EuroHeart II
BUILDING ACTION on HEART DISEASE and STROKE

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Diet, physical activity and cardiovascular disease prevention in Europe

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Why do diet and physical activity matter?

Eight risk factors account for 60% of cardiovascular disease worldwide. Of these, seven risk factors relate to diet and physical activity (alcohol, high blood pressure, overweight/obesity, high blood cholesterol, high blood glucose, low fruit and vegetable intake and physical inactivity). **By reducing exposure to these risk factors we could increase life expectancy by almost five years.**[1]

Why is prevention so important?

Cardiovascular disease costs the European Union almost 110 billion euros on health care and 82 billion in lost productivity and informal care costs per year.[2] These costs present a very substantial economic and social challenge that European countries are ill-equipped to deal with. **As people are living longer, European governments are raising retirement ages to help pay for pensions and elderly care. In reality, however, many people are already disabled by ill-health before they reach retirement age.**

Towards a more active Europe

Many Europeans live largely sedentary lives. A shift away from more physically active work and changes in travel and transport, along with increasing mechanisation of the home, have all contributed to this. Meanwhile, the evidence for the health benefits of physical activity gets ever stronger. **Policy solutions need to focus on ways of building physical activity—such as walking or cycling—into daily routines.**

Do diets in Europe comply with health advice?

Despite some areas of progress, most countries throughout Europe are far from achieving current population goals for diet and physical activity. **There are worrying signs of a generation shift in southern Europe as younger people move away from traditional eating habits and towards a more 'modern' diet which provides more energy from oils and fats, sugars and processed starches.**

Dramatic reductions in heart disease deaths have been seen in most western European countries in recent decades—brought about by a combination of better treatment and effective prevention.

There is, however, no room for complacency. Cardiovascular disease (CVD) is still the main cause of death in Europe—accounting for nearly half of all deaths in the region— and a major cause of ill-health and disability on a massive scale. Not everyone has benefited from the recent progress—there remains a startling gap of 21 years in healthy life expectancy for men between European countries and stark health inequalities exist within countries.[3] Alongside the improvements that have been seen, a dramatic rise in the prevalence of certain risk factors—namely obesity, overweight and diabetes—threatens to undo the gains that have been made.

We must shift the dietary and physical activity patterns of European populations to halt these worrying trends, and to prevent the illness and suffering that coronary heart disease and stroke inflict on Europe's citizens on a massive scale. It is time to build on the progress which has been made to ensure the heart health of future generations across Europe.

What is new in the European Heart Network's latest report?

The European Heart Network's report Diet, Physical Activity and Cardiovascular Disease Prevention in Europe, reviews the latest evidence on the relationships between cardiovascular health and what we eat or how active we are. It also takes a close look at current European eating and physical activity patterns and proposes a series of policy actions.

Two sets of population goals

We propose two sets of population goals for European countries to work towards in the medium and long term. The intermediate targets are set at a level which governments could realistically aim for within the next five to 10 years. The second, more-ambitious, goals highlight diet and activity levels to aim towards in the longer term.

It is important to stress that these goals are not dietary guidelines for individuals. They represent a recommended average intake or level for the population as a whole, and are provided as a tool for policy makers to use in setting and monitoring strategy. The goals need to be translated into meaningful food-based dietary guidelines at the country level—taking local eating habits, activity patterns and cultural factors into account.

Intermediate and longer-term population goals for diet, physical activity and body mass index

