





# Health, food and physical activity

Nordic Plan of Action on better health and quality of life through diet and physical activity

*The Nordic Council of Ministers for Fisheries and Aquaculture, Agriculture, Foodstuffs, and Forestry (MR-FJLS) and  
The Nordic Council of Ministers for Social Security and Health Care (MR-S)*

**Health, food and physical activity**

Nordic Plan of Action on better health and quality of life through diet and physical activity

ANP 2006:745

© Nordic Council of Ministers, Copenhagen 2006

ISBN 92-893-1344-7

This publication can be ordered on [www.norden.org/order](http://www.norden.org/order). Other Nordic publications are available at [www.norden.org/publications](http://www.norden.org/publications)

Printed in Denmark

**Nordic Council of Ministers**

Store Strandstræde 18  
DK-1255 Copenhagen K  
Phone (+45) 3396 0200  
Fax (+45) 3396 0202

**Nordic Council**

Store Strandstræde 18  
DK-1255 Copenhagen K  
Phone (+45) 3396 0400  
Fax (+45) 3311 1870

[www.norden.org](http://www.norden.org)

**Nordic co-operation**

Nordic co-operation, one of the oldest and most wide-ranging regional partnerships in the world, involves Denmark, Finland, Iceland, Norway, Sweden, the Faroe Islands, Greenland and Åland. Co-operation reinforces the sense of Nordic community while respecting national differences and similarities, makes it possible to uphold Nordic interests in the world at large and promotes positive relations between neighbouring peoples.

Co-operation was formalised in 1952 when *the Nordic Council* was set up as a forum for parliamentarians and governments. The Helsinki Treaty of 1962 has formed the framework for Nordic partnership ever since. The *Nordic Council of Ministers* was set up in 1971 as the formal forum for co-operation between the governments of the Nordic countries and the political leadership of the autonomous areas, i.e. the Faroe Islands, Greenland and Åland.

# Table of Contents

Statement by the Nordic Council of Ministers.....	7
Summary .....	9
1. An unhealthy diet, physical inactivity, and overweight in the Nordic countries.....	13
1.1 An unhealthy diet .....	14
1.2 Physical inactivity .....	17
1.3 Overweight .....	20
1.4 A social gradient to an unhealthy diet, physical inactivity, and overweight .....	22
1.5 Major areas of concern .....	24
2. A basis for a common Nordic policy .....	27
2.1 Nordic values and principles .....	28
2.2 Current Nordic cooperation and “Nordic added value” .....	31
3. Nordic ambitions .....	35
4. Areas of priority – and Nordic cooperation .....	39
4.1 Children and youth .....	40
4.2 Healthier choices made easier for all.....	44
4.3 Targeted action .....	48
5. A common Nordic monitoring.....	51
6. Laying the ground for the development of best practice.....	55
7. Reinforced cooperation on scientific research .....	57
8. Follow-up on the Nordic Plan of Action.....	61



# Statement by the Nordic Council of Ministers

It is an overall ambition of the Nordic Council of Ministers to ensure better health and quality of life on equal terms for all Nordic citizens.

The World Health Organization (WHO) has underlined the seriousness of the problem of an unhealthy diet, physical inactivity, and overweight at the global level. Projections made by WHO point to a major increase in mortality due to non-communicable diseases. An unhealthy diet, physical inactivity, and overweight are among the most important underlying determinants behind this trend. WHO therefore recommends the development of governmental strategies and policies on the promotion of a healthy diet and physical activity and the prevention of overweight and obesity.

The trend in the Nordic countries is just as alarming as the one described by WHO at the global level. Each of the Nordic countries has already implemented a broad range of policies and has developed or is in the process of drawing up comprehensive strategies.

The Nordic countries have a common ambition and a common view of the problems that need to be addressed. Solutions to the problems of an unhealthy diet, physical inactivity, and overweight must primarily be found in action at the national or local level, but action at the Nordic and the international level is needed to support these efforts.

The Nordic Plan of Action includes specific Nordic initiatives as well as a number of common positions on issues that are currently being discussed in the EU and WHO.

The Nordic Plan of Action presents common Nordic standpoints that will be put forward in the coming discussions on the Commission Green Paper and on a number of issues regulated at the EU level. It will also provide a Nordic perspective to the WHO ministerial conference in Istanbul 2006 on Counteracting Obesity and to the formulation of the WHO-Europe Strategy on non-communicable diseases that is to be submitted to the Regional Committee for Europe in September 2006.

The Nordic Plan of Action will thus support the respective national efforts by strengthening cooperation on the development of the best possible policies and by seeking influence on the international agenda.

*The Nordic Council of Ministers for Fisheries and Aquaculture, Agriculture, Foodstuffs, and Forestry (MR-FJLS)*

*The Nordic Council of Ministers for Social Security and Health Care (MR-S)*

Approved July 6, 2006

# Summary

Unbalanced diet and physical inactivity have severe consequences for the health and quality of life of the individual and pose a serious economic threat to welfare in the Nordic societies. The prevalence of overweight and obesity is increasing in all the Nordic countries. There is also increasing evidence that an unbalanced diet and physical inactivity contribute to inequality in health.

Many Nordic citizens do not follow the official recommendations on diet and physical activity. A large number of citizens have a much too low intake of fruits and vegetables, have a too low intake of fish, and consume a diet too rich in fat, especially saturated fat. Children and youth have an intake of sugar that is well above the recommended level. About 50% of the population does not meet the recommendations regarding daily physical activity. The number of overweight adults now exceeds 40% and the number of overweight children is increasing and now corresponds to around 15–20%.

See further Chapter 1.

## A basis for a common Nordic policy

The five Nordic countries and three self-governing areas<sup>1</sup> have a long tradition for close cooperation on the issues of health, food, and nutrition.

It is a common Nordic conception that fulfilling the ambitions of a healthy diet and physical activity will require a common and multi-sectoral effort involving civil society, non-governmental organizations, private stakeholders, local and state authorities, as well as action at the international level. The Nordic countries strongly support the efforts and initiatives at the international and European levels, as well as in the individual Nordic countries, at both the state and local levels, to ensure stakeholder cooperation and co-responsibility.

The Nordic countries also agree that regulation in this area should be used if other options for ensuring a satisfying outcome for society have been exhausted or are deemed unrealistic.

See further Chapter 2.

---

<sup>1</sup> Faroe Islands, Greenland, and Åland.

## Nordic ambitions

The Nordic Council of Ministers<sup>2</sup> has defined a number of *ambitious measurable targets – common short- and long-term ambitions* – to be met by the Nordic countries, *both in the short term (5 years) and in the long term (15 years)*.

The ambitions focus on ensuring:

- A clear improvement in the Nordic population's diet.
- That a vast majority of adults and the elderly meet the recommendation on physical activity and all children are physically active.
- A major success in reducing the number of overweight and obese in the Nordic countries, especially among children and youth.
- A low tolerance for social inequality in health related to diet and physical activity.

See further Chapter 3.

## Areas of priority and Nordic cooperation

The Nordic countries have the following common areas of priority in the efforts to reach these Nordic ambitions on diet, physical activity, and overweight:

- Enabling children and youth to make healthy choices and protecting them from an environment that encourages unhealthy choices.
- Making healthier choices easier for all.
- Using targeted action to reach vulnerable and risk groups.

There are and will in the future be both similarities and differences in the specific choices of action taken by each Nordic government within the designated areas of common priority. The differences are considered as a source of richness and will allow for informative comparisons and an exchange of knowledge.

The Nordic Council of Ministers has decided to establish a catalogue of major initiatives in the Nordic countries that can serve as a source of inspiration to policymakers. The catalogue will be updated at least once every second year, and in time also with information that can be used to determine best practices.

The Nordic countries will work together to ensure that EU policies and initiatives at the international level support the efforts and ambitions of the Nordic countries. At present, the Nordic countries find the follo-

---

<sup>2</sup> Refers in this Plan of Action to the Ministers for Fisheries and Aquaculture, Agriculture, Food-stuffs, and Forestry and the Ministers for Social Security and Health Care, respectively.

wing particularly important: the EU Commission must maintain its ultimatum to industry on stopping all advertising and marketing of less healthy food directed at children and propose EU legislation in this area if industry fails to comply; through the forthcoming revision of the EC Directive on nutrition labelling, the EU must quickly ensure mandatory and better nutrition labelling; the EU Commission will be encouraged to assess whether and how the policies under the Common Agricultural Policy can contribute to the establishment of school fruit schemes in the EU and whether the school milk schemes can be revised in order to promote the intake of low-fat milk products.

See further Chapter 4.

## A common Nordic monitoring

Nordic surveys on diet, physical activity, and overweight provide crucial information for the formulation of policies. The surveys do not, however, permit comparisons between the Nordic countries and are not conducted regularly so as to permit a continuous overall assessment of the impact of policies.

The Nordic Council of Ministers has decided to establish a basic common monitoring with data collection every second year that will make it possible for the Nordic countries to make a continuous assessment of achievements. The common monitoring will provide the general public and decision-makers with adequate and updated information on trends within the areas of diet, physical activity, and overweight and promote Nordic cooperation in achieving common ambitions.

The monitoring in each individual Nordic country will be carried out on the basis of common principles.

See further Chapter 5.

## Best practice

In order to ensure the development of best practice in the Nordic countries, closer cooperation on methods will be established to assess the effectiveness and cost-efficiency of action to promote a healthy diet and physical activity and to prevent overweight.

A Nordic understanding on common methods will ensure that comparable methods to assess the effectiveness and efficiency of specific initiatives are used in the Nordic countries.

Such assessments will in time be included in a common Nordic catalogue on best practice in initiatives to promote a healthy diet and physical activity and to prevent overweight.

See further Chapter 6.

## Reinforced cooperation on scientific research

The Nordic Council of Ministers will work to promote research in a number of areas that are particularly relevant for the Nordic Plan of Action.

These areas include the validity and further development of the common Nordic monitoring and the identification of determinants of a less healthy diet, physical inactivity, and overweight. Also deemed relevant are the health consequences and costs to society and a focus on comparative studies and innovation in certain areas.

“Nordforsk,” under the Nordic Council of Ministers, has decided to give priority to the research theme “Food, nutrition, and health” over the next five years, meaning that substantial funds (c. EUR 1,5 million per year) will be provided as seed money to facilitate Nordic research cooperation within this research field.

See further Chapter 7.

## Follow-up on the Nordic Plan of Action

The Nordic Council of Ministers has delegated the overall implementing responsibility for the Nordic Plan of Action to its Committees of Senior Officials, i.e. the Committee of Senior Officials for Agriculture, Fisheries, Food, and Forestry, CSO-FJLS (Food) and the Committee of Senior Officials for Health and Social Services, CSO-S.

On an operational level, the implementation of the Plan of Action will be coordinated by the Nordic Working Group on Diet, Food, and Toxicology (NKMT) under CSO-FJLS (Food).

Every second year, NKMT will publish a status report on the implementation of the Nordic Plan of Action. Once the common monitoring has been established, the status report will be accompanied by a separate monitoring report.

See further Chapter 8.

# 1. An unhealthy diet, physical inactivity, and overweight in the Nordic countries

The population of the Nordic countries far from follows the official recommendations on diet and physical activity, and there is a substantial prevalence of overweight and obesity among both adults and children.

The available data and analyses on diet, physical activity, and overweight in the Nordic countries are limited and difficult to compare. One should therefore be cautious in drawing comparative conclusions on actual status, trends, and economic consequences for society.

The existing analyses of the consequences of an unhealthy diet, physical inactivity, and overweight in terms of loss of years of life and years of life in good health, and in terms of costs to society do, however, present a clear picture of the magnitude of the problem that must be addressed by the Nordic countries.

Figures on economic costs to society must be interpreted with reservation, notably because they will differ on how the health consequences are assessed, which economic outcomes are considered, the costing methods used, etc.<sup>3</sup>

There is also a clear social dimension to unhealthy diet and low levels of physical activity and there is a significantly higher prevalence of overweight, heart diseases, and diabetes in lower socioeconomic groups and among those with lower levels of education.

