trial, *International Journal of Epidemiology* (2016). [DOI: 10.1093/ije/dyw186](https://doi.org/10.1093/ije/dyw186)

Provided by Newcastle University

Citation: Personalized nutrition is better than a 'one size fits all' approach in improving diets (2016, August 16) retrieved 6 May 2024 from <https://medicalxpress.com/news/2016-08-personalized-nutrition-size-approach-diets.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private

study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.