



CARDIOVASCULAR HEALTH, F&V CONSUMPTION AND THE POWER OF EU POLICY TO PROMOTE BOTH

Despite dramatic progress in tackling premature deaths from heart disease and stroke in recent decades, cardiovascular disease (CVD) remains a leading cause of death and ill-health in the European Union (EU) – accounting for 1.8 million deaths every year (3.9 million deaths in the WHO European region)¹.

At a population level, dietary factors are by far the largest of all the behaviour-related risk factors that contribute to CVD. These risk factors – including, notably, low intake of fruit and vegetables – are responsible for 49% of all the years lost to cardiovascular death or disability (men and women combined) in the EU².

CVD is not only costly in terms of human loss and suffering, it is also estimated to cost the EU economy € 210 billion per year.

The European Heart Network (EHN) has estimated that if fruit and vegetable intake in the EU(25) increased to 400g/person/day there would be about 50 000 fewer deaths from heart disease and stroke³; if the intake increased to 600g/person/day, 130 000 fewer deaths from heart disease and stroke could be achieved⁴.

The three articles in this special newsletter for the 2018 EGEA Conference set out why policy action to increase consumption of fruit and vegetables is needed to combat Europe's major disease burden.

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fighting heart disease
and stroke
european heart network

1. <http://www.ehnheart.org/cvd-statistics/cvd-statistics-2017.html>
2. Data from the Global Burden of Disease database (2015) <https://vizhub.healthdata.org/gbd-compare/>
3. <http://www.ehnheart.org/publications-and-papers/publications/114:fruit-and-vegetable-policy-in-the-european-union.html>
4. Based on 2005 data

CARDIOVASCULAR HEALTH-PROMOTING DIET

EAT MORE

- Vegetables
- Fruits & berries
- Whole grain products
- Pulses
- Nuts & seeds
- Fish
- Low-fat dairy products

EAT LESS

✗ Food & drinks low in vitamins, minerals & dietary fiber and/or high in free sugars, saturated/trans fat or salt

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A healthy diet for better cardiovascular health

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In recent years, the scientific evidence on the links between diet and cardiovascular disease has generally strengthened.

The European Heart Network (EHN) presented the science in its 2017 paper *Transforming European food and drink policies for cardiovascular health*, where it proposes population goals* on foods and nutrients. These goals include recommendation for fruit and vegetables (F&V), where the evidence that higher intakes are protective against premature death, and more specifically against cardiovascular deaths and stroke risk, has also strengthened.

The EHN proposed intermediate and long-term population goals for F&V (Table 1):

Table 1: Revised population goals for F&V (EHN)

Intermediate goal	Long term goal
+ 400 g/day	+600 g/day

A cardiovascular health promoting diet means a shift from an animal-based diet to a more plant-based diet. This includes vegetables, fruit and berries in abundance. Whole grain products, nuts and seeds, fish, pulses and low fat dairy products are also important, as are non-tropical vegetable oils in modest amounts. This everyday dietary pattern also limits consumption of red meat, processed meat products and foods or drinks with low content of vitamins, minerals and dietary fibre and/or a high content of free sugars, saturated/trans fats or salt.

Three dietary patterns associated with cardiovascular health have

been subject of scientific investigation:

- **Mediterranean diet:** characterised by a high intake of fruit, vegetables, pulses, wholegrain products, monounsaturated fatty acids (such as olive oil), and fish. Studies have shown that this diet can lower overall death rates, cardiovascular death and cardiovascular risk¹.

- **Dietary Approach to Stop Hypertension (DASH):** plant-based diet, rich in fruit, vegetables, whole grains and nuts, with low-fat dairy products, lean meats, fish and poultry. This dietary pattern is associated with an improvement in blood pressure and lipid profile, thus lowering cardiovascular diseases (CVD) risk².

- **Healthy Nordic Diet:** including natural fibre-rich foods such as vegetables, pulses, fruit (especially berries), nuts, seeds and whole grains as well as rapeseed oil and fat-free or low-fat dairy products. Studies have shown that this diet has cardiovascular benefits³.

Dietary components that increase CVD risk

To reduce the risk of CVD, some of EHN's recommendations for sugar, fat, and salt are set out in Table 2.