Alcohol is a major concern for the Nordic countries, but is not addressed directly in this Plan of Action, other than as one among a number of factors that can contribute to a too high intake of energy and therefore to overweight and obesity. In 2004, the Nordic Council of Ministers established a common approach to problems related to alcohol policy in an international context.<sup>4</sup>

---

<sup>3</sup> See for example: Melberg, H.O., The concepts of “cost to society” and “social costs,” paper presented at the KBS conference in Oslo, June, 2000; Rasmussen, S.R. og Sjøgaard, J. Tobaksrygningens samfundøkonomiske omkostninger; [http://www.ugeskriftet.dk/lf/UFL/uf199\\_00/1999\\_2000/uf12023/v\\_p/30567.htm](http://www.ugeskriftet.dk/lf/UFL/uf199_00/1999_2000/uf12023/v_p/30567.htm); CE Europe Stats. Estimating global road fatalities. [http://www.factbook.net/EGRF\\_Economic\\_costs.htm](http://www.factbook.net/EGRF_Economic_costs.htm).

<sup>4</sup> Nordic Council of Ministers, Declaration from the Nordic Council of Ministers, Ministers of Social Affairs and Health, Regarding Alcohol Policy, October 29, 2004, Journal no. 43001.15.002/04.

## 1.1 An unhealthy diet

Results from US dietary surveys indicate that an increase in dietary energy intake explains a major part of the rise in body weight reported in the US.

National dietary surveys carried out in the Nordic countries do not show an increased dietary energy intake in the population to the same extent. Data from the national dietary surveys indicate that the average intake of energy has decreased in Finland and Denmark, whereas it has increased slightly in Sweden.<sup>5</sup> Data from children and youth in Iceland do not show an increased energy intake.<sup>6</sup> However, comparisons of energy intake over time are of limited value due to increased under-reporting on i.e. the intake of snacks, sweets, sodas, and other foods between mealtimes, particularly in overweight or obese subjects.<sup>7</sup> In some of the Nordic countries, this is confirmed by food supply data showing an increased amount of energy available for consumption. There are very limited comparable data on the trend in energy intake in the Nordic countries with regard to children and youth.

The Nordic Nutrition Recommendations constitute a common Nordic platform for defining the objectives of the individual national efforts on promoting healthy eating and physical activity.<sup>8</sup> The Nordic Nutrition Recommendations provide reference values for the intake of and balance between individual nutrients, such as fat, saturated fats, protein, added sugar, dietary fibre, and specific vitamins and minerals.

On the basis of the Nordic Nutrition Recommendations, each Nordic country has established national food-based dietary guidelines. There are differences in these guidelines because of differences in the Nordic countries in meal patterns, food choices, etc.

The current status on diet in the Nordic countries shows a number of discrepancies compared to the official Nordic Nutrition Recommendations and the nationally defined food-based dietary guidelines, as illustrated in table 1.

---

<sup>5</sup> No available data from Iceland and Norway.

<sup>6</sup> Arnardóttir, H. E., Diet and body composition of 9 and 15- year-old children in Iceland. Master Thesis from Department of Food Science, University of Iceland, 2005. Steingrimsdóttir L, et al. Hvað borðar íslensk æska? Könnun á mataræði ungs skólafólks 1992–1993. Reykjavík: Manneldisráð Íslands 1993.

<sup>7</sup> Heitman & Lissner 2005.

<sup>8</sup> NNR. A 4<sup>th</sup> edition of the recommendations was released in 2004 after approval by the Nordic Council of Ministers (Agriculture, Fisheries, Food, and Forestry).

**Table 1: Intake of selected nutrients and fruits and vegetables in the general population<sup>9</sup>**

	Recommended	Actual intake (data from 1995–2000)
Fat – percent of total energy intake (E%)	C. 30	34–35
Saturated fat – percent of total energy intake (E%)	Max. 10	12–16
Added sugar – percent of total energy intake (E%)	Max. 10	10–11 (b)
Fruit and vegetables (g/day)	Min. 500 g (a)	230–400 g (c)

(a) Min. 500g is excluding potatoes. There is, as mentioned, no common Nordic food-based recommendation. The recommendation varies between 500g, 600g, and 750g (the last mentioned is used in Norway and includes potatoes).

(b) The intake of sugar has been constant or has increased slightly to moderately over the past 10 years, depending on the country.

(c) The intake of fruits and vegetables is highest among women.

On average (table 1) the intake of fat and saturated fat is too high and the intake of fruits and vegetables is too low in the Nordic countries. The average intake of sugar in the population corresponds to the recommended maximum. It must be stressed that the range of dietary intakes is considerable and that the mean intake values cover very low and very high intake values. It should also be noted that the available data were collected in different years and with different methods, so they should only be interpreted and compared with great reservation.

It is important to mention that the Nordic Nutrition Recommendations also point out that an increased consumption of wholegrain bread and cereals is desirable, that regular consumption of fish should be part of a balanced diet, and that salt levels in processed and consumed foods should be reduced/moderated. This is not illustrated in table 1.

The data for children in table 2 and the corresponding data for youth in table 3 show that the intake of sugar and saturated fat among children exceeds the recommended level and that the intake of fruits and vegetables is too low.

<sup>9</sup> DK: *Danskernes kostvaner 2000–2002. Hovedresultater*. Danmarks Fødevarerforsknig (2005). SE: Riksmaten, *Kostvanor och Näringsindtag i Sverige, 1997*. I: Steingrimsdóttir L, Þorgeirsdóttir H, Ólafsdóttir AS. *The Diet of Icelanders, Dietary Survey of The Icelandic Nutrition Council 2002*. Public Health Institute of Iceland, 2003. NO: *Norkost 1997. Rapport nr.2/1999*. Statens råd for ernæring og fysisk aktivitet, 1999. FI: *FINRAVINTO 2002*, National Public Health Institute.

**Table 2: Intake of selected nutrients and fruits and vegetables among young children<sup>10</sup>**

	Recommended	Denmark (4–9 y)	Sweden (8 y)	Norway (9 y)	Finland	Iceland (9 y)
Fat – percent of total energy intake (E%)	C. 30	34	31	32	n.a.	32
Saturated fat – percent of total energy intake (E%)	Max. 10	15	14	14	n.a.	15
Added sugar – percent of total energy intake (E%)	Max. 10	13	13	17	n.a.	13
Fruits and vegetables (g/day)	Min. 400 (a)	339	239	243	n.a.	139

(a) There are no common Nordic food-based recommendations for children. The dietary guidelines on fruits and vegetables at the national level (Denmark, Finland, Norway, and Sweden) are min. 500 g/day (excluding potatoes). In Denmark, recommendations are set at 400 (300–500) g/day for children 4–10 years of age.

**Table 3: Intake of selected nutrients and fruits and vegetables among older children/youth<sup>11</sup>**

	Recommended	Denmark 10–17y	Sweden (11y)	Norway (13y)	Finland	Iceland (15y)
Fat – percent of total energy intake (E%)	C. 30	32	32	31	n.a.	30
Saturated fat – percent of total energy intake (E%)	Max. 10	14	14	13	n.a.	14
Added sugar – percent of total energy intake (E%)	Max. 10	14.	12	18	n.a.	16
Fruits and vegetables (g/day)	Min. 500 (a)	407	193	240	n.a.	123

(a) Min. 500g is excluding potatoes. There are, as mentioned, no common Nordic food-based recommendations. The recommendation for youth corresponds to that for adults and varies between 500g, 600g, and 750g (the last mentioned is used in Norway and includes potatoes).

Studies on the costs to society of an unhealthy diet are sparse and the available studies are difficult to compare.<sup>12</sup> Evaluating the costs to society of an unhealthy diet is difficult as the recommendations on a healthy diet are multifaceted. Most studies focus on the intake of fat/saturated fat or of fruits and vegetables.

There is no doubt that the costs to society are substantial, something that is confirmed by a number of studies carried out outside the Nordic countries.<sup>13</sup> This is also illustrated by the important presence of risk factors that are diet-related in the WHO estimates of causes of the burden of disease; see table 4 below.

<sup>10</sup> DK: Danskernes kostvaner 2000–2002. Danmarks Fødevarerforsknig (2005). SE: Barnundersökningen Food Consumption and nutrient intake among Swedish children 2003. I: Arnardóttir, H.E., Diet and body composition of 9- and 15-year-old children in Iceland. Master Thesis from Department of Food Science, University of Iceland, 2005. NO: Ungkost 2000. Landsomfattende kostholdsundersøkelse blant elever i 4.- og 8.klasse i Norge. Sosial- og helsedirektoratet 2002. FI: No nationally representative data.

<sup>11</sup> DK: Danskernes kostvaner 2000–2002. Hovedresultater. Danmarks Fødevarerforsknig (2005). I: Arnardóttir, H.E., Diet and body composition of 9- and 15-year-old children in Iceland. Master Thesis from Department of Food Science, University of Iceland, 2005. NO: Ungkost 2000. Landsomfattende kostholdsundersøkelse blant elever i 4.- og 8.klasse i Norge. Sosial- og helsedirektoratet Oslo 2002. FI: No nationally representative data. SE: Reference not confirmed.

<sup>12</sup> Lang, T and Rayner, G (Ed.), “Why Health is the Key to the Future of Food and Farming,” 2002.

<sup>13</sup> See for example Hoffman, K and Jackson, S (2003), A review of the evidence for the effectiveness and costs of interventions preventing the burden of non-communicable diseases: How can health systems respond? – Report prepared for the World Bank.

**Table 4: Ten leading selected risk factors as percentage causes of disease burden measured in DALYs (disability adjusted life years) in developed countries<sup>14</sup>**

Risk factors	Total DALYs (%)
Tobacco	12.2
Blood pressure	10.9
Alcohol	9.2
Cholesterol	7.7
Overweight	7.4
Low fruit and vegetable intake	3.9
Physical inactivity	3.3
Illicit drugs	1.8
Unsafe sex	0.8
Iron deficiency	0.7

WHO 2002

A study carried out by researchers at the University of Southern Denmark<sup>15</sup> concludes that a conservative estimate would be that the average population life expectancy could be increased by 0.9 years or by 1.5 years if an intake of 250g per day of fruits and vegetables in the population were to increase to 400g per day or 500g per day, respectively.<sup>16</sup>

There are no Nordic scientific studies on the costs to society that can be associated with an unhealthy diet. The intake of fruit and vegetables is only one among a number of important components of a healthy diet. The intake of fat, saturated fat, and salt, for example, plays an important role in the risk factors “Blood pressure” and “Cholesterol,” which are important contributors to the burden of disease, as illustrated in table 4.

An unhealthy diet is a very important contributor to the burden of disease in the Nordic countries, as it is at the global level. The disease burden to society in terms of lost years of life and life in good health due to an unhealthy diet is of a magnitude comparable to that of other major contributors to the burden of disease such as tobacco, alcohol, and physical inactivity.<sup>17</sup>

## 1.2 Physical inactivity

Physical inactivity has recently been acknowledged as a major, independent risk factor in relation to the premature occurrence of chronic illnesses and premature death. It is also important to realize that physical activity is an important factor for the treatment of many chronic diseases.

Apart from the close link between physical inactivity and the development of chronic diseases, it is important to stress that physical activity

<sup>14</sup> The table can be misleading with regard to the relative importance of diet and physical activity since diet and physical activity affect some of the risk factors mentioned, such as blood pressure, cholesterol, etc.

<sup>15</sup> Gundgaard, J et al. Vurdering af de sundhedsøkonomiske konsekvenser ved et øget indtag af frugt og grøntsager. Teknisk Rapport, Syddansk Universitet, Januar 2002.

<sup>16</sup> The study only encompasses cancer and coronary heart diseases, and not other diseases that could be related to a low intake of fruit and vegetables.

<sup>17</sup> World Health Report, WHO, 2002.

is positively associated with cognitive functions and mental fitness, with the way that all age groups socialize, and with their quality of life. Regular daily physical activity is essential for maintaining body functions in older age groups.