Goal	Intermediate population goals	Longer-term population goals
Total fat comprises different types of fatty acids: saturated fat, trans fats, polyunsaturated and monounsaturated fatty acids	Fat should provide less than 30% of the total calories from food (food energy) in the diet.[i] Unrefined carbohydrate from foods rich in fibre should replace the fat as a source of energy.	In the longer term, the aim should be to reduce the energy from fat to between 20 and 25% of food energy. Unrefined carbohydrate from foods rich in fibre should replace the fat as a source of energy.
Saturated fat	Less than 10% of food energy should come from saturated fat in the interim.	In the longer term, the goal should be less than 7% of food energy from saturated fat.
Trans fats	Trans fatty acids should provide less than 1% of food energy in the interim.	The longer-term aim should be for trans fats to provide less than 0.5% of energy.
Polyunsaturated fatty acids (PUFA) include linoleic acid (LA), alpha-linolenic acid (ALA) and the very long chain fatty acids eicosapentanoic acid (EPA) and docosahexaenoic acid (DHA)	Polyunsaturated fatty acids should provide between 6 and 11% of food energy. Energy from alpha-linolenic acid (one particular polyunsaturated fatty acid) should be between 1 and 2% of food energy in the interim. Average intakes of very long chain n-3 polyunsaturated fatty acids (also known as omega 3 fatty acids) such as EPA and DHA, should be 250 - 500 mg per day.	In the longer term, poluynsaturated fatty acids should provide between 5 and 8% of food energy. The longer term goal is for alpha-linolenic acid to provide at least 2% of energy. Average intakes of very long chain n-3 polyunsaturated fatty acids should be 250 - 500 mg per day.
Monounsaturated fatty acids	Monounsaturated fatty acids should provide between 8% and 13% of food energy.	In the longer term, the goal is for monounsaturated fatty acids to provide between 7.5% and 9.5% of food energy.
Fruit and vegetables, including fresh, frozen, dried and canned fruits and vegetables, but usually excluding potatoes	Average intakes of fruit and vegetables combined should be more than 400 g per day.	In the longer term, average intakes of fruit and vegetables should be more than 600 g per day.
Salt	Average intakes of salt should be less than 5 g of salt per day.	The longer-term goal is for less than 4 g of salt per day.
Physical activity	For cardiovascular health 150 minutes of at least moderate intensity endurance or aerobic activity per week is recommended. For additional health benefits, and to prevent overweight and obesity, one hour of moderate activity on most days (around 300 minutes per week) is recommended as an intermediate target.	In the longer term around 60 minutes a day of at least moderate intensity physical activity are recommended.
Body mass index	The average body mass index (BMI) for the adult population should be less than 23.	In the longer-term, the average BMI should be 21 for adults.

i Percentage of dietary energy excluding alcohol.

Total carbohydrate	More than 55% of energy. It is important that this carbohydrate comes mainly from whole-grain cereals, fruit, berries, vegetables and legumes.	In the longer term, the goal is for between 60% and 70% of food energy. It is important that this carbohydrate comes mainly from whole-grain cereals, fruit, berries, vegetables and legumes.
Added sugars, including sucrose, fructose, maltose, lactose, starch hydrolysate (glucose, high fructose syrup), honey, fruit and berry concentrates and other sugar preparations which are used as they are or are added to foods	Energy from added sugars should provide less than 10% of food energy.	In the longer-term, a tentative goal of less than 5% of food energy from added sugars is proposed.
Sugar-sweetened drinks	Consumption of sugar-sweetened beverages (including dairy-based drinks) should be reduced as much as possible. Water is to be encouraged as the drink of choice, although there remains a place for unsweetened, low fat dairy drinks and unsweetened fruit juice in limited amounts.	As a longer-term goal, there should be zero consumption of sugar-sweetened drinks. Water is to be encouraged as the drink of choice, although there remains a place for unsweetened, low fat dairy drinks and unsweetened fruit juice in limited amounts.
Fibre is defined according to two different definitions: Non-starch polysaccharides (NSP) and fibre as measured by the Association of Official Analytical Chemists (AOAC) method (which tends to give a higher fibre values)	Average diets should include more than 20 g of non-starch polysaccharides per day. This is equivalent to 27 g of fibre as defined by the AOAC.	In the longer term, diets should include, on average, more than 25 g of non-starch polysaccharides (>35 g of AOAC-defined fibre).

