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Hellenic Presidency Conference February 2014

Nutrition and Physical Activity from childhood to old age: challenges and opportunities

The evidence behind policy and action

Susanne Løgstrup, Director, European Heart Network

25 February 2014

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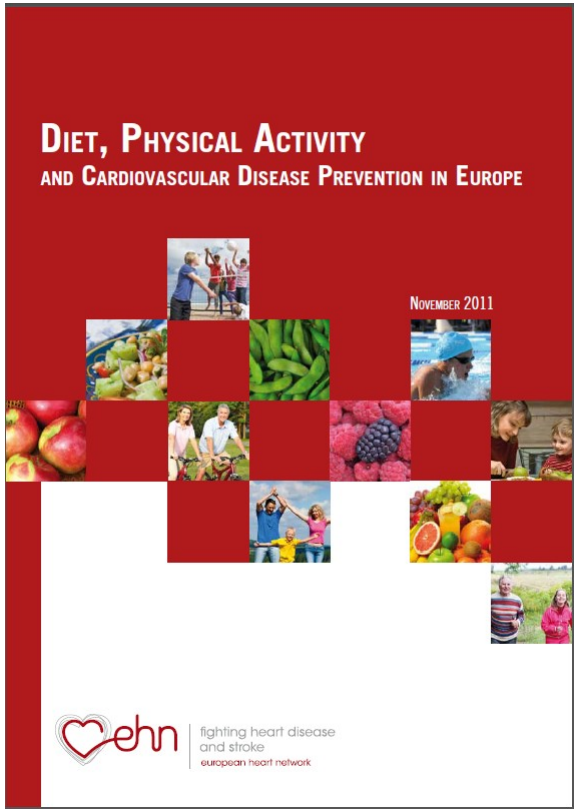
Diet, Physical Activity and CVD Prevention in Europe (Nov/2011)

- Fat
- Salt
- Sugar
- Dietary fibre and complex carbohydrates
- Fruits & vegetables
- Overweight and obesity
- Physical activity
- Alcohol
- Folate
- Antioxidants



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Component	Intermediate targets	Longer-term goals
Total fat	<30% E	20-25% E
Saturated fat	<10% E	<7% E
Trans fats	<1% E	<0.5% E
Polyunsaturated fat + ALA and very long chain PUFAs	6-11% E	5-8% E
Monounsaturated fat	8-13% E	7.5%-9.5% E
Fruit and veg.	>400g per day	>600g per day
Salt	<5g per day	<4g per day
Physical activity	>150 mins moderate intensity per week +1 hour per day on most days	> than this
BMI (average for adults)	<23	21
Total carbohydrates	>55% E	60-70% E
Added sugar	<10% E	<5% E
Sugar sweetened drinks	As little as possible	Zero
Dietary fibre (NSP)	>20g per day	>25g per day

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Recent research evidence

Most US adults consume more added sugar than is recommended for a healthy diet. We observed a significant relationship between added sugar consumption and increased risk for CVD mortality

JAMA Intern. Med. **Published online February 3, 2014**

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Recent research evidence

…the review of evidence for this paper concluded that there is limited and inconsistent evidence for an effect of consumption of sugar on CVD risk. Most consistent evidence is found for an association between high intake of sugar-sweetened drinks and risks of CVD….

Diet, physical activity and cardiovascular disease prevention in Europe. *European Heart Network*, November 2011

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CHD mortality projections to 2020 - comparing different policy scenarios

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Three scenarios modelled

Scenario	Decrease in saturated fat	Relative decrease in salt	Decrease in prevalence of physical inactivity	Decrease of smoking
Conservative	1%	10%	5%	5%
Intermediate	2%	20%	10%	10%
Optimistic	3%	30%	15%	15%