The Nordic countries have quite similar national recommendations on physical activity.<sup>18</sup> It is the basic recommendation that adults and the elderly should be physically active at a moderate intensity for at least 30 minutes every day. The recommendation for children is physical activity of moderate and vigorous intensity for at least 60 minutes every day. In Denmark, the recommendation for children also includes that they should engage in physical activity of high intensity for at least 20–30 minutes twice a week.

It is assumed that about half the population does not meet the recommendations. The low levels of physical activity seem to be related to a decrease in physical activity during the everyday lives of the citizens, whereas physical activity in the form of physical exercise during leisure time seems to be increasing. Data on harder physical activity during work hours, on the other hand, show a significant decrease. Taken together, it seems likely that the total energy expenditure is lower than previously, an assumption that also finds some scientific support in data from Sweden.<sup>19</sup>

A general tendency is observed in all the Nordic countries towards an increased use of and access to computers at home and TV. A Norwegian study shows that 15-year-old boys and girls on average use computers, watch TV, or do homework 39 hours a week.<sup>20</sup> As is true in many other industrialized countries, there is also a clear trend in the direction of fewer having an employment involving physical activity.

Only limited comparable Nordic data exist on the level of physical activity in connection with transportation, housework, and other activities of daily life, but it is assumed that it has decreased. Finnish data indicate that the proportion of people with commuting activity (less than 15 minutes per day) decreased from 60 to 44% in men and from 38 to 30% in women from 1980 to 2002. The few existing data point to an increase in the use of motorized means of transportation in the Nordic countries over many years. The daily use of non-motorized means of transport, such as walking or cycling, in turn, has decreased or decreased considerably, depending on the individual country.

For children and youth, the data indicate significant differences in the activity levels between different age groups. The older age groups appear on average to be much less physically active than the younger age groups. Boys also seem to have a higher level of physical activity than girls, es-

---

<sup>18</sup> The Nordic recommendation is based on the American College of Sports Medicine's recommendation from the late 1990s. Recommendations on physical activity are also a part of the common Nordic Nutrition Recommendations (NNR 2004).

<sup>19</sup> Norman, 2003.

<sup>20</sup> Torbjørn Torsheim et al. "Helse og trivsel blant barn og unge – Norske resultater fra studien" "Helsevaner blant skoleelever. En WHO-studie i flere land", HEMIL-senteret, (2004).

pecially for the older age groups. There seems to be a tendency towards a decrease in children's level of activity during school hours the older they get.

A study carried out by researchers from the University of Southern Denmark<sup>21</sup> concludes that if half of the inactive adults<sup>22</sup> in Denmark (0.5 million individuals) were to become moderately physically active for the rest of their life, it could, over their remaining lifetime, result in a total gain of EUR 8.2 billion for society.<sup>23</sup> The size of the economic burden of physical inactivity is confirmed by studies outside the Nordic countries.<sup>24</sup>

A change from being inactive to being moderately active for a 30-year-old person yields a gain in expected life years of 2.8 years for men and 4.6 years for women. At the same time, the change in behaviour increases the expected number of years without disease by 2.4 years for men and 2.7 years for women. If a 30-year-old were to become very physically active, the gains would be even greater. Men and women could then expect to live 7.8 and 7.3 years longer and avoid 4 to 4.8 years of disease, respectively.<sup>25</sup>

The Swedish Food Agency and the Swedish Institute of Public Health have used the Danish study in an assessment of the costs to society related to physical inactivity in Sweden. Today about 14% of the Swedish population is physically inactive during their leisure time. The assessment<sup>26</sup> concludes that if all of those who are inactive were to become moderately active, it would over their remaining lifetime give Sweden a total economic gain of EUR 20 billion.<sup>27</sup>

If the Danish study is uncritically applied to the other Nordic countries, without taking national differences in health systems, etc. into account, and assuming that 11% are physically inactive in Finland, Iceland, and Norway, the gains that the Nordic countries could obtain if all those who are inactive became moderately active would be in the order of EUR 55 billion.<sup>28</sup>

---

<sup>21</sup> Jan Sørensen et al., "Modellering af potentielle sundhedsøkonomiske konsekvenser ved øget fysisk aktivitet i den voksne befolkning", Center for anvendt Sundhedstjenesteforskning og Teknologivurdering, Syddansk Universitet, 2005.

<sup>22</sup> Age 30 to 79 years.

<sup>23</sup> Not a yearly saving: a theoretical measurement of the potential saving that can be realized through the changes mentioned.

<sup>24</sup> See for example: Katzmarzyk PT, Janssen I. The economic costs associated with physical inactivity and obesity in Canada: an update. *Can J Appl Physiol.* 2004; 29:90-115.

<sup>25</sup> Jan Sørensen et al., 2005.

<sup>26</sup> Livsmedelsverket och Statens folkhälsoinstitut, "Kostnadsberäkningar och finansieringsförslag för underlag till handlingsplan för goda matvanor och ökad fysisk aktivitet", 30. september 2005.

<sup>27</sup> Not a yearly saving: a theoretical measurement of the potential saving that can be realized through the changes mentioned.

<sup>28</sup> Not a yearly saving: a theoretical measurement of the potential saving that can be realized through the changes mentioned.

### 1.3 Overweight

The average Body Mass Index (BMI) in the Nordic adult population today is around 25, which is the official limit for an individual being designated as overweight.

Forty to 46% of all men and 26 to 33% of all women in the Nordic countries are overweight (compared to an average of 47% in all developed countries). A Norwegian study has shown that the prevalence of overweight differs between different ethnic groups. Eighty% of Turkish immigrant men and 84% of Turkish immigrant women are overweight, compared to 40 and 24% of the immigrants from Vietnam.<sup>29</sup> When it comes to obesity, there are only slight differences between the sexes. The percentage of the Nordic adult population that is obese varies from 8 to 22%; see table 5 below.

**Table 5: Level of overweight (BMI 25–29.9) and obesity (BMI > 30) in the general population<sup>30</sup>**

Percentage overweight today	Overweight		Obese	
	Men	Women	Men	Women
Denmark (2003)	40	33	10	9
Sweden (2005)	42	27	12	11
Norway (2002, 18–74y)	43	27	9	8
Finland (2001)	46	29	21	22
Iceland (2002, 15 – 80 y)	44	28	12	12

Notes: Data from countries cannot be compared directly due to different collection methods. Norway: Self-reported.

The available Nordic data with regard to the trend in and status of overweight and obesity among children and youth are limited and difficult to compare. There is, however, a comparable trend toward a significant increase in the number of overweight and obese children and youth in each of the Nordic countries, even though the actual level varies.

Table 6 shows the prevalence of overweight and obesity among youth in the Nordic countries. The available data do not support a corresponding table for children.

<sup>29</sup> Kumar et al. Ethnic differences in obesity among immigrants from developing countries, in Oslo, Norway, *Int J Obes* 2006; 30: 684–690.

<sup>30</sup> I. Steingrimsdóttir L et al., *The Diet of Icelanders, Dietary Survey of The Icelandic Nutrition Council 2002, Main findings*. Public Health Institute of Iceland, Reykjavík, 2003. Weight and height self assessed. NO: Statistisk sentralbyrå. Levekårsundersøkelsen 2002. FI: Health 2000 Survey. National Public Health Institute. DK: Kjøllet, M and Rasmussen, NK. Sundhed og sygelighed i Danmark 2000. Statens Institut for Folkesundhed 2002.

**Table 6: Level of overweight and obesity among youth**<sup>31</sup>

Percentage of overweight among youth	Overweight		Obese	
	Young men	Young women	Young men	Young women
Denmark (2000 – 16–24y)	17	13	5	3
Sweden (2005 – 16–29y)	22	13	6	5
Norway (2000 – 13y)	11	11	2–3	1
Finland (2001 – 14y)	13	10	5	2–3
Iceland (Reykjavik 2004 – 14y)	17	13	5	4

Note: The data cannot be compared directly due to different collection methods.

In 2005, the Swedish Food Agency and the Swedish Institute of Public Health presented figures on the costs to society of overweight and obesity in Sweden in a paper dealing with the costs to society of overweight and obesity and the financing of their proposal for a Swedish national action plan.<sup>32</sup> The figures that have been compiled by the Swedish Institute of Health Economics<sup>33</sup> are presented in table 7.

**Table 7: Direct health care costs and indirect costs due to loss of production as a result of sick leave, early retirement, and early death in Sweden related to overweight and obesity, 2003. Million EUR.**

	Men	Women	Total
Direct costs	150	175	325
Sick leaves	169	193	361
Early retirement	351	337	688
Early death	264	57	322
Total	785	586	1.685

As table 7 shows, the total yearly cost of overweight and obesity in Sweden has been calculated to be around EUR 1.7 billion, which represents approximately 0.7% of Sweden's gross domestic product. The magnitude of the costs to society of overweight is confirmed by similar estimates in the US and UK.<sup>34</sup> The Swedish Food Agency and the Swedish Institute of Public Health assess that the costs to Swedish society associated with overweight and obesity will double before 2030 if the current trend in the number of the overweight and obese continues unchanged.

The work in Sweden on costs to society cannot be used directly to indicate the costs of overweight and obesity in the other Nordic countries

<sup>31</sup> I: The Centre For Child Health Services, measures from the school health care system in Reykjavík, 2004. DK: Kjølner M and Rasmussen NK, Sundhed og sygelighed i Danmark 2000. Statens Institut for Folkesundhed 2002. NO: Andersen LF et al. Overweight and obesity among Norwegian schoolchildren: changes from 1993 to 2000. *Scand J Public Health* 2005; 33:99–106. FI: Nuorten terveystapatutkimus 2001. SE: Nationella folkhälsoenkäten "Hälsa på lika villkor" 2005, [www.fhi.se](http://www.fhi.se).

<sup>32</sup> Livsmedelsverket och Statens folkhälsoinstitut, "Kostnadsberäkningar och finansieringsförslag för underlag till handlingsplan för goda matvanor och ökad fysisk aktivitet", September 2005.

<sup>33</sup> Persson, U et al., "Kostnadsutveckling i svensk sjukvård relaterad till övervikt och fetma – några scenarier. Vårdens resursbehov och utmaningar på längre sikt", Institut för Hälso- och sjukvårdsekonomi, Landstingsförbundet, 2004 and Persson, U och Ödegaard, K "Indirekta kostnader till följd av sjukdomar relaterade till övervikt och fetma", Institut för Hälso- och sjukvårdsekonomi, 2005.

<sup>34</sup> Suhrccke, M et al. 2005.

because of differences in health systems, the organization of the labour market, etc.

If the non-transferability is ignored, the available data on overweight and obesity in the Nordic countries suggest that the total costs of overweight and obesity could be around EUR 4.7 billion for the Nordic countries as a whole or EUR 196 for each Nordic citizen per year. In Denmark, Finland, Iceland, and Norway the costs would respectively be around EUR 1 billion, EUR 1.1 billion, EUR 56 million, and EUR 0.8 billion. If these figures hold, the total costs of overweight and obesity represent between 0.5 and 1% of GDP in the Nordic countries.

#### 1.4 A social gradient to an unhealthy diet, physical inactivity, and overweight

It is the general picture in all the Nordic countries that adults with longer education and higher socioeconomic status have better overall health than socio-economically weaker groups. Mortality rates therefore vary with levels of education and job position, especially among men.<sup>35</sup> Death from cardio-vascular diseases is 1.5 times more likely to occur among blue-collar workers and the lower educated compared to the other groups of the population, both in Sweden and in the other Nordic countries.<sup>36</sup>

There is no doubt that health in general in the Nordic countries is connected to social status.

##### *Dietary habits*

There is also a clear connection between dietary habits and social status in the Nordic countries.<sup>37</sup>

Studies show that healthy dietary habits are more common among the higher educated,<sup>38</sup> as illustrated by the higher intake of fruit and vegetables compared to the less educated in Norway<sup>39</sup> and Sweden.<sup>40</sup>

Studies on dietary habits among children from Norway, Denmark, and Sweden show that children with high-educated parents eat less sugar, more fruit and vegetables, and less fat than others. These children also

---

<sup>35</sup> DK: Andersen et al., Dødelighed og erhverv 1996–2000. Danmarks Statistik, 2005.