Some other key points

- **Folate**: we concluded that there is not currently enough evidence to justify inclusion of a population goal specifically targeted at preventing cardiovascular disease.
- **Antioxidants, including polyphenols**: we concluded that there is not currently sufficient evidence to justify including a population goal in relation to cardiovascular disease prevention.
- **Alcohol**: if alcohol is consumed at all, it should be limited to not more than 20 g alcohol (two drinks) per day for men and not more than 10 g alcohol (one drink) per day for women. It is not recommended that adult abstainers begin drinking alcohol.
- **Breastfeeding**: we recommend exclusive breastfeeding for the first six months, followed by continued breastfeeding with appropriate complementary foods for up to one year of age.
- **Towards a plant-based diet**: a diet that meets these population goals favours a shift towards a predominantly plant-based diet from an animal-based diet.
- **Population-wide approach**: despite recent advances in medicine, including the widespread use of statins, we continue to advocate a population-wide approach to preventing cardiovascular diseases through changes to diet and physical activity.
- **Fish**: the goal for polyunsaturated fatty acids is consistent with twice weekly consumption of oily fish. The European Heart Network is aware of the potential consequences on the world's fish stocks. Strong regulation is vital to ensure that fisheries and marine resources are managed sustainably.
- **Sustainability**: the European Heart Network is mindful that we can no longer consider diet and physical activity in isolation of the major environmental challenges facing our planet. The goals proposed here are formulated from the perspective of preventing cardiovascular diseases, but we have sought to take some note of environmental perspectives.

How do European diets and physical activity levels measure up against these new goals?

In general, Europeans are eating more than they used to.[ii] Wider availability of food (more opportunities to buy food) and falling prices for many foods have helped to push intakes up.

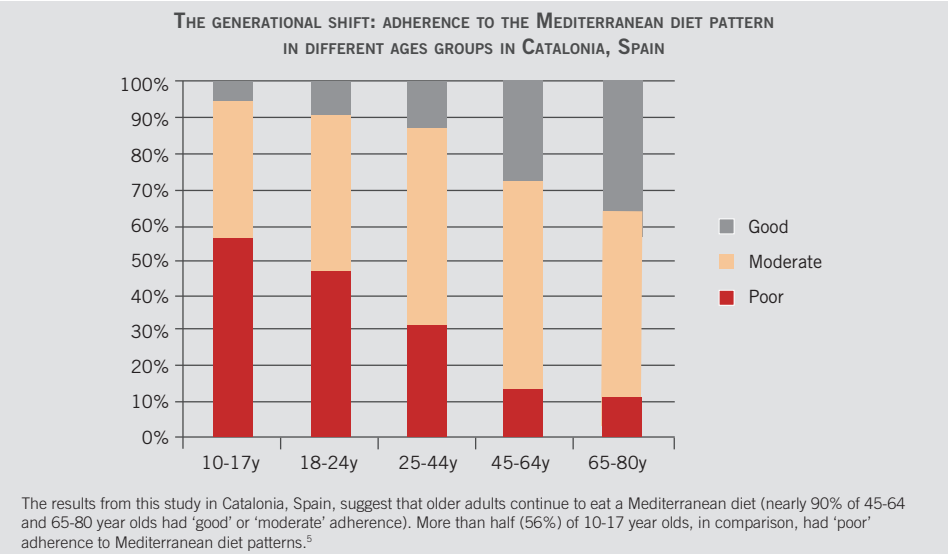
In all the countries where we have comparable survey data,[iii] a majority are failing to meet even the interim goals for salt and for saturated fat (Portugal is an exception in relation to saturated fat).[4] Despite real progress in reducing trans fatty acid levels in recent years, popular foods with high amounts of trans fats are still easily available in eastern Europe and there are concerns about potentially high intakes among some particular groups.

While fruit and vegetable consumption has increased in most countries, Mediterranean countries continue to have much higher intakes. Northern Europe has continued to have high intakes of Common Agricultural Policy-supported meat and dairy foods, and southern Europe has seen meat supplies increase nearly four-fold in a generation.