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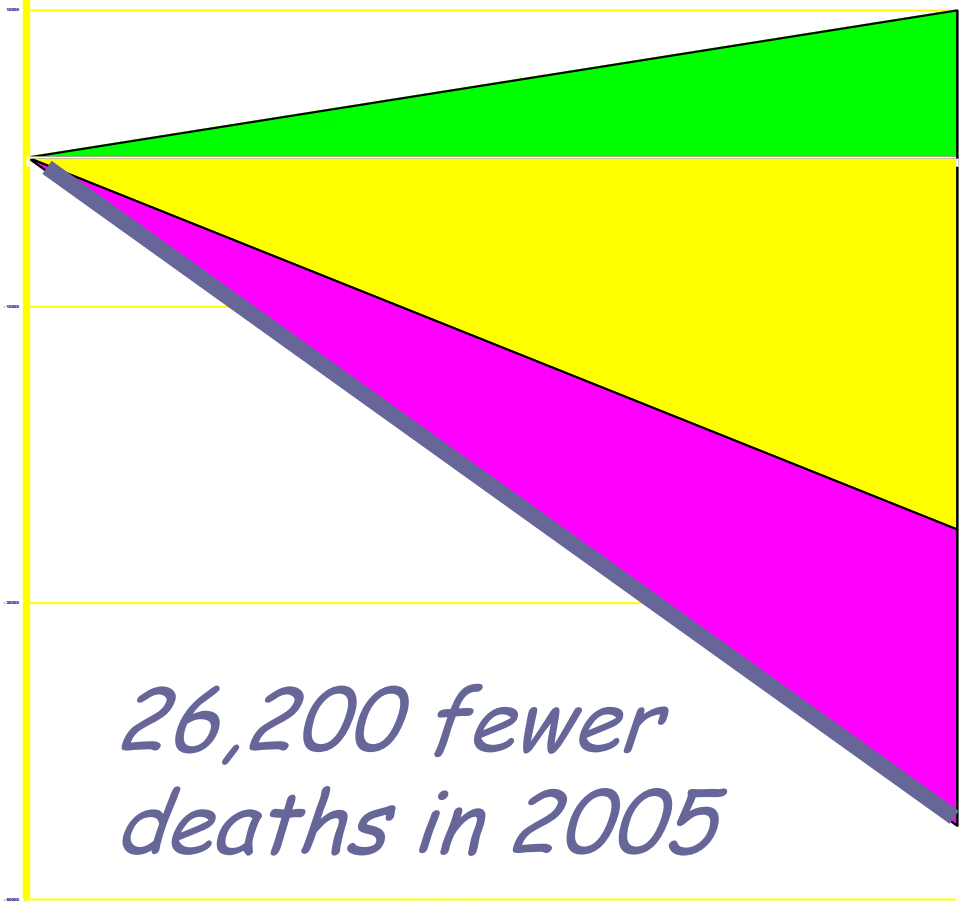
IMPACT: CHD mortality fall Poland 1991-2005



Risk Factors worse +7%

Obesity (increase)	+4.5%
Diabetes (increase)	+2.5%

Risk Factors better -66%

Cholesterol (diet)	**-39%**
Smoking	- 11%
Physical activity	-10%
Population BP fall	0% (⇑Men ⇓Women)

Treatments -38%

AMI treatments	-5 %
Unstable angina	-4%
Secondary prevention	-7%
Heart failure	-12%
Angina: CABG surgery	-2%
Angina ASA	- 1 %
Hypertension therapies	-2%
Statins (Primary prevention)	-3%

Unexplained -10%

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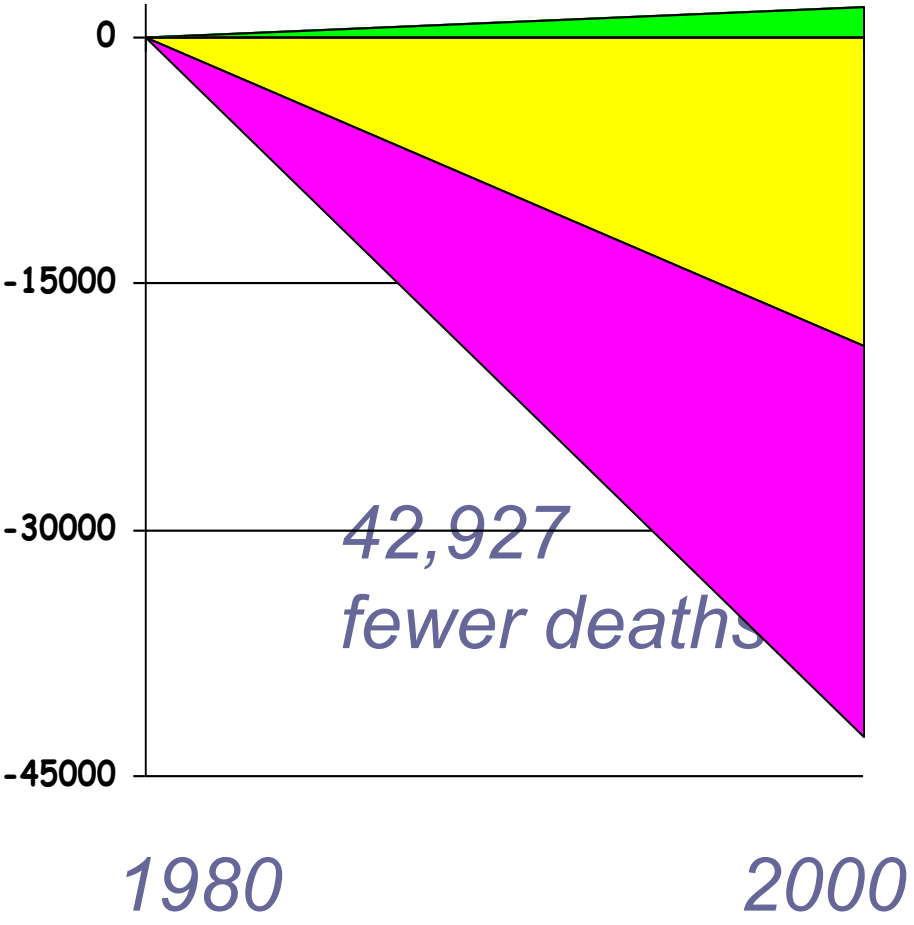
Explaining the fall in coronary heart disease deaths in Italy 1980-2000



