Public Health Nutrition: 7(4), 473–474 DOI: 10.1079/PHN2004628

Editorial
Dietary Patterns and Dietary Makeovers

The disappointing results of intervention trials focusing on single dietary factors have contributed to an increased interest in whole-diet interventions. A whole-diet or dietary pattern approach recognizes the difficulty – in terms of both statistical method and interpretation – of isolating the effects of individual dietary factors. It also recognizes the value of assessing the aggregate effect of nutrients or foods commonly consumed together.

In this issue of Public Health Nutrition, Vincent *et al.*[1] describe the Mediterranean Diet, Cardiovascular Risks and Gene Polymorphisms (Medi-RIVAGE) study. Their intervention compares an olive oil-rich Mediterranean-type diet (MED) to a low-fat diet as recommended by the American Heart Association (AHA), for its effect on cardiovascular disease risk. Their study is among only a few to use a pattern approach for a dietary intervention[2–4]. Their study may also be the first intervention trial to compare a dietary pattern with a single nutrient-focused intervention. Results from the study have important implications for how we might improve on the dietary information disseminated to the public. Dietary advice from health professionals as well as from the food industry is dominated by single dietary factors, as evidenced by our familiarity with the terminology: low-fat, cholesterol-free, low-carb.

Beyond its comparison of a dietary pattern vs. a conventional single-factor approach, the Medi-RIVAGE study can address a second but equally important question: is changing one's dietary pattern as feasible as modifying intake of a specific factor in the diet? In other words, how well will the participants in the two arms of the study comply? In their study design, Vincent et al. appear to give the MED arm an edge. Whereas participants randomized to the AHA arm appear to receive only instructions, those in the MED arm are provided with tomato paste, olive oil, soluble fibre-enriched pasta, season-appropriate menus with recipes, and a list of commercial ready-to-use salads and dishes that meet study criteria. This is likely because the MED arm is the main arm of interest, and also because a wholesale change in diet requires greater incentive.

Still, even if AHA subjects were given steamers, non-stick pans, chicken recipes, and a comparable list of heart-healthy ready-to-use salads, it is interesting to speculate if MED participants might benefit simply from the opportunity for a diet makeover. The idea of going back to a Mediterranean dietary pattern might resonate well with participants if they have strayed from their traditional diets. It might summon up nostalgic images of the days when people ate good-tasting food that also happened to be good for them. A new dietary pattern could be viewed as an opportunity to re-discover or re-invent oneself. The AHA plan, in contrast, is less appetizing. Instead of a diet overhaul, the strategy is diet tweaking. Your image of a proper meal might be a breakfast of scrambled eggs and buttered toast, or a dinner of steak with creamy potatoes followed by dessert. But you would have to tweak this image to produce a meal consistent with AHA recommendations: use chicken breast instead of steak, don't make the potatoes too creamy, skip dessert, and forget about eggs for breakfast every day. Instead of an opportunity for re-invention, the new diet is simply a less satisfying version of what one is used to.

The issue of tweaking as a strategy to improve the diet arises in another study in a very different setting. Colecraft *et al.*[5] conducted a longitudinal study to evaluate the effectiveness of the Nutrition Rehabilitation Center (NRC) program in Accra, Ghana. They followed NRC participants at four time points beginning from their admission into the NRC until 2-4 months after exiting the program. The tweaking in this case largely involved substituting other grains for corn-based foods – for example, using sorghum instead of corn-based cereal, Weanimix instead of koko. They found that use of NRC-promoted foods was low after NRC participation and discharge. In short, they found that tweaking did not work. The reasons offered by caregivers for their non-compliance – the cereals are too difficult to obtain or too expensive; I don't know how to cook them; my children won't eat them – are enlightening and provide a human perspective on the data. They also illustrate how difficult it is to make even seemingly simple changes within an established dietary pattern.

Commonly mentioned advantages of a dietary pattern approach are its relevance to actual eating habits, its ability to address correlations and interactions among nutrients, and its quantification of the aggregate effect of simultaneous exposure to several dietary factors consumed together[6]. The Medi-RIVAGE may reveal yet another advantage. It offers a picture of what we could be eating with a diet makeover. Instead of substituting chicken for steak, just have pasta. It offers an attractive alternative to the dietary pattern that we've established for ourselves, so that diet modification can be viewed as a positive change that is well worth striving for.

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https://doi.org/10.1079/PHN2004628 Published online by Cambridge University Press