Diderichsen F., Folkesundhedsrapport 2005 for Københavns Kommune. Institut for Folkesundhedsvidenskab, Københavns Universitet, 2005. FI: FINRISKI 2002, National Public Health Institute

<sup>36</sup> Mackenbach JP et al., EU Working Group on Socioeconomic Inequalities in Health.

<sup>37</sup> NO: Sosiale ulikheter i helse i Norge. En kunnskapsoversikt. IS-1304. Sosial- og helsedirektoratet 2005. FI: Aromaa ja Koskinen. Terveys ja toimintakyky Suomessa. Publication of National Public Health Institute B3/2002.

<sup>38</sup> Becker W, Pearson M. Riksmaten 1997–98. Kostvanor och näringsintag i Sverige. Nationella Folkhälsoenkäten: På lika villkor. Statens folkhälsoinstitut; 2004.

<sup>39</sup> Johansson L et al., Healthy dietary habits in relation to social determinants and lifestyle factors. Brit J Nutr 1999; 81:211–20.

<sup>40</sup> Nationella folkhälsoenkäten "Hälsa på lika villkor" 2005, [www.fhi.se](http://www.fhi.se).

have a lower BMI, show more regular dietary habits, and eat healthier foods.<sup>41</sup>

Children's dietary habits seem to be linked to the education level of their parents, especially of their mother.

A Swedish study in the Stockholm area has shown clear differences among 15-year-olds in dietary habits depending on parents' education and ethnicity.<sup>42</sup> Both boys and girls with low-educated mothers more often have irregular meal patterns and twice as often eat unhealthy food compared to adolescents with high-educated mothers. There also seems to be a higher intake of sweetened soft drinks among children with less-educated and less well-off parents.<sup>43</sup>

### *Physical activity*

Little data exist in the Nordic countries combining physical activity with socioeconomic status. The existing data, however, support a tendency towards a lower degree of compliance with the official recommendations that is comparable to the one identified for diet and health in general.

Data from Sweden show relatively small differences in physical activity between social groups. However, the percentage with sedentary leisure time is twice as high among the lower educated compared to the higher educated. Furthermore, the percentage of those with a non-Swedish and non-Nordic ethnic background with sedentary leisure time is two to three times higher than among people with a Swedish/Nordic background.<sup>44</sup>

Data from Denmark show that the level of physical activity in leisure time is higher among adults with long education and high socioeconomic status.<sup>45</sup> When it comes to children and youth, data indicate that children of lower-educated parents are less physically active than children of parents from higher socioeconomic groups.<sup>46</sup> Data from Sweden do not confirm lower levels of physical activity among adolescents with lower-educated parents (COMPASS), but these children spend more time on sedentary activities like watching TV and video films. Girls and boys were sedentary for an average of 4.6 hours and 4.9 hours, respectively,

<sup>41</sup> Danskernes kostvaner 2000–2001, Fødevarerdirektoratet, 2002. Fødevarer Rapport 2002:10. Lillegaard ITL. UNGKOST 2000. Sosial- og helsedirektoratet, avdeling for ernæring, Statens næringsmiddelstillsyn og Institutt for ernæringsforskning, Universitetet i Oslo; 2002.

<sup>42</sup> Rasmussen F et al. COMPASS – en studie i sydvästra Storstockholm. Samhällsmedicin & Statens folkhälsoinstitut; 2004. R 2004:1.

<sup>43</sup> Jälminger A-K et al. – En matvaneundersökning bland barn i årskurs tre från områden med olika socioeko-nomiska förhållanden i Stockholms län. Centrum för Tillämpad Näringslära. Samhällsmedicin, Stockholms Läns Landsting; 2003. Rapport nr. 27. [www.sll.se](http://www.sll.se). Åström AN. Time trends in oral health behaviors among Norwegian adolescents: 1985–97. *Acta Odontologica Scandinavica*; 59 (4): 193–200.

<sup>44</sup> Nationella folkhälsoenkäten "Hälsa på lika villkor" 2005, [www.fhi.se](http://www.fhi.se).

<sup>45</sup> Kjølner M, Rasmussen N.K. Sundhed & Sygelighed i Danmark 2000, Statens Institut for Folkesundhed, 2002. Vaage OF. Trening, mosjon og friluftsliv. Rapporter 2004/13. Statistisk Sentralbyrå.

<sup>46</sup> Torsheim, T et al., Helse og tilsel blant barn og unge. En WHO-studie I flere land (2004). Ringgaard LW, Nielsen GA. Fysisk aktivitet i dagligdagen blandt 16–20 årige i Danmark. *Kræftens Bekæmpelse*, 2004.

during weekdays after school. Both boys and girls watched TV or video for an average of 2.1 hours per day on weekdays. Young people with a lower-educated mother, those in cramped accommodation, and those with immigrant background devoted the most time to sedentary activities.

### *Overweight/obesity*

There is a significant social gradient to the prevalence of overweight and obesity among adults in Denmark, Norway, and Iceland and the connection seems to be particularly clear with regard to levels of education.<sup>47</sup>

The tendency is equally clear among children and youth pointing to a connection between levels of overweight/obesity and parents' education level and socioeconomic status.<sup>48</sup>

## 1.5 Major areas of concern

The status in the Nordic countries can be summed up into the following areas of major concern:

- A large number of citizens in the Nordic countries do not eat in accordance with the official Nordic nutrition recommendations regarding fat (especially saturated fat) and sugar. It is especially troublesome that the intake of added sugar is very high among children and youth. Another major issue of concern is that few individuals meet the recommended intake levels of fruits and vegetables, and that many have a low intake of fish and whole grain cereals.
- About 50% of the population does not comply with the recommendations regarding the level of daily physical activity, and the decrease in the levels of physical activity among youth is critical.
- The number of overweight adults is increasing and now exceeds 40%, and the number of overweight children is increasing and now corresponds to around 15 to 20%.
- There is a clear social gradient in unhealthy eating, physical inactivity, and overweight in the Nordic countries. Groups with long education and higher socioeconomic status have healthier eating habits, are less sedentary during leisure time, and have a lower frequency of overweight.

---

<sup>47</sup> Heitmann BL et al., Overvægt og fedme. Sundhedsstyrelsen, 1999. Kjølner M, Rasmussen N.K. Sundhed & Sygelighed i Danmark 2000. Statens Institut for Folkesundhed, 2002. Sigurðsson R et al. The risk of obesity in association with education, alcohol use, residence and smoking among young Icelandic women. Abstract: Nordic Obesity Meeting 2006 (unpublished).

<sup>48</sup> Petersen T et al., Børns sundhed ved slutningen af skolealderen. Statens Institut for Folkesundhed, 2000. Heitmann BL et al. Overvægt og fedme. Sundhedsstyrelsen, 1999. Rasmussen F et al. COM-PASS – en studie i sydvästra Storstockholm. Fysisk aktivitet, matvanor, övervikt och självkänsla bland ungdomar. Samhällsmedicin & Statens folkhälsoinstitut; 2004. R 2004:1.

The economic costs to society related to an unhealthy diet, physical inactivity, and overweight are substantial and a further negative trend will constitute a major threat to the level of welfare in the Nordic countries. Estimates in developed countries of the costs to society of smoking range from 1.1 to 2.1% of GDP.<sup>49</sup> Estimates of the cost to society of alcohol in the US and Canada indicate costs in the range of 1 to 2% of GDP.<sup>50</sup>

The overall cost to society in the Nordic countries of an unhealthy diet, physical inactivity, and overweight, given their relative contribution to the burden of disease, must at least correspond to those costs, i.e. 1–2% of GDP.

---

<sup>49</sup> Lightwood J. et al., Estimating the costs of tobacco use in Jah P. og Chaloupka F. (Ed.) "Tobacco Control in Developing Countries," OUP for World Bank and WHO, 2000.

<sup>50</sup> Harwood et al. 1998. [http://www.nida.nih.gov/economiccosts/Table1\\_1.html](http://www.nida.nih.gov/economiccosts/Table1_1.html) and <http://www.ccsa.ca/econtab4.htm>



## 2. A basis for a common Nordic policy

The Nordic countries have similar social and health care sectors that are based on values that permeate the Nordic welfare model. By international standards, the Nordic countries have comprehensive public sectors providing tax-financed health care, education, social security, etc.

All the Nordic countries have national public health policies and health promotion programs, including overall objectives and strategies for the further development of the health of the nation and particularly emphasizing health promotion and prevention.<sup>51</sup> The overall objectives of the programs are almost identical, while strategies and interventions may vary.<sup>52</sup>

The Nordic countries have a long tradition for government nutrition policies that include extensive governmental initiatives on public nutrition, regulation and monitoring, and research in the fields of nutrition, food safety, and health.

The Nordic countries have policies at the national and local levels with regard to the promotion of healthy eating and physical activity, and a wide range of government and local agencies in each Nordic country share the responsibility for initiating efforts in this area.

Several Nordic countries have been working on national action plans on overweight and/or physical activity.<sup>53</sup> Sweden has had an Action Plan on nutrition since 1995 and has recently produced a draft for a new national action plan for healthy dietary habits and increased physical activity that focuses on a multilevel and multi-sectoral approach. Denmark has had a national nutrition policy since 1984 and the National Board of Health in Denmark adopted a national action plan against obesity in

---

<sup>51</sup> I: The Ministry of Health and Social Security. The Icelandic National Health Plan to the year 2010, 2004.

<sup>52</sup> Finn Kamper Jørgensen, National public health and health promotion programmes in the Nordic countries. *Ugeskrift for Læger* 2004, 166:1301–1305.

<sup>53</sup> I: Public Health Institute. Pingsályktun um manneldis- og neyslustefnu 1989. [http://www.lydheilsustod.is/media/manneldi/thingsalyktun\\_manneldi.PDF](http://www.lydheilsustod.is/media/manneldi/thingsalyktun_manneldi.PDF). Accessed March 2006. Pingsályktun um aðgerðir til að bæta heilbrigði Íslendinga með hollara mataræði og aukinni hreyfingu. 131. löggjafarþing 2004–2005. Þskj.1354–806. mál. Samþykkt 11. maí 2005. <http://www.althingi.is/dba-bin/ferill.pl?ltg=131&mnr=806>. NO: Stortingsmelding nr.16 (2002–2003) Resept for et sunnere Norge. Folkehelsepolitikken. Det Kongelige Helsedepartement. <http://odin.dep.no/hod/norsk/tema/p30008947/bn.html>. DK: Oplæg til national handlingsplan mod svær overvægt, Sundhedsstyrelsen 2003. SE: <http://www.fhi.se/upload/2702/TheSwedishActionplan.pdf>. FI: Report by the Committee on Development of Health-Enhancing Physical Activity, 2001. Ministry of Social Affairs and Health, Finland.

2003. Norway has had a national food and nutrition policy since the 1970s and has recently enacted a National Action Plan on Physical Activity that, like the nutrition policy, stresses the need for multidisciplinary and multi-sectoral cooperation. Norway is also currently working on an action plan addressing nutrition. Finland has a national action plan on Physical Activity. Iceland has had a national food and nutrition policy since 1989 and is currently working on an action plan for healthy dietary habits and increased physical activity.

These action plans represent diversity with regard to scope, measures, and proposed instruments, and clearly also show that not all of the important areas are covered in all countries. They provide a fine platform for a Nordic debate and cooperation on measures and for an exchange of information and experience to the benefit of all countries. A Nordic Plan of Action can provide added value to the initiatives already taken and be an important instrument to support the policies and action in each Nordic country.

## 2.1 Nordic values and principles

This Nordic Plan of Action is based on genuine values shared by the five countries and three autonomous territories<sup>54</sup> in the Nordic Region.

### *A healthy diet and physical activity – a multi-sectoral approach*

It is a common view in the Nordic countries that preventing overweight and obesity and promoting a healthy diet and physical activity are a collective responsibility; multiple sectors and stakeholders must be involved in societal changes at all levels. Non-governmental organizations as well as private stakeholders have an important role to play in achieving results.