Risk Factors worse +4 %

Obesity (increase)	+ 2%
Diabetes (increase)	+ 2.5%

Risk Factors better –44 %

Cholesterol	-25 %
Smoking	- 9%
Population BP fall	- 4 %
Physical activity (incr.)	- 6 %

Treatments -55 %

Angina	-12 %
CABG & PTCA	- 2 %
Angina: Aspirin etc	- 1 %
Hypertension therapies	- 1 %
Statins 1° prevention	- 2 %

Palmieri et al Am J Public H 2009

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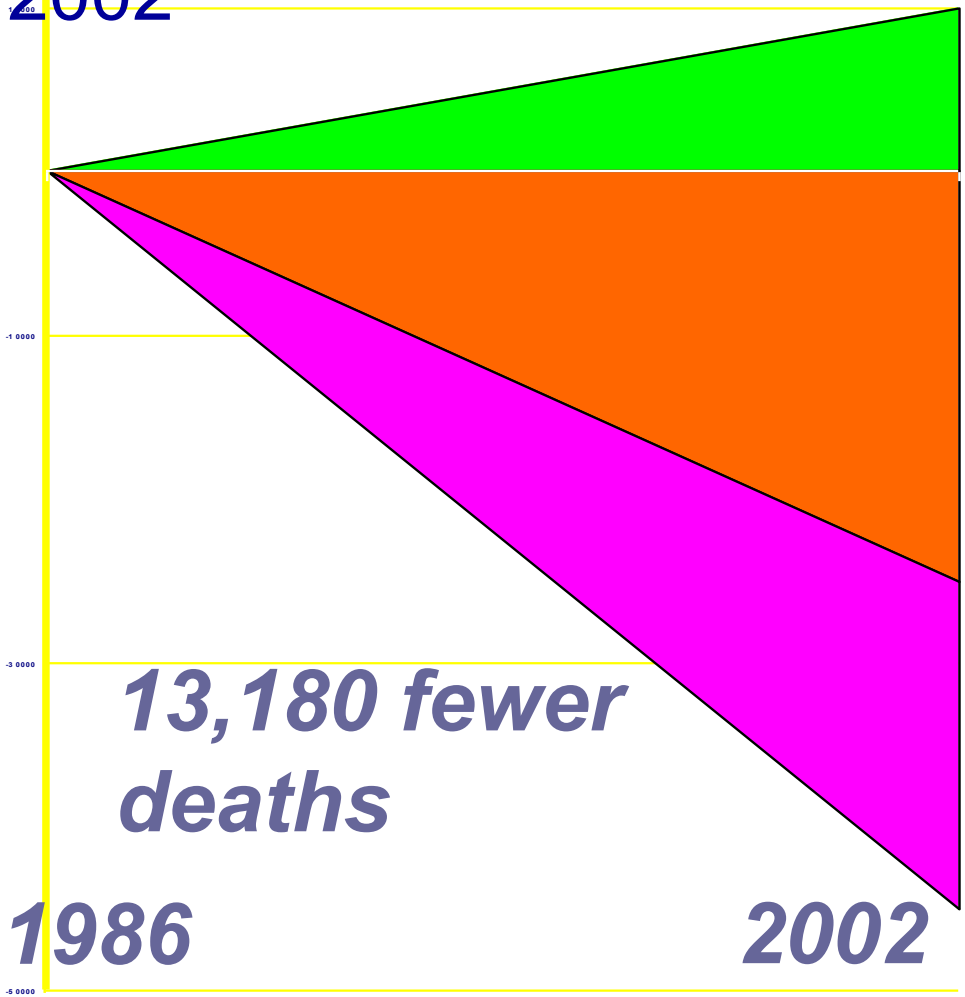
Explaining the CHD mortality fall in Sweden 1986-2002

Bjorck et al Eur Heart J 2009



Risk Factors worse +11%

Obesity (increase)	+3%
Diabetes (increase)	+8%

Risk Factors better -66%

Cholesterol (diet)	-39%
Population BP fall	-9%
Smoking	-20%
Physical activity	-13%