Consumption of sugar has been high in northern Europe for many decades (much of it present in processed foods and the sugar in drinks and foods eaten outside the home) but has also increased in southern Europe in recent years. Market data suggest that sales of snacks, confectionery and soft drinks have grown significantly, as has the number of fast food outlets, throughout the European region over recent decades.

ii Despite the considerable difficulties in knowing with certainty who is eating what in Europe, and how things are changing over time, food production and supply statistics along with comparable survey data, where it exists, help paint a picture. See the full length version of EHN's paper Diet, Physical Activity and Cardiovascular Disease Prevention in Europe for a more detailed description.

iii Elmadfa and colleagues reported national survey data from European countries. The analyses in the EHN paper compare salt intakes in 15 EU member states (France, Hungary, Portugal, Denmark, Italy, Sweden, Poland, Austria, Germany, Lithuania, Finland, UK, Spain and Estonia) and fat intakes in 18 countries (as before minus Germany and including Romania, Greece, Netherlands and Norway).



The results from this study in Catalonia, Spain, suggest that older adults continue to eat a Mediterranean diet (nearly 90% of 45-64 and 65-80 year olds had 'good' or 'moderate' adherence). More than half (56%) of 10-17 year olds, in comparison, had 'poor' adherence to Mediterranean diet patterns.[5]

Comparable data are also scarce on how physically active European populations are, or how activity levels are changing over time. WHO estimates that at least two thirds of the adult population of the European Union do not do enough physical activity for optimal health.[6]

What action is needed?

We now know that the policy response to diet and inactivity-related ill-health needs to come predominantly from making changes to the environment—in terms of the food supply and other factors which influence what people eat and how physically active they are.

The European Heart Network's report on Diet, Physical Activity and Cardiovascular Disease Prevention in Europe presents a raft of different areas for policy action (see below). Our report sets out detailed recommendations for European, national and local policy makers, along with proposals for industry, health professionals and heart foundations.

- Reformulation of food products to reduce the salt, saturated fat, and added sugar content of foods and portion size
- Legislation to eliminate industrially produced trans fatty acids
- Easy access to meaningful information about the nutritional quality of foods
- Ensuring availability of fresh drinking water
- Controlling advertising of unhealthy foods aimed at children
- Mass media educational campaigns to increase demand for healthy foods and to promote physical activity
- Promotion of healthy options
- Effective rules on nutrition and health claims
- Promotion of breastfeeding and ensuring appropriate marketing of breastmilk substitutes
- Economic tools (taxes and subsidies) and pricing strategies to make healthier foods more affordable and appealing, and to make less healthy foods more expensive
- Use of the Common Agricultural Policy to promote a healthy diet across Europe
- Improving access to affordable healthy foodstuffs for vulnerable and disadvantaged groups
- Economic tools (taxes, subsidies and pricing strategies) to promote physical activity
- Improving access to affordable healthy food and physical activity opportunities
- Improving the nutritional quality of food served and/or sold in public institutions
- Encouraging and facilitating healthy eating and active living in schools and pre-school facilities
- Measures to enable people to make healthier choices when they eat out
- Actions in the workplace to improve diet and physical activity
- Creation of environments that promote active living
- Health service involvement in promoting healthy lifestyles

The summary and full versions of the European Heart Network's Diet, Physical Activity and Cardiovascular Disease Prevention in Europe are available to download from **http://www.ehnheart.org**. You can also order a hard copy of the summary report from the European Heart Network, contact us through our website.

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1 World Health Organization. Global health risks: mortality and burden of disease attributable to selected major risks. Geneva: WHO, 2009.
2 Latest figures available at time of publication. Figures from European Heart Network. European cardiovascular disease statistics 2008. Brussels: EHN, 2008.
3 World Health Organization Regional Office for Europe. European Health Report, 2009. Copenhagen: WHO, 2009.
4 Elmadfa I, ed. European Nutrition and Health report 2009. Forum of Nutrition 2009;62:1-412.
5 Serra-Majem L, Ribas-Barba L, Salvador G et al. Compliance with dietary guidelines in the Catalan population: basis for a nutrition policy at the regional level (the PAAS strategy). Public Health Nutrition 2007;10:1406-1414.
6 World Health Organization. The challenge of obesity in the WHO European Region and the strategies for response. WHO: Copenhagen, 2007.