Taken together, the population goals proposed above should translate to a cardiovascular health promoting diet that has a low energy density, which is important for weight maintenance and for the prevention of overweight and obesity. EHN proposes an intermediate goal for adults to have an average Body Mass Index of less than 23, and a long-term goal of 21. A diverse and balanced diet covers the need for nutrients and food supplements are rarely needed.

Table 2: EHN recommendations on fat, sugar and salt

Dietary components	Explanatory comments	Recommendations
Fat	<ul style="list-style-type: none"> • Replace saturated fats by unsaturated fats and complex carbohydrates to reduce total LDL-cholesterol in blood and thus the risk of heart disease. • Minimize trans-fat intakes⁴ 	<ul style="list-style-type: none"> • Saturated fat Intermediate goal: <10% of calories from saturated fats for the general population and <7% of calories for a population at a high risk for CVD; <1/3 of total fat Long-term goal: 7% of calories, and < 1/3 of total fat; Replaced with unsaturated fats (++ polyunsaturated) and fibre-rich complex carbohydrates • Trans-fat: <0.5% of calories, of which 0% from industrially-produced trans-fat • Total fat: ~25% of calories
Sugars	Decrease sugar-sweetened drinks as much as possible and limit the amount of fruit juice consumed (sugary drinks including fruit juices and dairy products with added sugars, sweets, candies and cakes) may have a beneficial effect (although small) on cardiovascular health.	<ul style="list-style-type: none"> Intermediate goal: <10% of calories Long-term goal: <5% of calories
Salt	Clear relationship between salt intake and cardiovascular death as well as overall death rates	<5 g of salt (2 g of sodium) per day

* Population goals aren't guidelines for individuals; they represent an average intake for the whole population so policymakers can identify the gaps between actual and recommended diets and help them translate these goals into dietary guidelines.

Based on: Transforming European food and drink policies for cardiovascular health – Chapter 2: Food, drink and cardiovascular disease: the science. EHN Paper 2017. <http://www.ehnheart.org/publications-and-papers/publications/1093:transforming-european-food-and-drinks-policies-for-cardiovascular-health.html>

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Sustainable food systems for cardiovascular health

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In a perfect world evidence-based food and nutrition goals would swiftly be translated by governments into clear dietary guidelines. People would then change their food choices to reflect the latest advice. This would lead to growing demand for healthier products while demand for less healthy products would decline.

However, current food systems are complex with long food chains that involve several different actors. Many factors on the supply side of the market (what is produced, how it is sold and at what price) have an impact on the food environment which, coupled with individual food preferences, influences consumer decisions about what to eat. The complexity of food systems presents challenges as well as opportunities for policymakers. Many global and external drivers are well beyond the unilateral control of national or regional authorities – let alone individuals. Yet, there are many different entry points along the food chain where policymakers can take action to enable and encourage healthy sustainable diets. (Figure 1)

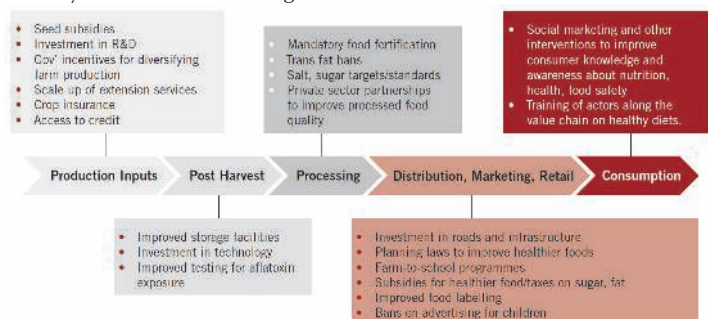


Figure 1: Opportunities to improve nutrition and diets along the food value chain – Reproduced with kind permission from : Fanzo *et al.* 2017

Below we look at some of these, namely: agriculture & food supply, trade & investment agreements, food promotion and food-environment links.

Agriculture & supply side issues: how can food production affect cardiovascular health?