The Nordic countries strongly argue for a multi-sectoral approach to a healthy diet and physical activity, and support the current efforts and initiatives regarding stakeholder cooperation that are carried out at the international and European levels, as well as in the individual Nordic countries at both the national and the local level.

### *Individual responsibility*

The Nordic countries acknowledge that the individual choice of lifestyle is a central element in understanding the underlying causes of an unhealthy diet, physical inactivity, overweight, and obesity. The individual has a clear responsibility for making his/her own choices.

---

<sup>54</sup> Faroe Islands, Greenland, and Åland.

The consequences of the choice of lifestyle are not equally clear to all citizens, the competences of the citizens vary, and environmental influences play an important role in forming choices and preferences.

Experience in the Nordic countries clearly demonstrates that providing information and education contributes positively to healthy dietary habits and physical activity in the population, but also that many other factors contribute to the shaping of individual choices, especially among children.

In the future, the Nordic countries will continue to ensure the availability of information and education about a healthy diet and physical activity, and in cooperation with relevant stakeholders, act on the broad environment that contributes to the shaping of individual preferences and choices. It is important to ensure that individuals are able to make informed choices of diet and level of physical activity and that healthy choices are available to all.

In the efforts to create a supportive environment for healthy individual choices of lifestyle, the Nordic countries will pay particular attention to groups in society that have the most difficulties in making healthy choices.

#### *Action at the local level*

The Nordic countries share a similar tradition for strong local governments, and local governments play an important role in shaping Nordic societies. The Nordic countries also have a solid tradition for active involvement of local citizen groups. There is a strong foundation for action to promote a healthy diet and physical activity, in particular in the local environment of the individual citizen.

The local communities have extensive responsibilities in health care and health promotion, but also play an important role in decision-making regarding the availability of healthy food choices and opportunities for physical activity, such as supportive environments to promote healthy lifestyles.

Local action through non-governmental organizations, sports clubs, civil community activities, primary health care, schools, and other institutions are important for local participation in the task at hand, and for greater success in reaching groups of society that are otherwise not reached by broader and more general information campaigns, etc.

The Nordic countries share a common view that local governments have a crucial role to play in the promotion of a healthy diet and physical activity, and that the Nordic governments must provide the necessary support for the development of multilevel and multi-sectoral solutions in the local communities.

*Stakeholder co-responsibility*

NGOs in the Nordic countries play an important role in the common effort to prevent overweight and obesity and to promote a healthy diet and physical activity. This applies to private health organizations as well as organizations representing consumers, industry, retailers, the catering industry, and the media, as they play an important role in shaping consumer preferences.

In the future, private stakeholders must continue to play an important role in the common effort to ensure better health and quality of life through diet and physical activity, both by themselves and in cooperation with governments and local authorities.

The Nordic governments share a common view that the food industry, retailers, the catering industry, and the media play an important role in the shaping of individual choices through the products they make more or less readily available to consumers, food portion sizes, advertising, etc. It is therefore expected that they take responsibility for the outcomes of their actions and that they directly and indirectly participate in the efforts to ensure better dietary habits and physical activity in the Nordic population.

The potential in engaging the food industry's experience, technical know-how, and creativity must be explored. The great potential for the media and entertainment industries to encourage a balanced diet, healthy eating habits, and regular physical activity should be explored further.

It is a general aim in the Nordic countries to develop and strengthen public/private partnerships, as an important element in the effort to prevent overweight and obesity and to promote a healthy diet and physical activity. The Nordic countries will continue the dialogue with the food sector to emphasize their role and co-responsibility for healthy dietary habits.

*Supportive action at the governmental level, and a will to intervene if necessary*

The Nordic countries have a long tradition for public regulation to ensure that outcomes in a free market also protect public health. The Nordic countries share a common view that regulation should be used when it is appropriate and if other options for ensuring satisfying outcomes for society have been exhausted or are deemed unrealistic.

The Nordic governments agree that the current trend with regard to dietary habits, physical activity, overweight, and obesity is unacceptable because of its negative effects on individuals and on society as a whole. There is a clear will to introduce legislation/regulation if the trend remains unchanged.

A number of regulations already exist at the European level as well as in the individual Nordic countries that contribute positively to the dietary habits and levels of physical activity in the Nordic populations. In a global economy, there are clear limits to the effectiveness of national legislation in a number of significant areas. The internal market in the EU also sets limits to the possibilities of national legislation in a number of areas.

The Nordic governments will intensify their work to ensure that legislation at the national, EU, and international levels is sufficient to support the common Nordic ambition to ensure the health and quality of life of the Nordic populations.

## 2.2 Current Nordic cooperation and “Nordic added value”

The Nordic countries have a long tradition for close cooperation within the framework of the Nordic Council of Ministers on the issues of food safety, health, and nutrition as well as on social health and welfare. It is the ambition of the Nordic Council of Ministers in the coming years to increase cooperation within the area of physical activity.

“Nordic added value” is a cornerstone in Nordic cooperation. It means that collaboration aims to increase the competence and competitiveness of the countries, develop unity, and use common resources better by focusing on areas where synergy and the best results can be expected through Nordic solutions.

The political collaboration between the Nordic governments takes place in the Council of Ministers. Committees of Senior Officials (CSO) with representatives from the national ministries and authorities are responsible for the implementation and follow up on decisions made by the Nordic Ministers. Over the years, a number of working parties, cooperation bodies, network groups, and institutions have been established to assist in the implementation process and to support Nordic cooperation in general.

### *Food and forestry*

The Council of Ministers for Fisheries and Aquaculture, Agriculture, Foodstuffs, and Forestry covers all politically relevant questions throughout the food chain from the soil/sea to the table, and thus stands for a holistic approach to all aspects of food production and consumption. The overall objective of the food policy is to ensure a wide range of healthy and safe foods of high quality, making it possible for citizens to choose a diet that promotes good health.

Within the food sector, a working group consisting of national experts has for many years collaborated and run projects concerning nutrition, health, and physical activity. The most comprehensive common effort is

the Nordic Nutrition Recommendations, of which the 4<sup>th</sup> edition was released in 2004.<sup>55</sup> The recommendations set guidelines for dietary composition and the intake of nutrients. A new element in the 2004 edition is that it now also contains recommendations on physical activity. The Nordic Nutrition Recommendations function as a scientific basis for the national recommendations in each of the Nordic countries. When deciding on the official national recommendations and strategy of communication, each country is free to choose the specific focus according to the needs of the different populations. Furthermore, the Nordic Council of Ministers has adopted a common Nordic policy for nutrition labelling.<sup>56</sup>

At the time this Plan of Action is adopted, the Nordic Council of Ministers is also expected to adopt a program called “New Nordic Food,” with the overall objective of promoting and developing the values and potentials of Nordic food and food culture. The aim is to connect Nordic strengths within gastronomy, food culture, tourism, regional values, health and welfare, rural and coastal development, raw materials, and added value within food production. One element is to help make a diet available that contributes to consumer health and quality of life

Furthermore, some activities within the forestry sector are also relevant for the health and well-being of citizens. In August 2005, the responsible Ministers adopted a declaration on the value of forests in which they agreed to develop the connection between the local values of the forests and the creation of better possibilities for recreation and outdoor life in the local societies.

#### *Health and social services*

The Council of Ministers for Health and Social Services is based on a shared set of values that permeates the Nordic welfare model. The basic principles are equal treatment for all citizens, social solidarity, and safety for all.

Within the social sector, the Nordic School of Public Health and Nordic Cooperation on Disability are of special importance in relation to this Plan of Action.

Furthermore, the Nordic Council of Ministers and the Nordic Council have agreed on an action program, “Design for all – a Nordic program for action.” This program covers persons with disabilities and should ensure that all perspectives of design are included in other action plans, as relevant.

---

<sup>55</sup> NNR. A 4<sup>th</sup> edition of the recommendations was released in 2004 after approval by the Nordic Council of Ministers (Agriculture, Fisheries, Food, and Forestry).

<sup>56</sup> “Nutrition Labelling: Nordic Recommendations Based on Consumer Opinions,” Nordic Council of Ministers, TemaNord 2004. TemaNord 2001:501 Forbrugernes krav til fødevaremærkning og vareinformation.

*Environment and health*

One of the targets of the action program of the Nordic Council of Ministers for the Environment is “to ensure that it is possible to have an outdoor life and experience nature as a way of improving and securing public health.” This is based on the Nordic tradition for using nature and active outdoor life for both physical and mental recreation.

In addition to cooperation going on through the above-mentioned formal institutions of the Nordic Council of Ministers, there are working groups, networks, and forums for exchanges of experience among government agencies, research institutions, etc. Several formal and informal Nordic networks for exchanging experience have been introduced in the area of physical activity, such as a network on exercise by prescription (at county level) and a network between public health actors (at state level).

As shown here, there is a common Nordic identity on a wide range of approaches and policies that make it relevant and meaningful to establish closer cooperation on health and quality of life through diet and physical activity within the framework of a Nordic Plan of Action.

The Nordic countries wish to build on all the existing important cooperation and existing networks on the issues of health, nutrition, and physical activity in order to further strengthen cooperation on solving the problems of an unhealthy diet, physical inactivity, and overweight.



### 3. Nordic ambitions

The governments of the Nordic countries have committed themselves nationally to address the issue of an unhealthy diet, physical inactivity, and overweight and enacted policies to promote a healthier lifestyle.

The Nordic Council of Ministers wants to underline these commitments by formulating common Nordic ambitions on combating an unhealthy diet, physical inactivity, and overweight. Common goals are to be created to allow for comparisons, whereby national actions taken in each of the Nordic countries can be assessed.

A common ambition will be a clear benefit for the Nordic countries when coupled with a common monitoring of effects, an increased sharing of knowledge, a common effort to identify best practice, and increased scientific cooperation, as laid out in the subsequent chapters of this Plan of Action.

The stated common ambitions have been formulated on the basis of present existing knowledge and data. The ambitions will be reviewed – and changed accordingly – in the light of new relevant knowledge and data, as was done for example in the case of the common Nordic Nutrition Recommendations.

The ambitions and goals are presented in the four boxes below:

#### **A clear improvement in the Nordic population's diet**

*Goal 2011:* The consumption of fruits and vegetables and of whole-grain bread/cereals has increased, and the intake of fat, especially saturated fat and trans fatty acids, and added sugar has been reduced. The intake of salt has been maintained or reduced, depending on the specific national context.

*Vision 2021:* A major part of the population is eating according to the Nordic Nutrition Recommendations applicable. The current references for the vision are:

- At least 70% of the population above 10 years has a daily intake of fruits and vegetables of at least 500 g/day. The average intake of children, 4–10 years, is at least 400 g/day.
- The average dietary intake of the population meets the NNR on fat and saturated fat plus trans fatty acids (respectively, max. 30 E% and max. 10 E% put together), and at least 70% meets the NNR on fat (E% between 25 and 35).

Continued

Continued from previous page

- 80% or more meets the NNR recommendation on daily intake of added sugar (max. 10 E%).
- 70% or more consumes fish or fish products, corresponding to a main dish twice a week.
- At least 70% of the adult population has a daily intake of whole-grain bread/cereals corresponding to at least half of their daily intake of bread/cereals.
- The average diet of adults meets the NNR recommendation on salt.

### **A vast majority meets the recommendation on physical activity and all children are physically active**

*Goal 2011:* The current trend, where an increasing proportion of adults and children are physically inactive, has been brought to a halt and at best reversed.

*Vision 2021:*

- At least 75% of the adult population is physically active (moderate intensity) for at least 30 minutes every day.
- All children aged 1–12 and at least 85% of children and youth aged 12–16 are physically active (moderate intensity) for at least 1 hour every day.

### **A major success in reducing the number of overweight and obese**

*Goal 2011:* The continuing increase in the proportion of the overweight and obese has been stopped and at best reversed.

*Vision 2021:*

- The number of overweight and obese adults has been reduced by at least 30% from the present level.
- The number of overweight and obese children and youngsters has been reduced by at least 50% from the present level

### **A low tolerance for social inequality in health related to diet and physical activity**

*Goal 2011:* Existing differences between different social groups with regard to overweight, obesity, unhealthy diet, and physical inactivity have not deepened further and are at best have been reduced.

