



A tomato with your coffee?

People who eat vegetables with their main meal only don't get enough of them. So researchers are looking for new ways to get vegetables into people. And it's working. At meetings, people are quite happy to swap their coffee-time cookie for some cherry tomatoes. 'If vegetables are offered, people eat them with pleasure.'

TEXT KORNE VERSLUIS **PHOTO** HOLLANDESE HOOGTE



The Dutch do not eat enough vegetables. On average, we eat about 130 grams a day, which is about half the 250 grams recommended by the Nutrition Centre. At the end of last year the centre raised the recommended daily intake of vegetables from 200 to 250 grams. Nutritionists are going against the tide here, as the Dutch have actually been eating smaller and smaller quantities of vegetables since the 1980s. Most Dutch people did not even manage the previous norm of 200 grams of vegetables a day. Only 28 percent of adults eat this much, and only 5 percent of the Dutch manage the 250 grams recommended by the new guidelines. Young people and children consume the amounts suggested for their age groups even less often. This is worrying because we all know that vegetables are good for you. 'We know that but we don't eat them,' says Renger Witkamp, professor of Nutrition and Pharmacology in Wageningen. Yet Witkamp has colleagues who are not concerned about this. More precisely, he has one distinguished colleague who likes to explain why the hallowed status given to fruit and vegetables is unjustified. An apple is no more than sugar water in a skin, and vegetables are really only healthy for what they lack: calories. So says the ex-Wageningen professor Martijn Katan (now at VU University Amsterdam) in his books and in interviews. It is true that people who eat a lot of fruit and vegetables fall ill less often and live longer. But, says Katan, that is not in itself proof that there are health-giving substances in fruit and vegetables. Many of the people who eat a lot of fruit and vegetables are highly educated and have healthier lifestyles. It cannot be proven that their health is due to the vegetables they eat.

RICH IN VITAMINS

No direct answer to Katan's critique can be found in the scientific literature, Witkamp admits. 'No double-blind controlled studies have proven that it is substances in vegetables that cause you to live longer. You cannot carry out such studies because people are not willing to eat a controlled diet for years on end. But we do have a lot of indications. Katan likes to shoot down sacred cows, but the vast majority of nutrition researchers in the world

think vegetables are not just healthy because they are low-calorie, but also because they are rich in vitamins, minerals and other micronutrients.'

There are fruits with a high 'Katan factor', says Witkamp. It is true, for instance, that apples are not as healthy as their image would suggest. Apart from a bit of fibre in the skins, apples consist largely of sugar water. But there really are substances in vegetables which keep people healthy. Various studies have shown, for instance, that polyphenols in cabbage have an anti-inflammatory effect. That is healthy, since inflammation is the cause of many of the negative consequences of overweight. Other vegetables contain substances which are converted in the gut into short-chain fatty acids such as butyric acid or propionic acid, which keep the lining of the gut healthy. Or there's the example of beetroot, which contains nitrate and lowers blood pressure. And almost all vegetables are high in fibre.

HIGHER STANDARDS

The Health Council, which laid down new dietary guidelines last year, now being recommended by the Nutrition Centre, studied the evidence for a number of health effects of eating vegetables and concluded that there is strong evidence that eating plenty of vegetables is good for blood pressure, and helps against cardiovascular diseases and bowel cancer.

Green leafy vegetables reduce the risk of diabetes. 'So I am sticking to the dietary guideline of: vegetables, vegetables, vegetables and fruit,' says Witkamp. But the average Dutch person does not follow this guideline. Since the nineteen eighties, say researchers, we have been eating less and less vegetables. Whether raising the bar will help to reverse this trend is very doubtful, says Emely de Vet, professor of Health Communication and Behaviour Change at Wageningen. 'Of course you hope people will raise the bar for themselves but I think it's more likely that a higher norm will discourage people. If you don't achieve the target, you just give up. Whereas every extra mouthful of vegetables is progress.'

