
Executive summary

Health Council of the Netherlands. Committee on Trends in food consumption. Significant trends in food consumption in the Netherlands. The Hague: Health Council of the Netherlands, 2002; publication no. 2002/12

A National food consumption survey has been held in the Netherlands every five years since 1987. This document presents the most significant dietary trends for the period 1987/88 to 1997/98, and outlines their possible consequences in terms of public health. The focus of the document is on three groups: the population as a whole, the 13 to 18 age group and the 19 to 35 age group. Because the period under review was marked by a number of demographic shifts, the data used for analysis have been standardised according to age, gender and education based on the situation obtaining in 1987/88*.

Food consumption and meal patterns

Various socio-demographic shifts were noted during the period under review and these will certainly have accounted for changes to general lifestyle, food choices and eating habits. Significant developments include an ongoing decrease in the consumption of staples such as potatoes, vegetables, fruit and fresh meat. With regard to fruit consumption, both the number of consumers** and the quantity of fruit eaten by each individual was seen to decrease. In the case of vegetables, it was largely the quantity consumed that fell rather than the actual number of people eating vegetables at all. The

* Accordingly, some data with regard to food consumption presented in this report may differ from that published elsewhere, based on non-standardised food consumption surveys.

** Where the report refers to 'the percentage of consumers' or 'the number of persons consuming a product', this is to be taken to mean the number of respondents who claimed to have consumed the product in question on one or both of the survey dates.

reduction in the consumption of dietary staples was accompanied by a rise in that of the product groups 'grains, cereals and binding agents', 'fish', 'nuts and snacks', 'pre-prepared meals' and 'beverages' (notably sugar-free and standard soft drinks). The consumption of (fresh) fruit juices also increased, going some way towards compensating for the fall in the consumption of whole fresh fruit. Within the product group 'fats, oils and savoury sauces', margarine lost some ground to the lighter 'halvarine'-type substitutes while the consumption of thick (cream) sauces increased substantially. In the product group 'milk and dairy products', the previously noted trend whereby full-cream products were displaced by semi-skimmed and skimmed milk products and derivatives continued throughout the period under review.

In general terms, dietary trends among the two selected age groups (13 to 18-year-olds and those between 19 and 35) are in line with those of the population as a whole. Nevertheless, the decline in the consumption of 'bread' and 'vegetables' is somewhat higher than average among boys in the 13 to 18 age group. Similarly, the consumption of alcoholic beverages by this group increased, particularly during the latter half of the period concerned, i.e. 1992-1997/98. A larger number of boys started to drink beer during this period, and drank it in greater quantities. Among the 13 to 18 age group, it is noticeable that the decrease in the consumption of (fresh) vegetables is actually greater for female respondents than for their male counterparts. The number of boys who regularly ate vegetables remained more or less constant, while the number of girls doing so showed a significant decrease. Taking all factors into account, dietary preferences among the 13 to 18 age group displayed a trend which may be described as less favourable than that for the population as a whole.

The dietary preferences of the 19 to 35 age group largely follow those of the overall population. However, it is noticeable that in this sector there was a marked shift away from alcoholic drinks in favour of non-alcoholic beverages, particularly sugar-free soft drinks and fruit juices. The decrease in the consumption of vegetables was of similar proportions for both male and female respondents and was less marked than in the younger (13 to 18) age group. In general, the shift in the 19 to 35 age group's dietary preferences may be described as slightly less unfavourable than that observed among the younger group.

Among both selected age groups and the population as a whole, the most conspicuous shift in dietary preferences was observed during the period 1987/88-1992. During the subsequent five-year period, the trends thus far established were seen to continue for most product groups.

With regard to eating habits, the traditional 'three meals a day' pattern remained the norm the period 1987/88-1997/98, although there was some decline in the number of people taking breakfast, especially among the lower socio-economic group. Males aged between 19 and 35 seem particularly likely to skip breakfast. Those who do not eat

breakfast generally have a lower level of nutrition. However, there is no evidence to suggest that failure to eat breakfast results in failure to achieve the recommended daily intake of the selected nutrients.

With regard to the main meal of the day, there is a clear tendency towards products with a relatively short preparation time and for pre-prepared meals. The traditional 'meat and two-veg' is increasingly replaced by a rice or pasta dish or some other table-ready meal. Between meals, the consumption of coffee and tea is increasingly giving way to that of non-alcoholic beverages (notably soft drinks of the soda type), while bakery products (cakes and biscuits) have lost in popularity to nuts and packaged snacks. However, there is no evidence to suggest that the practice of 'grazing' increased significantly during the ten-year period under review.

