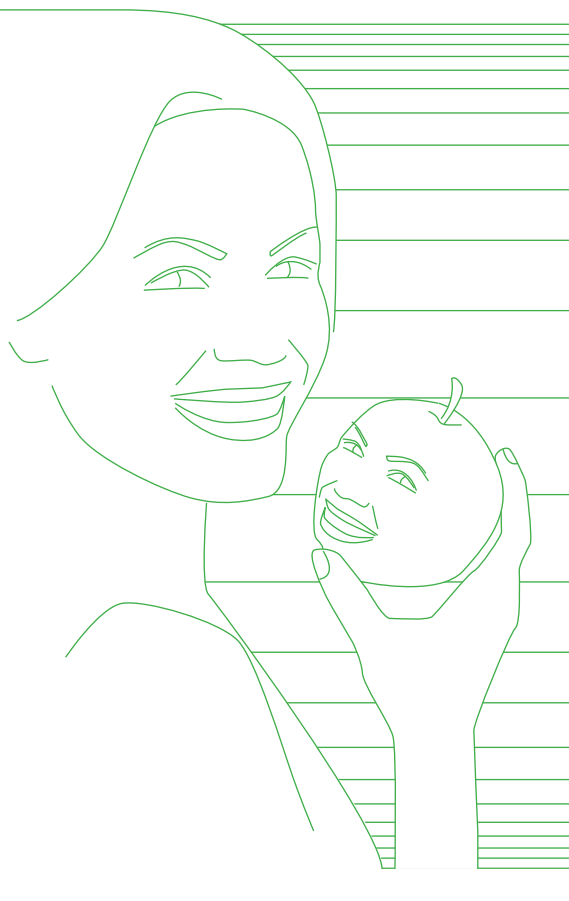


Personalised nutrition ushers in a new way of eating

Text by **Stefan Pabst**



Eating has always brought people together, so what happens if everyone's suddenly on a different diet? With the advent of personalised nutrition based on DNA profiles, there will be fewer and fewer opportunities to eat together with family, friends and colleagues. Cooking for large groups will become a real challenge. On the other hand, individualised nutrition could also give rise to new communities, with people who eat a similar diet getting together for mealtimes.

But even then, personalised nutrition could really push the sense of community to its limits. Will people who continue to eat things that their genetic profile says aren't good for them be accepted? Anyone who doesn't use food as a way of supposedly managing their own health could find themselves being given the cold shoulder.

Genetic profiling offers fresh hope to dieters

But isn't this discussion a little premature? In the search for a means of tackling obesity and prophylactically treating genetically disposed diseases, a number of products have recently hit the market with the promise of tailor-made nutrition based on DNA analysis. At the end of 2017, British start-up GenSmart¹ launched an app that provides recommendations for a healthier lifestyle based on the user's DNA. The genetic profiling is done by the company 23andMe², which has been offering commercial DNA analysis for private individuals since 2006. Tests currently cost around 100 US dollars. Instead of sequencing the entire human genome, the company uses genotyping, which looks at specific locations in your DNA that are linked to the tolerance

of foods. GenSmart's smartphone app then provides customers with diet plans based on a low-carbohydrate or low-fat regime. On the basis of scientific studies, GenSmart identifies links, for example, between variations of genes that are responsible for an insulin receptor and therefore indicate that a low-fat or low-carb diet would be more likely to work for particular people.

However, Stanford University³ published a study in February 2018 which suggests that DNA-based nutrition plans are no more successful than traditional diets. As part of the study, 609 overweight test persons followed either a low-carb or low-fat diet. All the participants lost weight over the course of a year, but the study established no differences between the various diets and identified no correlation between the participants' DNA profiles and their effective weight loss.

A better understanding of the interplay between genetic disposition and environmental factors might well pave the way for successful personalised nutrition one day. But solutions on offer at present aren't backed by any scientific evidence.

It's not all about getting the right nutrients

As long as people are unsure about what constitutes a healthy diet, they'll be happy to follow strict guidelines – all the more so today when digital apps serve as personal guides. And that's the real crux of the matter: regardless of whether the technology works or not, we are witnessing the advent of a kind of quantified nutrition that is eroding the key social motivation for eating – enjoyment and a sense of togetherness. And it's not just the social aspect that's lost if people can no longer share their food. Personalised nutrition could also lead to the exclusion of people who don't keep to their own personal diet.

Of course, it should be possible to find technological solutions as an antidote to this fragmentation, such as apps that create recipes based on the individual data of a specific group of people so they're able to share mealtimes after all – but that will just shift the issue and create a new problem to be dealt with. Making joint decisions on the basis of the lowest common denominator might sound democratic, but it will take us further and further away from eating as an enjoyable experience.

1: www.gensmart.me

2: www.23andme.com

3: Effect of Low-Fat vs Low-Carbohydrate Diet on 12-Month Weight Loss in Overweight Adults and the Association with Genotype Pattern or Insulin Secretion: jamanetwork.com/journals/jama/article-abstract/2673150?redirect=true