People with traditional Dutch eating habits will have great difficulty eating the recommended 250 grams of





‘Every extra mouthful of vegetables is progress’

vegetables. In the Netherlands, vegetables go with the evening meal. And hardly anyone can eat 250 grams of vegetables at that meal. You will only manage it if you also eat vegetables with lunch, breakfast or as a snack.

VEGGIE SNACKS

The GroentenFruit Huis, the Dutch fruit and vegetable growers’ organization, has financed a few research projects at Wageningen UR in recent years to find out whether there are new ways of getting Dutch people to eat more vegetables. Victor Immink, a marketing researcher at Wageningen Economic Research, and Ellen van Kleef of the Marketing and Consumer Behaviour group placed cherry tomatoes and snack-size cucumbers and peppers on meeting tables in offices. Beforehand they expected that a few vegetables would be eaten during afternoon meetings. But surely morning coffee would call for cookies and not for cucumbers or tomatoes? ‘It turned out that wasn’t the case. People will eat vegetables with their coffee too, if you offer them.’ Immink conducted his trials with vegetable snacks in a total of 320 meetings at six locations, including the Ministry of Economic Affairs, the Gelderse Vallei hospital and Wageningen UR. People at the meetings ate an average of 80 grams of vegetables when they were served in a bowl: almost one third of the recommended amount. And the vegetable consumption did not even go

down when there were cookies on the table next to the mini-veggies too. At meetings where everyone had their own bowl of vegetables, the average consumption was as high as 97 grams.

A surprisingly large amount, although the question is whether the civil servants and hospital staff ate the vegetables mainly for their novelty value, or because they really appealed to them. Immink: ‘We would very much like to know that too. So we are going to repeat the experiment and then monitor people for longer.’

RADISHES FOR TODDLERS

Gertrude Zeinstra, a researcher at Wageningen Food & Biobased Research, did an experiment at crèches. Preschool children were repeatedly offered courgette, pumpkin and radishes as an afternoon snack. Vegetables which most toddlers do not eat at home and which therefore did not initially appeal to them. Zeinstra: ‘We know that children learn to eat vegetables by being offered them repeatedly.’ That was true during her study too. By the end of the study, in which the toddlers were offered each vegetable an average of 12 times, they were eating approximately twice as much pumpkin and radish. There was no change in their consumption of courgettes, though. ‘We think that is because courgette has a neutral flavour, and it is also more familiar to the children than the other vegetables. That makes the learning curve less steep.’

‘For the fruit and vegetable sector, crèches are interesting places for serving vegetables in new ways. They are keen to gain a reputation for healthy food,’ says Zeinstra. Parents who find it hard to get their child to eat vegetables at home like to hear that the crèche is helping them. But there is not much time for cooking, says Zeinstra. ‘Nursery nurses are used to preparing fruit snacks so convenient vegetables such as cherry tomatoes or snack-size cucumbers work well in their system. If you want to get children used to different vegetables which take some preparation, you have to deliver the vegetables in a form that can be served up without a lot of bother.’

In other places too, it seems easy to persuade people to eat some extra vegetables. Wageningen researchers >



PHOTO: HOLLANDESE HOOGTE

State Secretary for Economic Affairs Martijn van Dam hands out snack-size vegetables in The Hague in July 2016 at the start of what is known in Dutch as the 'cucumber season' – the summer slow news season. All part of efforts in collaboration with GroenteFruit Huis and the Nutrition Centre to draw attention to the health benefits of eating plenty of vegetables.