*Vision 2021:* The variation between different social groups on meeting the defined objectives with regard to diet, physical activity, and overweight/obesity is at most 20%.

The respective national efforts to fulfil the common Nordic ambitions will be strongly supported by the common Nordic initiatives that are described in the following. The success in achieving common ambitions and the stated goals will be reviewed continuously by ensuring comparable and continuous monitoring, as described in the chapter on common monitoring (Chapter 6).



## 4. Areas of priority – and Nordic cooperation

The Nordic countries have common areas of priority in the effort to reach the stated ambitions on diet, physical activity, and overweight.

Ensuring better health and quality of life through diet and physical activity must focus on ensuring that:

- Children and youth are enabled to make healthy choices and are protected from an environment that encourages unhealthy choices.
- Healthier choices are made easier for all.
- Targeted actions are directed at vulnerable and risk groups.

In the future there will be both similarities and differences in the specific choices of action taken by each Nordic government, within the designated areas of common priority. The differences should be considered as a source of richness that will allow for informative comparisons and exchange of experiences. The establishment of a common Nordic monitoring and the development of evaluations of best practice will ensure that optimal solutions will be identified to the benefit of all (see Chapters 5 and 6).

As noted under the description of each area of priority, the Nordic countries emphasize action to affect the availability of healthier choices, but also action to improve the dietary habits and physical activity of children and the population as a whole. Healthy living should be the favourite choice of lifestyle, not only because it is available, but also because it is the norm among one's peers.

An important element in the Nordic Plan of Action will be a common catalogue on major initiatives enacted in the Nordic countries to promote health and quality of life through diet and physical activity to be compiled before the end of 2006. This catalogue will be updated at least once every second year, and will thus give an overview of the action taken in each of the Nordic countries to meet the stated common ambitions.

In the Nordic countries no systematic evaluations have yet been established of the effectiveness or efficiency of different initiatives enacted to promote a healthy diet and physical activity. It is the ambition of the Nordic Plan of Action to contribute to the establishment of a more systematic use of comparable evaluations and to include these evaluations in

the common catalogue on major initiatives in the Nordic countries (see Chapter 6).

## 4.1 Children and youth

### *Ensure children and youth an adequate knowledge of and easy access to a healthy diet and physical activity*

The Nordic countries have a common conception that one of the major elements in achieving future improvements in the dietary habits and level of physical activity in the population is to ensure children and youth an adequate knowledge of and easy access to healthy food and physical activity.

In some of the Nordic countries, at the state or local level, a wide array of campaigns on healthy eating and physical activity directed at children and youth have been initiated. Information on the subject is to some extent made available to children and youth on websites.<sup>57</sup>

In Norway, the Ministry of Education and Research and the Ministry of Health and Care Services finance a project called physical activity and meals in schools. The project was launched in 2004. The aim is to develop local models for school organization in order to integrate one hour of physical activity every day and healthy school meals in accordance with official guidelines. Furthermore, the project will provide a survey of knowledge and experience, evaluate models, disseminate good models, and advise local school authorities concerning success factors.

Many of these initiatives have been carried out in collaboration with private stakeholders, such as NGOs, retailers, industry, etc. It has not been systematically evaluated how these campaigns affect children and youth or which methods are the most effective.

Schools and day-care institutions are important settings when it comes to influencing children's dietary habits and the level of daily physical activity by creating supportive environments. Schools and day-care institutions reach children from all segments of the population and can therefore contribute to alleviating social inequality in health.

Today all of the Nordic countries offer different types of education at schools on healthy eating and energy balance, primarily in the form of home-economics classes, but also in a broader context of health education.

Ensuring children a healthy diet while they are in school or day-care is a high priority for all the Nordic countries. In Iceland, Finland, and Sweden, meals are provided at school,<sup>58</sup> and efforts are concentrated on ensuring a higher quality of the meals offered. In Denmark and Norway, the general picture is that no complete meal is offered at public schools, as

---

<sup>57</sup> For example in Denmark: [www.madklassen.dk](http://www.madklassen.dk)

<sup>58</sup> In Finland and Sweden, the meals are provided free of charge.

both countries have a long tradition for lunchbox meals. The efforts in Denmark and Norway are therefore primarily focused on ensuring improved information to schools, parents, and children on the importance of healthy foods in schools. Some local communities or institutions, in both Denmark and Norway, have established school meals, primarily user-financed, and assistance is offered to these local communities and institutions. Norwegian schools also offer subscription-based programs for fruit and vegetables, and milk is subsidized by the government.<sup>59</sup> In Denmark, milk schemes are widely available in schools and some local fruit arrangements have been established. All the Nordic countries have formulated guidelines with recommendations on the dietary quality of food available at schools.

It is a common Nordic priority to promote the availability of fruits and vegetables in schools and day-care institutions. Norway has established a parent-financed, subsidized school fruit and vegetable program, to which approximately 10% of all primary-school children have subscribed. An economic analysis done in Norway has shown that free school fruit is a cost-effective measure to implement. Research has shown that free fruit in schools is an efficient measure to raise the total consumption of fruit, reduce social inequalities in fruit intake and reduce the intake of snacks and sweets. Evaluation of the Norwegian subscription program shows that there is a social gradient; pupils with the highest consumption originally subscribe and raise their consumption. The program may contribute to increasing social differences.

Denmark is currently focusing on promoting parent-financed schemes through information campaigns and partnerships with private stakeholders.

Today all the Nordic countries offer physical education at schools for one to two hours per week. In order to increase the level of physical activity among children and youth, it is important to focus not only on the quantity of physical education, but also on the quality of physical education, the school environment, and local infrastructure that encourage physical activity. It is also necessary to focus on how physical activity can be integrated in different subjects and in outdoor activities. The competences of all the teachers and the leadership of the schools are also essential focus areas with respect to physical education and nutrition. It is also important to focus on improving the possibilities for physical activity during transportation to and from school. Important efforts in these areas have been made in many local communities, and as a whole, the Nordic countries do have a high level of performance in this area in comparison with many other developed countries.

---

<sup>59</sup> Norway: [www.skolefrukt.no](http://www.skolefrukt.no) and [www.skolemilk.no](http://www.skolemilk.no).

There is a Nordic consensus on the important role played by day-care institutions and schools in promoting a healthy lifestyle among children and forming habits that the children can take with them into adulthood. It will be important to ensure that the quality and the quantity of offers are adequate to cover needs. It is also important that the teaching staff has proper knowledge and is educated in health, diet, and physical activity. None of the Nordic countries has so far made systematic efforts in this area. The Nordic Council of Ministers will seek cooperation with the education sector in this field.

The Nordic EU member countries will request that the EU Commission assess whether and how the regulations under the Common Agricultural Policy can contribute to the establishment of school fruit schemes in the EU, and whether the school milk schemes can be revised in order to promote the intake of low-fat milk products only.

### *Limit the availability of unhealthy foods*

It is a general picture in the Nordic countries that less healthy snacks and sugar drinks are of limited availability at elementary schools. Vending machines are either forbidden or are simply absent in the primary-school environment. School children, and especially older ones, are allowed to leave school during breaks and buy snacks and sugared drinks at shops in the vicinity. This is a problem in all the Nordic countries. The problem can be addressed by ensuring that children have adequate knowledge of the importance of a healthy diet and a positive appetite for healthy food, and at the same time ensure that fresh cold drinking water and healthy foods are available and accessible in the school environment. Initiatives making healthier choices more appealing should also be a focus area.

Denmark, Norway, Iceland, and Finland have extra taxes on sugar, chocolate, sodas, etc. It is well known that high prices generally lower consumption. The use of taxes is also a positive signal on the need for a healthy diet in the population. However, in spite of these taxes, the prices of soda are relatively low compared with fruit juices and do not seem to deter children and young people from consuming these products in quantities far beyond the recommended levels.

The efforts made in the Nordic countries by national and local governments to limit the availability of less healthy foods in schools, youth clubs, and other places where children and young people spend time should be seen as an integral part of the efforts to promote healthy food and the availability of healthy foods in these institutions. There are many efforts made at both the national and the local level to ensure the establishment of nutrition policies in these institutions, and many institutions

with such policies in place do have limits on the availability of unhealthy foods. Many institutions have established guidelines limiting the sale of less healthy food or regulating what type of foods children can bring with them to the institution.

The Nordic countries will continue to work actively on minimizing the availability and intake of drinks with added sugar and snacks at schools, day-care institutions, and other places where children spend their leisure time.

### *Restrictions on the marketing of unhealthy foods targeted at children and youth*

The effects of advertising and marketing on children's choices have been documented in several recent international reports and studies.<sup>60</sup>

Sweden and Norway have established regulations that forbid TV marketing directed at children below the age of 12. In Norway, the consumer sector has initiated a project aiming to develop voluntary standards on the marketing of unhealthy foods directed at children and youth. In Denmark, the Danish Food and Drink Federation and the Danish Brewers' Association established self-regulatory principles in 2004 and 2005, respectively. Other Nordic countries are also working on promoting stakeholder-driven self-regulation.

The Nordic countries recognize that government-driven regulation will only be fully effective if it is established at the European or international level. Therefore, cooperation with the EU Commission, WHO, and other relevant international organizations is important in this regard. The opportunity for a ban on the TV marketing of unhealthy food to children should be further explored in the ongoing revision of the EU TV directive. It is important to ensure that the regulations of the main target country are enforced, not the regulations of the country where the programs are broadcast. The Nordic countries will also support WHO in exploring the feasibility of an international code on the marketing of food and non-alcoholic beverages to children.

The Nordic countries agree that the advertising and marketing of less healthy foods affect children's and youth's consumption of and attitudes towards foods and therefore need to be restricted. The Nordic countries will hold the EU Commission to its ultimatum to industry on stopping all advertising and marketing of unhealthy food directed at children, and will together demand community legislation if the current practices are not brought to an end through self-regulation.

<sup>60</sup> See for instance: Review of research on the effects of food promotion to children. Final report. Prepared for the Food Standards Agency. Hasting, G. et al. University of Strathclyde, Glasgow. 2003. Food marketing to children and youth: threat or opportunity, Institute of Medicine, Dec. 2005.

## 4.2 Healthier choices made easier for all

### *Information and advice on a healthy diet and physical activity to the general population*

The approach applied in providing information on a healthy diet has varied greatly among the Nordic countries. Denmark and Iceland have carried out nationwide campaigns promoting for instance fruit and vegetable intake, while Norway and Sweden have largely provided information through public and NGO websites. In Finland, national TV and leaflet campaigns are the most common form of communication.

Some degree of information and advice on a healthy diet directed towards the general population is as a minimum available through homepages and either local or national information campaigns from public institutions or NGOs in all the Nordic countries.

Several campaigns directed towards increasing the level of physical activity have been carried out in the Nordic countries. These campaigns have been both privately and publicly financed.<sup>61</sup>

The Nordic countries have a wide range of experience with information campaigns and activities in different areas and directed at different target groups.

The Nordic Council of Ministers will initiate the gathering of the relevant actors at the national level in the Nordic countries with the purpose of elaborating a proposal on how the Nordic countries to a wider extent can benefit from each other's experience, materials from information campaigns, and so forth.

### *Ensure improved product-related nutrition information*

The Nordic countries have a common ambition to ensure a labelling of food that makes it easier for the consumer to choose healthier products and make a more informed choice of food. Surveys have shown that consumers request an easily understandable tool to interpret the information provided in nutrition labelling.<sup>62</sup>

The Nordic countries agree that improved product-related nutrient information is needed. A working group under the Nordic Council has compiled an analysis on the subject and a specific proposal for better nutrition labelling.<sup>63</sup> The Nordic Countries agree that nutrition labelling, where relevant, should be made mandatory.

<sup>61</sup> Promoting pedestrian and bicycle traffic in Finland. The Jaloin-programme 2001–2004. Report from Ministry of Transport and Communications, 2004.