The number of people eating either the midday or evening meal outside the home has increased somewhat less than general market surveys may suggest. The same can be said of the degree to which people choose to skip breakfast, of the consumption of pre-prepared meals, and of the replacement of the traditional Dutch (bread-based) breakfast with one featuring breakfast cereal or a pre-prepared breakfast drink. Although such trends did indeed emerge in the early 1990s and have indeed made some impact on the results of the surveys on which this report is based, their main influence was felt during the period after 1997/98. The Commission expects this development to continue and to intensify, whereupon there is likely to be further decline in the consumption of fruit and vegetables due to a concomitant rise in that of pre-prepared meals and more frequent dining out. This may also lead to a further decline in the intake of various micronutrients due to such factors as substitution of staples and a tendency not to eat breakfast.

Energy and nutrient intake

The trends in food consumption habits have had both positive and negative effects in terms of nutrition. The positive effects relate to the decrease in average energy value (kJ/Kcal) of the selected foodstuffs, the decrease in the intake of fats and the improvement of the fatty acid composition of the diet. Negative effects include a decrease in the average nutrient density of the diet.

The energy value of the diet and the energy value per gram (energy density) declined noticeably during the period 1987/88-1997/98, both for the population as a whole and for the two selected age groups. However, this decline was not able to prevent a significant increase in the number of persons classified as *overweight* or *obese*, particularly among females aged 19 to 35 at the lower end of the socio-economic scale. The decrease in energy intake was most noticeable during the period 1987/88-1992. During the subsequent five-year period there was a further slight decrease for the

population as a whole and for females aged 13 to 18, but a slight increase among males aged 13 to 18 and for the 19 to 35 age group.

During the period 1992-1987/98, average physical activity — and hence energy expenditure — decreased further among all sections of the population. The commission concludes that the observed increase in the number of persons presenting classified as overweight or obese may be attributed to the fact that the reduction in energy intake was less than the decrease in energy expenditure through physical activity.

The reduction in the average quantity of fat in the diet and the improvement of the fatty acid composition (affecting both the population as a whole and the two selected age groups) may be regarded as a (potentially) positive development. However, the quantity of saturated fatty acids and, to a lesser degree, trans fatty acids in the diet of the selected age groups is still markedly higher than recommended. The intake of simple and polyunsaturated fatty acids among these groups is within the target range, but nevertheless remains somewhat lower than that of the total population.

The decrease in the consumption of ‘visible’ fats (spreads and cooking oils, etc.) has not been fully offset by the use of added (‘hidden’) fats in bread, potato products and pre-prepared meals. Similarly, the decrease in the intake of saturated fatty acids in spreads, cooking oils, cheese, dairy products, meat and bakery products has not been fully offset by the increased intake from sources such as potato products and pre-prepared meals.

The number of persons maintaining a diet which complies with the published dietary guidelines with regard to total fat intake, saturated fatty acids, carbohydrates and dietary fibre remains extremely small, showing little change during the period 1987/88-1997/98. Despite the fall in the consumption of saturated fatty acids, such consumption remains higher than desirable. However, the degree to which the guidelines with regard to saturated fatty acids are being observed has increased, as has that with regard to total fat intake.

The reduction in the consumption of potatoes, fruit, vegetables and bread has rendered it increasingly difficult to meet the guidelines for the intake of dietary fibre. The average content of dietary fibre in the average person's diet remains far below the recommended level. The main obstacles to achieving a diet which conforms to the published guidelines (with regard to total fat, saturated fatty acids, carbohydrates and dietary fibre) would appear to be the saturated fatty acid content and dietary fibre content. The total fat content plays a lesser role.

In the case of a number of micronutrients, trends with regard to intake have been further analysed over the ten-year period. Particular attention was devoted to vitamins A, D, E, C, B₆, B₁₂, folic acid, and the minerals iron and calcium. In general, it may be stated that the food consumption in the Netherlands did not develop favourably with regard to the intake of these nutrients during the period 1987/88-1997/98. In most cases,

intake declined, both among the population as a whole and among the two selected age groups. Moreover, a number of important micronutrients have become less readily available, the nutrient density of the diet having decreased.

In particular, the decrease in availability and intake of the fat-soluble vitamins A, E and, to a lesser extent, D has been caused by the reduction in the consumption of spreads and cooking oils and of liver (products), matched by a shift away from the consumption of full-fat milk and products in favour of the skimmed and semi-skimmed varieties. This requires ongoing attention, as does the decrease in the intake of folic acid and β -carotene due to the fall in the consumption of fresh vegetables. The average intake of iron, which was already far below recommended levels at the beginning of the period under review, particularly among women of childbearing age, fell yet further. Further study into the underlying causes and effects of this decrease is seen as desirable.