did a test together with the 'Variety in the Kitchen' foundation and the Van der Valk restaurant chain, looking at what restaurant diners thought of a meal containing more vegetables and less meat. During a trial period the researchers increased the quantity of vegetables on the plates, at the same time reducing the amount of meat by 12.5 percent. Result: vegetable consumption went up by more than 30 percent, and the restaurant threw out 33 percent less meat. Diners who were asked for their opinion of the meal, gave the vegetable-rich meal the same score as the traditional meal. So it does not seem to be all that difficult to get people eating more vegetables. And the trick of just putting

more vegetables onto your plate can quite easily be done at home too, of course. But it is not as simple as that, thinks Emely de Vet. 'A lot of people think they are already doing fine. They overestimate the amount of vegetables they eat.' Nor does the scientific literature give well-meaning household cooks much hope that they will stick to their resolutions to serve more vegetables and less meat. A lot of studies have been done with the aim of teaching people to adopt healthier eating habits, but review articles which scrutinize the results of these studies note almost unanimously that the effect of an intervention quickly dwindles. A bit like New Year resolutions, which rarely last until March. De Vet: 'If you have to make a big effort every day to achieve something, it is difficult to keep it up.'

This is why De Vet thinks it is sensible to target habit-forming, so that the situation invites certain behaviour without requiring much thought. And here we can learn from the bad habits which are quickly acquired. Eating crisps in front of the TV, for instance. A bag of crisps is emptied in no time. De Vet: 'We know that people are not very capable of moderation when they eat mindlessly. I give my children vegetables when they are watching TV and they eat them without noticing it. I hope that eating vegetables will become a habit.'

'We know what we should eat but we don't eat it'



‘Crèches are interesting places to present vegetables in new ways’

De Vet thinks other knowledge about the eating environment can contribute to healthier eating too. The distance to the food can make a difference, for instance. Put a bowl of something tasty at arm’s length and 40 percent fewer people take any of it. But it is important that it is still within reach. People who have to stand up and walk to the other end of the meeting room to get a cookie to have with their coffee may eat more cookies to compensate for the effort invested.

OFFERING CHOICE

Many employers find it hard to take steps to promote health at work, says the researcher. Employees do not like it if the employer takes too much interest in their unhealthy behaviour. They accept it when the employer offers some additional healthy choices, such as a bowl of fruit in the department, but not if the meat croquettes disappear from the lunch menu.

In 2015 De Vet won a VIDI grant from the Dutch research organization NWO for research on the subtle signals which prompt people to make healthier or unhealthier choices. ‘By positioning the croquettes prominently in the canteen, you send a signal that it is socially acceptable to take them. That sets the norm. If you put them further towards the back you will see that fewer people will take them. People are sensitive to those sorts of signals. If there are sweet papers visible in the bin, people are more likely to take a sweet. The papers suggest that it is acceptable.’ So by displaying the salads prominently in the canteen, you could use that subtle signal to prompt employees to eat more vegetables. According to Anne Marie Borgdorff, policymaker at GroentenFruit Huis, which co-finances numerous projects, the various tests have shown that people happily eat more vegetables if they are offered them. ‘The supply is key. If vegetables are on offer, people are keen to eat them.’ In the next few years, the GroentenFruit Huis and the ministry of Economic Affairs are going to jointly finance research among primary school children. ‘How can we make sure they eat more veg? A lot of children still get given cookies to take to school. We want to see whether we can replace those with vegetables.’ ■



TWO PIECES OF FRUIT A DAY

As well as more vegetables, the Nutrition Centre continues to recommend eating two pieces of fruit a day. This norm is not adhered to by the vast majority of Dutch people, either. About one quarter of the Dutch manage it, more women than men and far more elderly people than youngsters.

The basis for the Nutrition Centre’s ‘disc of five’ important food groups is the Health Council’s guidelines. In 2015 the council published new guidelines, incorporating the latest insights on the effects of eating fruit and noting that people who eat plenty of fruit have 10 percent less risk of coronary disease and 30 percent less risk of a stroke. People who eat more than 300 grams of fruit were said to have a lower risk of bowel cancer or diabetes. The Health Council does note that the evidence for these effects is not watertight. Enthusiastic fruit eaters tend to have generally healthier lifestyles than regular customers at the snack bar. So the council does not claim that fruit ‘causes’ the observed effects, but cautiously goes no further than a ‘link’: a high fruit intake ‘goes together’ with a reduced risk of stroke.



PHOTO ANP