<sup>62</sup> "Nutrition Labelling: Nordic Recommendations Based on Consumer Opinions," Nordic Council of Ministers, TemaNord 2004. TemaNord 2001:501 Forbrugernes krav til fødevaremærkning og vareinformation. DK: [www.sst.dk](http://www.sst.dk). Campaigns in Denmark: 30 minutes in 1995, 2003, 2004; 60 minutes in 2005, 2006, 2007.

<sup>63</sup> TemaNord 2004:508

The Nordic countries will work together in order to promote the common Nordic proposal on better nutrition labelling in the forthcoming revision of the EC Directive on nutrition labelling, and to ensure that nutrition labelling becomes mandatory.

Signposting has been implemented in Sweden since 1989, the “keyhole” symbol and trademark making it easier for consumers to identify healthier choices of food. In Denmark, a scheme similar to the Swedish “keyhole” system has been used. This system will be replaced by new signposting in 2007 that also will give consumers an indication of which foods are a less healthy choice. In Finland, the Heart Association’s “heart sign” is a system designating foods that meet selected criteria for the content of fat, fibre, sugar, saturated fat, and salt. Recently, a decision of principle was made that the “heart sign” will continue to be the Finnish choice to designate healthier food alternatives. Over 200 food items are labelled with the “heart sign” in Finland.

In February–March 2006, an ad hoc working group on signposting assessed the possibility of establishing a common Nordic signpost-labelling scheme.<sup>64</sup> It is currently not feasible to establish such a scheme. The Nordic countries also have different approaches towards the possible introduction of an EC signpost-labelling scheme.

The Nordic countries will explore the possibilities of harmonizing the criteria behind the signpost-labelling schemes used in each country.

#### *Support workplace action to promote a healthy lifestyle among employees*

The workplace is an important area for promoting a healthy lifestyle, both among employees and in society as a whole.

Action at workplaces to promote healthy lifestyles by initiatives such as firms subsidizing healthy meals, offering free fruit, creating opportunities for physical activity, providing enough time and space to eat, etc., are widespread in most of the Nordic countries. In Denmark and Norway, for example, there are private associations that focus exclusively on workplace-related sports activities. In Sweden, a private association (“Korpen”) in collaboration with the National Institute of Public Health has devised criteria for assigning health diplomas to workplaces that fulfil the criteria.

The Nordic governments and local authorities have to some extent participated in the promotion of a healthy lifestyle at workplaces. In Denmark, for example, the Ministry of Family and Consumer Affairs has

<sup>64</sup> The conclusions from the work in the ad hoc group are available in a separate document.

carried out a project in cooperation with the labour union “3F”<sup>65</sup> with the aim of assisting workplaces in creating a healthier food culture. Finland’s local communities subsidize meals at workplaces. In Norway, the Directorate for Health and Social Affairs, the Fruit and Vegetables Marketing Board, and county health authorities cooperate in educating canteen personnel to offer employees healthier meals.

In Norway, a new Working Environment Act obliges employers to consider physical activity as a part of the company’s systematic work on health, environment, and safety at work (HES). Such measures will be considered in cooperation with representatives of the employees. Suitable measures are, however, bound to vary from company to company. Information and educational material has been developed in order to increase knowledge about the potential health effects of better facilities for physical activity at work.

In the coming years, the Nordic countries will give priority to initiatives directed at inspiring workplaces to invest in initiatives to promote a healthy diet and physical activity among their employees.

### *Support local communities in their efforts to a promote healthy lifestyle*

Local action towards promoting healthy lifestyles plays an important role in all the Nordic countries. There are several different approaches to local involvement. Areas such as non-governmental organizations, sports clubs, social clubs, primary health care, schools, and adult education facilities are essential areas of action.

As part of the implementation of the new national public health policy, local communities in Sweden are being motivated to establish local and regional public health boards. Similar initiatives are in place in Norway through the partnership model to promote public health in local and regional governments.<sup>66</sup> Considerable resources are allocated to strengthen the infrastructure for public health work and to stimulate local projects that promote a healthy diet and physical activity. There have also been several initiatives in Finland, one of the most ambitious initiatives being a diabetes-prevention program.<sup>67</sup> In Denmark, considerable resources have been allocated to co-finance local projects that promote a healthy diet and physical activity and prevent overweight and obesity among vulnerable social groups. In Iceland, municipalities and the Public Health Institute are joining together to promote increased physical activity and a better diet for children.

<sup>65</sup> Fælles Fagligt Forbund

<sup>66</sup> St.meld. nr 16 (2002–2003) Resept for et sunnere Norge. Folkehelsepolitikken. Det Kongelige Helsedepartement

<sup>67</sup> DEHKO

The Nordic countries give high priority to local action promoting a healthy diet and physical activity and preventing overweight and obesity. The establishment of a common catalogue of major Nordic initiatives and good examples will reinforce the sharing of knowledge on promoting local action and on local action that has been shown to be particularly effective. Support action to promote physical activity and outdoor life in leisure time

Creating physical environments that facilitate and encourage an active lifestyle and physical activity is an important aspect of work to prevent overweight, obesity and chronic diseases. All groups in the population should be given the opportunity to be physically active, independent of age and physical capacity, socioeconomic status, ethnic background, and cultural circumstances. The shaping of the physical environment, particularly the local environment, constitutes the conditions for the individual's opportunities for physical activity.

It has been proved that qualities in the physical environment influence the level of physical activity within various groups of the population. This should be taken into consideration in planning public areas. The local environment comprises human habitations, parks, open spaces, roads, streets, playgrounds, nature reserves, and cultivated farmland. It also includes institutions such as kindergartens and schools. Transport systems that strengthen the competitiveness of active travel like walking and cycling are important. Active transport is another important field of priority, as walking and cycling on short trips is an easy way of integrating physical activity into everyday life. It also features as an important factor in nature-conservation efforts and protecting recreational areas.

Further, the possibility of pursuing an outdoor life is a quality that must be ensured and made equally accessible to the population as a contribution to a good quality of life, well-being, improved public health, and sustainable development. Policies covering outdoor life are based on the idea that outdoor life is a value per se through the pure joy of the activity itself, experiencing nature, and opportunities for recreation, relaxation, and spending time with others.

The Nordic countries will promote the active use of local surroundings and share experience and knowledge in their efforts to contribute to a more active lifestyle in leisure time.

*Support action to promote the availability of healthy foods, including fruits and vegetables*

The availability of healthy foods and attractive alternatives to less healthy foods is considered important in order to promote healthier diets in the

Nordic population. The promotion of healthy foods is a high priority in the Nordic countries.

Existing initiatives on the promotion of healthy food and healthy alternatives range from taxes on certain groups of less healthy foods such as sugar, sodas, and alcohol, to subsidizing healthy food choices by for instance offering free fruit at workplaces. Denmark has introduced a nationwide campaign promoting a greater intake of fruits and vegetables called “six a day,” and Iceland has a similar “five a day” campaign. In Sweden, some restaurants offer keyhole-labelled meals that have to fulfil certain nutritional criteria.

Some parts of the Nordic food industry are making considerable efforts to develop and promote healthier foods, and a number of retailers have also allocated considerable resources in order to participate in the promotion of healthier diets. In some of the Nordic countries, government funding is made available for producers who wish to develop new and healthier food products.

There are examples in the Nordic countries of successful partnerships between government institutions and industry/retailers that contribute to the overall effort to promote a healthier diet.

The Nordic countries acknowledge contributions from industry and retailers in promoting healthier choices, but also agree that there is room for strengthened efforts. The Nordic countries recognize that partnerships/cooperation between the public sector, NGOs, industry/retailers, restaurants, etc. is an important element in promoting the availability of healthy alternatives.

### 4.3 Targeted action

#### *Targeted action supporting vulnerable and risk groups*

There is a clear need to address the issue of social inequalities in diet, physical activity, and overweight. There is also a need to discuss the effect of different measures on social inequality in health, and this must be taken into account when measures are considered.

All the Nordic countries have vulnerable groups as a specific target for action, but only very few initiatives directly supporting these groups have been enacted. Denmark is currently planning a campaign to be launched in 2007 directed at parents of young children in lower social groups focusing on general lifestyle improvements with regard to diet and physical activity. As already mentioned, the Danish government provides substantial co-funding to local projects directed at vulnerable groups.

In the Nordic countries there is a strong need for targeted initiatives supporting selected ethnic minorities with particular problems when it comes to healthy lifestyles.

The Nordic countries will give high priority to action empowering socially vulnerable groups and ethnic minorities with particular problems when it comes to healthy lifestyles. The aim is to reduce inequalities in health related to diet, physical activity, and overweight. The common Nordic catalogue of initiatives will contribute to closer Nordic cooperation and a sharing of knowledge on how to reach these specific groups.

*Provide advice to groups with particular needs, such as pregnant women, infants, small children, and immigrant groups*

There are groups in society with specific needs and/or in specific situations that make it relevant to target them. In the Nordic countries, there is a particular focus on pregnant women, who are considered to be both very receptive to information on healthy lifestyles and also a very important group when it comes to the prevention of unhealthy lifestyles.

One central focus area among pregnant women and new parents in the Nordic countries is breastfeeding. The prevalence of breastfeeding in the Nordic countries is high. The Nordic Nutrition Recommendations encourage exclusive breastfeeding for infants during the first 6 months as the benefits of breastfeeding are well documented. Breastfeeding provides the newborn with essential nutrients and provides protection against infections and probably also against other diseases. Breastfeeding is considered to have many positive long-term health effects through its effect on the child's immune system and the health of the mother.

Pregnant woman from lower socioeconomic groups are also a particular target group in the Nordic countries (for instance when it comes to promoting breastfeeding). Denmark has initiated efforts directed at overweight pregnant women, among other things with regard to increasing their physical activity. Norway has recently drafted new guidelines for health professionals regarding pregnancy. As a part of the implementation process in Norway, conferences focusing on lifestyle issues during pregnancy are being held.

The Nordic countries will continue to provide information to groups in the population with particular needs in terms of diet and physical activity. In the future, particular attention will be paid to pregnant woman and new parents to promote, safeguard, and support breastfeeding.



## 5. A common Nordic monitoring

Existing national surveys on diet, physical activity, and overweight do not offer the Nordic countries the possibility to perform a continuous assessment of achievements, or to make comparisons between the Nordic countries.

As an important element in the common Nordic Plan of Action, the Nordic Council of Ministers has therefore decided to develop a common Nordic monitoring of diet, physical activity, and overweight. It is the ambition that data will be collected every second year and in a representative way cover gender, predefined age groups (among children and adults), and social strata.

The Nordic Working Group on Diet, Food, and Toxicology (NKMT) under CSO-FJLS (Food) will coordinate the work on developing and implementing the Nordic monitoring system within the framework set out in the following. The monitoring will be developed taking due account to the work carried out in the EU on monitoring.

The data collected in each Nordic country under the common monitoring system will be presented in a common Nordic report. Besides presenting the data collected through the common monitoring, where relevant and based on data from more thorough national surveys, the Nordic report will contain an evaluation of the validity of the data presented.

### *General considerations on the monitoring of diet, physical activity, and overweight*

A common monitoring must not demand a major investment of public resources in each of the Nordic countries. The monitoring system must be as simple as possible and should if possible be integrated with current surveys.

The common Nordic monitoring system will not replace existing major health or dietary surveys in the Nordic countries. On the contrary, existing health and dietary surveys are needed to validate the common monitoring, provide more detailed information, and identify factors that may explain the trend that monitoring will depict.

Each country will collect data individually within the monitoring system in keeping with the common requirements that will be formulated.

Living conditions among the population with disabilities are important background factors, and issues on diet and physical activity in these

groups should possibly be considered in health policies. The possibility should be considered of integrating monitoring and data collection on diet and physical activity with the existing data collection from the population of disabled people under the Nordic Council of Ministers for Health and Social Services.

### *Monitoring diet*

The Nordic countries publish surveys on their respective populations' dietary habits every 5 to 10 years. There are many differences between the Nordic countries in the methods used to collect data, and data are collected in different years, for different age groups, and with different frequencies.<sup>68</sup>

There is clearly a need to monitor dietary habits more often than every 5 to 10 years. Food supply statistics are available with a higher frequency than the larger national dietary surveys, but the data provided are at an aggregate level and thus cannot provide information at an individual level.