The European Union's Common Agricultural Policy (CAP) can, broadly speaking, define which products are produced and promoted and can, therefore, play a strong role in creating an environment conducive to positive dietary changes, which, in turn, promotes cardiovascular health. There is a need to thoroughly assess the nutrition and health benefits of substantially reforming or abolishing CAP. A radical rethink of CAP could contribute greatly, for example, to the promotion of foods such as fruit and vegetables, known to protect against cardiovascular disease (CVD) and other non-communicable diseases (NCDs). The question is now if the recent proposal from the European Commission with one of its objectives aiming to "improve the response of EU agriculture to societal demands on food and health, including safe, nutritious and sustainable food..." will deliver.

Impact of trade & investment agreements on food and nutrition

Trade and investment agreements affect the food and nutrition environment relevant to cardiovascular disease by:

- Directly influencing the relative price and availability of unhealthy foods; and
- Restricting governments' abilities to implement strong public health nutrition policies (constraining the policy space) and increasing the extent to which other stakeholders, such as industry, can influence policy. Targeted assessments of the impact on health of trade policy, ideally as part of trade negotiations, are needed, along with policy analyses to look at how nutrition can be taken into account in trade/investment policymaking¹.

Food promotion: one of the major drivers of consumption patterns

The commercial promotion of food and beverages high in fat, sugar or salt contributes heavily to a food environment which tends to cause obesity in Europe; moreover these products are a significant risk factor for the development of diet-related NCDs.

Food marketers particularly target children – due to their independent spending power and considerable influence over family spending – and try to influence their diets and taste preferences, while also developing their brand loyalty, as this will often last into adulthood². Promotion now takes place in both traditional broadcast and, increasingly, through highly-targeted digital media.

WHO has established a Set of recommendations on the marketing of foods and non-alcoholic beverages to children³ and a framework for the implementation of these recommendations and some European countries have introduced restrictions on unhealthy food promotion to children. However, most are voluntary or based on a self-regulatory approach and many have been criticized for being too narrow in scope or ineffective against the full spectrum of promotion to which today's children are exposed.

Current approaches are not, therefore, doing enough to limit children's exposure to marketing for unhealthy foods. While more research is needed regarding digital food promotion (social networks, website, etc.), there is already sufficient evidence of the combined impact of various forms of food marketing to justify the need of decisive policy measures to protect consumers, particularly children, from the ubiquitous marketing of unhealthy foods.

Food-environment links – identification of a healthy and sustainable dietary patterns

Global environmental change is affected by food system activities – particularly agriculture. Globally, trends are towards a higher consumption of meat and animal products⁴. Yet, these foods have higher food-based greenhouse gas emissions and higher water footprints than plant-based foods⁵.

Environmental change may have a negative impact on diet-related health overall with studies showing that poorer people would have a reduced calorie intake while wealthier people would have a reduced F&V intake⁶. Findings show that there is considerable overlap between consuming cardiovascular health-promoting diets and achieving higher levels of environmental sustainability. Dietary guidelines and broader policy approaches, which go beyond influencing individual choice, are needed to promote health-environment win-wins.

Based on: Transforming European food and drink policies for cardiovascular health – Chapter 3: Sustainable food systems for cardiovascular health. EHN paper 2017 <http://www.ehnheart.org/publications-and-papers/publications/1093:transforming-european-food-and-drinks-policies-for-cardiovascular-health.html>

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Effective policies for promoting healthy dietary patterns

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Recent years have seen significant global commitments on diet and nutrition, reflecting greater awareness of the importance of fighting non-communicable diseases (NCDs). However, progress on policies to improve European diets remains insufficient and patchy.

European developments on nutrition and diet-related NCDs

Despite slow and disappointing lack of progress in policies at the European level, particularly on nutrient profiles and marketing of unhealthy foods to children, there have been a few promising initiatives on trans fats and healthy school procurement.

The World Health Organization's Regional Office for Europe has developed several policies for the European region:

- Health 2020- A European policy framework and strategy for the 21st century aimed at improving health for all and reducing health inequalities;
- Vienna Declaration on Nutrition and NCDs making a statement to take action on obesity and to prioritize work on healthy diets for children¹;
- European Food and Nutrition Action Plan 2015–2020 to improve food system governance and the overall quality of the Europeans' diet and nutritional status²;
- A Nutrient Profile Model to support European countries in their

efforts to restrict marketing of foods high in fat, sugars or salt (HFSS) to children launched in 2015 by the WHO Regional Office for Europe³.