Likely consequences in terms of public health

A further analysis of two significant dietary trends has been made in an attempt to identify the consequences in terms of public health: the reduction in the intake of saturated fatty acids and of trans fatty acids by those in the 19 to 35 age group and of lower educational qualifications, and the reduction in the general consumption of fruit and vegetables. Projections suggest that a significant reduction in the incidence of cancer (approximately 1,700 cases) and of cardiovascular disease (approximately 3,500 cases) within this population group could have been achieved over the next forty years if the reduction in fruit and vegetable consumption had not taken place. This is the equivalent of 1% to 2% of cases of these diseases. However, the reduction in the intake of saturated fatty acids during the period 1987/88-1997/98 is likely to lead to a 5% reduction (9,000 cases) in the incidence of cardio-vascular disease among men, and almost 1% (400 cases) among women during the same period. The reduction in the dietary intake of trans fatty acids during the period 1987/88-1997/98 will account for a reduction in the incidence of cardiovascular disease in the order of 5% (9,000 cases) among men and 4% (2,000 cases) among women over the coming forty years. Note that these projections relate only to the 19 to 35 age group with lower educational qualifications. For the population as a whole, the overall health effect may be extrapolated and expressed as a multiple of these figures.

Of course, the greatest health gains will be achieved if the food consumption of the 19 to 35 age group can be brought in line with the recommendations, i.e. 400 grams fruit and vegetables per day, a maximum of 10% en saturated fatty acids and no more than 0.8 en% trans fatty acids. This increase in the consumption of fruit and vegetables could account for a 12% reduction (35,000 cases) in the incidence of cardio-vascular disease over the coming forty years and a 14% reduction (16,000 cases) in that of cancer. The

target reduction in the quantity of saturated fatty acids in the diet (to no more than 10 en%) could decrease the incidence of cardio-vascular disease by approximately 29% (75,000 cases) during the same period, while the reduction in the quantity of trans fatty acids (to a maximum of 0.8 en%) would reduce the incidence of such diseases by 4% (10,500 cases). Here too, these projections refer only to those in the 19 to 35 age range and of lower educational qualifications, whereby the overall health effect for the total population will be very much greater. However, the commission notes that, given the uncertainties inherent in the modelling method employed, the projections presented in the report with regard to possible health effects must be regarded as global indications only.

Recommendations

In view of the trends and developments noted in food consumption, the commission makes the following recommendations. First, the commission believes that effective public education with regard to food choices should be intensified to encourage greater consumption of fruit and vegetables, bread and grain products, with a concomitant decrease in the consumption of those products which are rich in fat (particularly saturated fatty acids) and those products with a high energy density but low nutrient density. Secondly, in the interests of reducing the number of persons classified as overweight or obese, the commission recommends that the importance of achieving and maintaining a good energy balance should be stressed. It is, for example, possible to improve one's energy balance by increasing the amount of physical activity undertaken each day while ensuring that the energy intake does not exceed personal energy requirements. In regular school education, more time and attention should be devoted to the importance of diet and exercise as aspects of a healthy lifestyle. The commission also recommends that efforts to discourage the consumption of alcohol, particularly by young people, should be intensified.

In its product development and choice of ingredients, the food industry should be encouraged to observe certain basic principles which will lead to a further reduction in the quantity of trans fatty acids in the diet to the level found in nature itself. Measures should also be taken to ensure a reduction in the overall quantity of fats - particularly saturated fatty acids - and an increase in the amount of fibre in the diet.

Given the decrease in the intake of fat-soluble vitamins, the commission recommends that products in which the fat content has been artificially lowered (e.g. in skimmed and semi-skimmed milk) should have the vitamin levels restored to those of the original product. The food industry and the catering trade (including school dining rooms, company canteens, etc) should be encouraged to follow the published dietary

guidelines (e.g. high nutrient density combined with low energy density) when developing pre-prepared meals, meal components, snacks, take-away dinners, etc.

With regard to legislation, the commission finds that the Netherlands should take the initiative in ensuring that the necessary amendments are made to Directive 90/496/EEG of the Council of European Municipalities (dated 24 September 1990 and relating to the labelling of foodstuffs; Pb EG L276), whereby the trans fatty acid content should be clearly stated and whereby all food labels (where applicable) should indicate the fatty acid composition (total, saturated, trans, simple unsaturated and polyunsaturated.) Moreover, the commission feels that the European Union should consider the imposition of a maximum permissible content of trans fatty acids in industrially processed edible vegetable oils and fats. Finally, the commission finds that the Netherlands should examine at EU-level the willingness for a mandatory food labelling (energy, macronutrients, fatty acids).

The report ends with a number of recommendations for further research.