It is possible to monitor the trend with regard to the fulfilment of the stated ambitions on dietary habits by developing and applying relatively simple questionnaires on key indicator foods.

A monitoring system with simple indicator questions cannot replace the existing more thorough dietary surveys. These surveys are necessary to draw a more precise picture of the intake of different foods and nutrients and how much it varies in the population.

The common monitoring will collect data on adults and children/youth, respectively, which will give a representative picture of whether the objectives stated by the Nordic Council of Ministers with regard to nutrition are being met over time.

### *Monitoring physical activity*

Surveys of physical activity are not as well established in the Nordic countries as surveys on dietary habits. A number of surveys have been carried out with the purpose of identifying which parameters are the best expressions of the level of physical activity in the population. The different data are comparable neither over time nor across borders. Initiatives have been taken in some of the Nordic countries to carry out comprehensive surveys, but not with regard to the establishment of simple and continuous monitoring. In Sweden, data on physical activity in a large and representative segment of the population are collected yearly in the public health questionnaire called "Hälsa på lika villkor."

---

<sup>68</sup> In Denmark, data are collected on a continuous basis with a third of the data being renewed every year.

A common Nordic monitoring system on physical activity must be able to assess the proportion of the population that meets the recommended level of physical activity.

The IPAQ (International Physical Activity Questionnaire)<sup>69</sup> is an internationally recognized and validated questionnaire that is already used in the Nordic countries in one way or the other. The IPAQ has been developed for use with young and middle-aged adults (15–69 years). With the purpose of monitoring in mind, the short version of the IPAQ, or a modified version of it, is considered adequate.

In order to further qualify and validate the results from a simple monitoring of physical activity, more thorough national surveys on physical activity should be carried out.

There is a need to clarify how a comparable collection of data can be undertaken among children and youth.

#### *Monitoring overweight and obesity*

The frequency and comparability of data on BMI and abdominal fat<sup>70</sup> in the Nordic countries, collected through existing surveys, is inadequate to ensure a continuous assessment of the overall efforts to prevent overweight and obesity.

The common monitoring will cover data on height, weight, and waistline in different age groups.

The gathering of data on height, weight, and waistline in a basic common monitoring can be based on self-reported data. Self-reported data have a tendency to result in under-reporting on weight and over-reporting on height.<sup>71</sup> Consequences are that BMI and the prevalence of overweight and obesity can be underestimated and this under-reporting may be larger in certain groups of the population. It is assumed that this under-reporting does not change in a major way over a short period of time, but this must be validated by national surveys that include measurements of height and weight.

How monitoring on children and youth can be carried out adequately must be considered further. Coordination with the WHO HBSC study (Health Behaviour in School-aged Children), which is conducted every 4–5 years in all the Nordic countries, should be considered.

---

<sup>69</sup> For further information see <http://ipaq.ki.se>.

<sup>70</sup> Abdominal fat repartition is a well-known risk factor behind coronary heart diseases. Waist-hip ratio is the indicator most used for abdominal fat, but waistline is considered as valid as an indicator, and waistline is simpler to administer.

<sup>71</sup> Kukowska-Wolk et al. 1989 & 1992



## 6. Laying the ground for the development of best practice

The common Nordic monitoring on diet, physical activity, and overweight will make it possible to tentatively assess the best practices in addressing the issues.

It must be underlined that these can only be tentative assessments. Despite the many similarities between the Nordic countries, there are also differences between and within them, differences that may have an important effect on the performance of each country. The results obtained can be affected by external factors that may be different or affect the countries differently. Nonetheless, it is thought that the common monitoring will result in better assessments of which combinations of initiatives can contribute to prevent an unhealthy diet, physical inactivity, and overweight.

The results of the common monitoring, qualified by more detailed research and the larger surveys carried out in each of the Nordic countries, will bring the Nordic countries closer to drawing conclusions on what works and what does not, especially when whole packages of initiatives are to be evaluated.

The possibilities for doing so will be increased substantially when the Nordic countries in a more systematic and comparable way are able to evaluate the effectiveness and efficiency of the individual initiatives they enact to prevent an unhealthy diet, physical inactivity, and overweight.

The Nordic Council of Ministers has therefore decided to initiate a process in order to ensure an increased sharing of experiences of the effectiveness and efficiency of initiatives in the Nordic countries, to prevent an unhealthy diet, physical inactivity, and overweight. This process will support the development of best practice to the benefit of each country.

A first step will be to establish a common Nordic understanding on methods to assess the effectiveness and efficiency of action taken to promote a healthy diet and physical activity and to prevent overweight.

The common understanding will be based on an agreement on common standards for the economic benefit that can be coupled to each of the stated ambitions on diet, physical activity, and overweight. For example, what is the value for society of a male adult 30 years of age who for the rest of his life changes from having a BMI of 30 to having a BMI of 25,

or of a child whose average daily intake of saturated fat over a lifetime changes from 14%E to 10%E?

The common understanding should also include an agreement on methods for evaluating the effectiveness of interventions both before they are enacted and after they have had time to demonstrate an effect.

The methods developed must be as practical and inexpensive as possible, so their use will not be inhibited by their complexity or their cost.

The responsibility for coordinating the necessary work on developing these methods will be placed in the Nordic Working Group on Diet, Food, and Toxicology (NKMT) under CSO-FJLS (Food).

A further step could be to develop a “manual” based on the established Nordic understanding.

The Nordic countries will work to ensure a widespread use of evaluations based on common standards and methods to assess the effectiveness and cost-efficiency of action taken to promote a healthy diet and physical activity and to prevent overweight.

In the longer term, the common approaches and cooperation on evaluations could lay the ground for the development of a common Nordic catalogue on best practices.

## 7. Reinforced cooperation on scientific research

In order to ensure the success of the Nordic Plan of Action, the Nordic countries will work to strengthen research and scientific cooperation in the following areas:

- 1) *Validity and further development of the common Nordic monitoring*
  - a) Development and validation of indicator foods and indicator questions concerning physical activity.
  - b) Identification of challenges in monitoring specific vulnerable/minority groups like the socially disadvantaged, ethnic minorities, vulnerable age groups (children, adolescents, the elderly).
  - c) Research data collection methods, i.e. innovative web-based methods.
- 2) *Determinants of an unhealthy diet, physical inactivity, and overweight,*
  - a) Identification of personal, social, and especially environmental determinants, for example prices of different foods, district and traffic planning, advertising and marketing, labelling of products, the media industry, etc. amenable to change.
- 3) *Health consequences and costs to society*
  - a) Research on health consequences for the individual and for society of a less healthy diet, physical inactivity, and overweight in terms of loss of years of life and loss of life in good health, including the economic costs to society.
  - b) Research on methods for ex-ante and ex-post evaluations of the effectiveness and cost-efficiency of initiatives.
- 4) *Comparative studies and innovation. Comparative studies on the effectiveness and efficiency of*
  - a) Health-promotion efforts combining dietary and physical activity strategies.
  - b) Policy measures, including educational efforts directed towards children and adolescents and work policies directed towards the adult population.

- c) Agricultural policies and food measures/activities and other relevant policies at the national and EU levels.
- d) Important and promising interventions with policy implications targeted at specific subgroups.
- e) Key factors identified to be part of best practice at the national and Nordic levels.

Intervention studies with new methods, initiatives and concepts, for example new ways of teaching and acting in school breaks or new ways of running workplaces, including workplace canteens.

Regarding other important research topics within the area of nutrition, food, and health, a recent seminar of Nordic researchers and representatives from Nordic research councils has confirmed the urgency and potentials of increased research cooperation on food, nutrition, and genes. In order to further understand the key factors in nutritionally adequate diets, it was pointed out that it is important to strengthen Nordic cooperation on research within the following areas:

- 5) *Multidisciplinary research on foods and food components with the aim of improving health, i.e. basic research on the main bioactive compounds in food followed by an analysis of their effects on human health using disciplines such as the new biomics technology, interventions studies, and other methods.*
- 6) *New epidemiological, clinical tests and interventions, and experimental studies on topics of common interest to the Nordic countries.*
- 7) *Methods to address inequalities in dietary habits and physical activity.*
- 8) *Research on consumer opinions of what sort of initiatives are necessary to change habits on diet and physical activity.*

The Nordic Council of Ministers has recently suggested that Nordforsk, the Nordic cooperation body for research, take up the interrelationship of “food, nutrition, and genes” as a new research area.

The Nordic Council of Ministers acknowledges and strongly supports that the Nordic cooperation body for research, Nordforsk,<sup>72</sup> has decided to give priority to the research theme “food, nutrition, and health” over the next five years, meaning that substantial funds (c. EUR 1,5 million per year) will be provided as seed money to facilitate Nordic research cooperation within this research field.

---

<sup>72</sup> NordForsk is an independent institution operating under the Nordic Council of Ministers for Education and Research. The institution is responsible for Nordic cooperation within research and research training. Central players in NordForsk are the national research councils, other research-funding agencies, and universities. NordForsk was established on January 1, 2005.

Within existing resources allocated to research, the Nordic Council of Ministers will give priority to facilitate Nordic research cooperation related to the Plan of Action and work for better resources for food research collaboration.

It should also be noted that some research activities related to the Plan of Action might seek funding from NKJ, the Nordic Joint Committee for Agricultural Research.

Finally, it is worth mentioning that the topics of food, nutrition, and health at present are high-priority areas in several of the national research councils of the Nordic countries, showing the importance of research in this field.



## 8. Follow-up on the Nordic Plan of Action

The Nordic Council of Ministers for Agriculture, Fisheries, Food, and Forestry (MR – FJLS) has the overall political responsibility for the Nordic Plan of Action on better health and quality of life through diet and physical activity. The plan will be implemented in close cooperation with the relevant committee of the Nordic Council of Ministers for Health and Social Services (MR – S).

The Nordic Council of Ministers has delegated the overall implementing responsibility for the Nordic Plan of Action to its Committees of Senior Officials, i.e. the Committee of Senior Officials for Agriculture, Fisheries, Food, and Forestry, CSO-FJLS (Food) and the Committee of Senior Officials for Health and Social Services, CSO-S.

On an operational level, the implementation of the Plan of Action will be coordinated by the Nordic Working Group on Diet, Food, and Toxicology (NKMT) under CSO-FJLS (Food). A number of more permanent working parties and institutions under the committees will also assist in the implementation of the Plan of Action, especially:

- The Nordic School of Public Health (NHV) – under CSO-S
- Nordic Cooperation on Disability (NHS) – under CSO-S

NKMT will publish a report on status in the implementation of the Nordic Plan of Action every second year. Once the common monitoring has been established, the status report will be accompanied by a separate monitoring report.

The CSOs will focus on analyzing activity reports in order to ensure that the action plans are being fulfilled to a satisfactory degree, deliberate on monitoring reports concerning trends, and, as appropriate, will further submit proposals on topical political issues to the Council of Ministers.

Giving that a multi-sectoral approach is needed in order to fulfil the objectives of the Plan of Action, collaboration with several related policy areas within the Nordic Council of Ministers will be established in the follow-up process, as appropriate.

Within the Council of Ministers for Fisheries and Aquaculture, Agriculture, Foodstuffs, and Forestry, synergy will be established with the program on “New Nordic Food” and policies on the values of forests in relation to physical activities. Further, cooperation and partnerships with other Nordic policy areas such as the environment, education, culture (children and youth strategy), research, innovation, etc. could be ap-

propriate for specific activities and projects. Collaboration with NGOs and public/private partnerships would also be in focus, as appropriate.

The current Plan of Action includes a substantial number of priorities of Nordic and national interest. The Nordic Council of Ministers and the committees of senior officials will work to ensure that the necessary resources are earmarked for the various priorities laid down in the Plan of Action.

Besides the implementation of the Plan of Action at the Nordic level, activities financed at the national level to follow up on the goals and priorities defined in this Plan of Action will play an important role in the implementation. The ministers therefore assume that these actions will be considered as an integrated part of the national priorities.