• And two consecutive Action Plans for the Prevention and Control of NCDs having as areas of intervention:

- Promoting healthy consumption via fiscal and marketing policies: tobacco, alcohol, food;
- Product reformulation and improvement: salt, fats and sugars;
- Salt reduction;
- Promoting active living and mobility;
- Promoting clean air^{4,5}.

Some European countries have developed their own policies, specifically on food taxes, reformulation, trans-fat, front-of-pack nutrition labelling, food in schools and marketing to children (Table 1).

The European Heart Network's (EHN) recommendations for food and nutrition policies for cardiovascular health

In order to minimise diet-related cardiovascular disease (CVD) in Europe, EHN proposes a package of recommendations. (Figure 1)

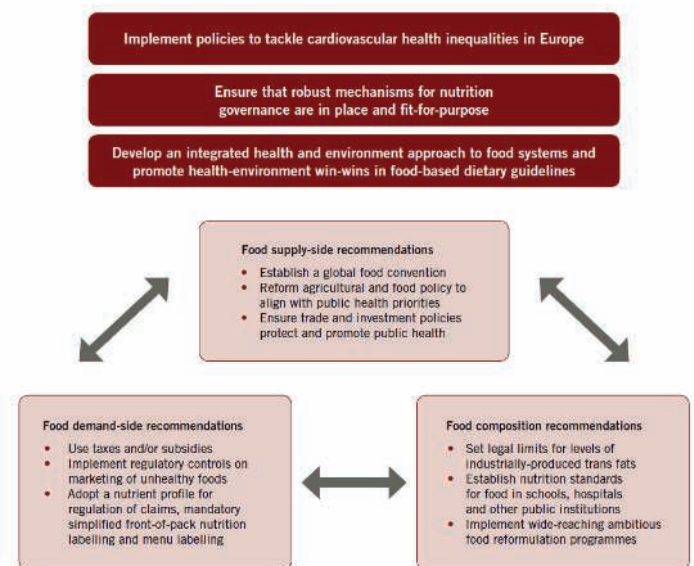
It includes three clusters of specific recommendations that influence food systems by impacting what food is supplied and consumer demand for foods, as well as altering foods' composition. These are supported by three overarching recommendations.

Table 1: Examples of development in policies in certain European countries

Labelling	Reformulation	Marketing to children	Food in public institutions	Food taxations
FR: Nutri-Score FOP* nutrition labelling scheme introduced by government to indicate overall nutritional quality of foods	Trans-fat Legislation to limit trans-fat: <i>AT, CS, DK, HU, IS, LV, NO</i>	IR: Prohibited advertising of HFSS foods during children's TV and radio programs and also limited HFSS food advertising to 25% of all advertising.	Legislation to improve nutritional quality of food in schools: <i>BG, EN, HU, LT, LV, NL, PL, SE, SI, WAL</i>	FR: Taxes on sugar-sweetened and artificially sweetened drinks. Taxes on soft drinks: <i>BE, EE, ES, HU, PT, UK</i>
UK: Voluntary FOP traffic light labelling scheme recommended by government	Salt reduction Voluntary, often focusing on bread: <i>AT, BE, CZ, ES, FR, GR, HR, HU, IE, IT, NO, SI</i>	ES & PL: Regulated advertising in schools and pre-schools		
Scandinavia: The voluntary Keyhole labelling scheme is in use	Mandatory, in bread: <i>BE, BG, GR, NL, PT</i>			
FI: Heart Symbol to endorse "better-for-you" choices				

* Front of pack

Figure 1: EHN's package of recommendations for food & nutrition policies for cardiovascular health



Based on: Transforming European food and drink policies for cardiovascular health – Chapter 4: Effective policies for promoting healthy dietary patterns. EHN paper 2017. <http://www.ehnheart.org/publications-and-papers/publications/1093:transforming-european-food-and-drinks-policies-for-cardiovascular-health.html>

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