Treatments -36%

AMI treatments	-6%
Unstable angina	-2%
Secondary prevention	-12%
Heart failure	-7%
Angina:CABG & PTCA	-3%
Hypertension therapies	-4%
Statins (primary prevention)	-2%

Unexplained -9%

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CHD mortality projections to 2020 - comparing different policy scenarios

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Reductions in CHD mortality:

Conservative scenario:	10.5%
Intermediate scenario:	20.3%
Optimistic scenario:	**29.1%**

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Cardiovascular diseases (CVD)

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- CVD
  - → over 4 million deaths in Europe
  - → over 1.9 million deaths in the EU
- **CHD**
  - **→ 1.8 million deaths in Europe**
  - **→ over 681 000 deaths in the EU**
- Stroke
  - → almost 1.1 deaths in Europe
  - → over 460 000 deaths in the EU

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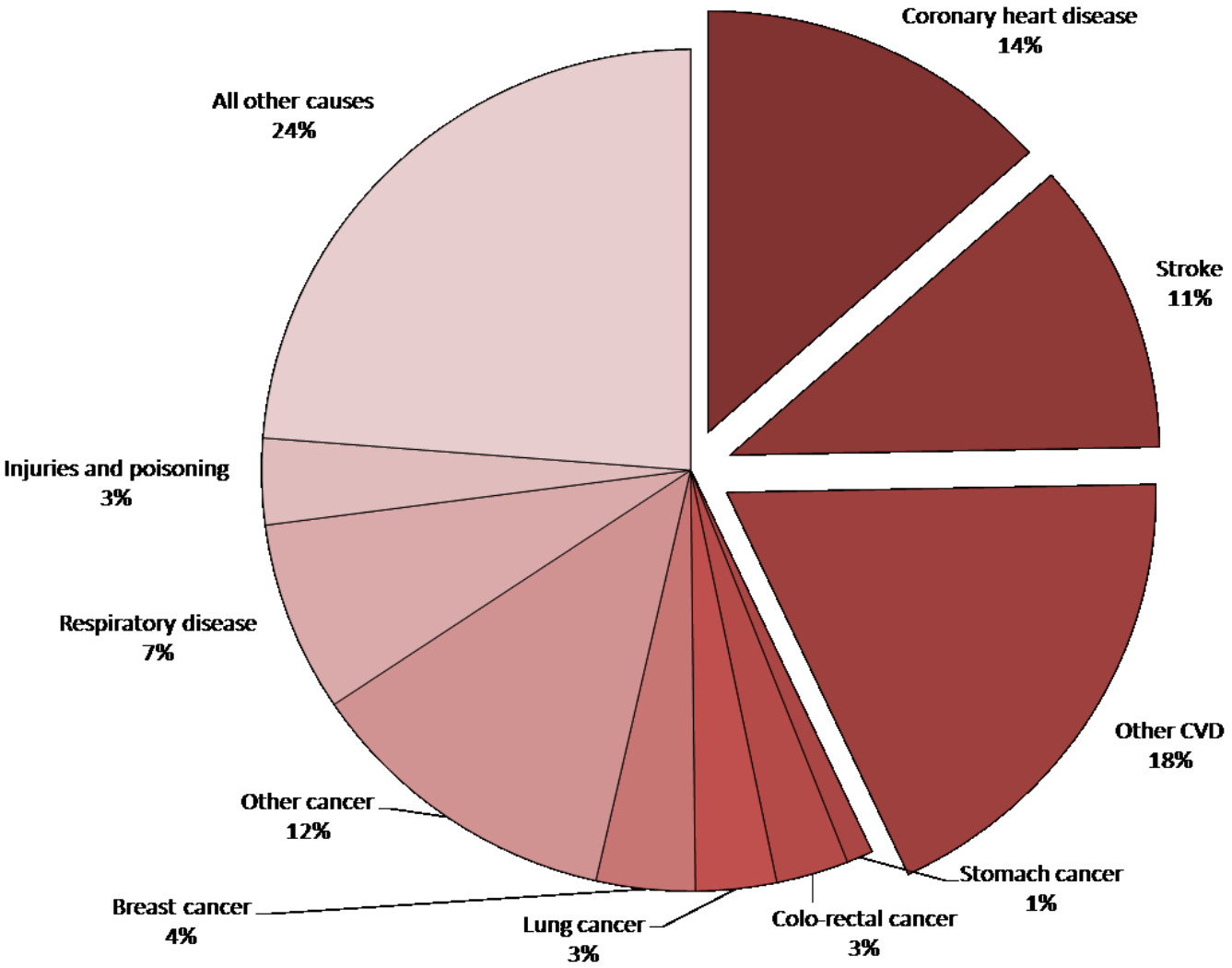
Deaths by cause, women, latest available year, EU



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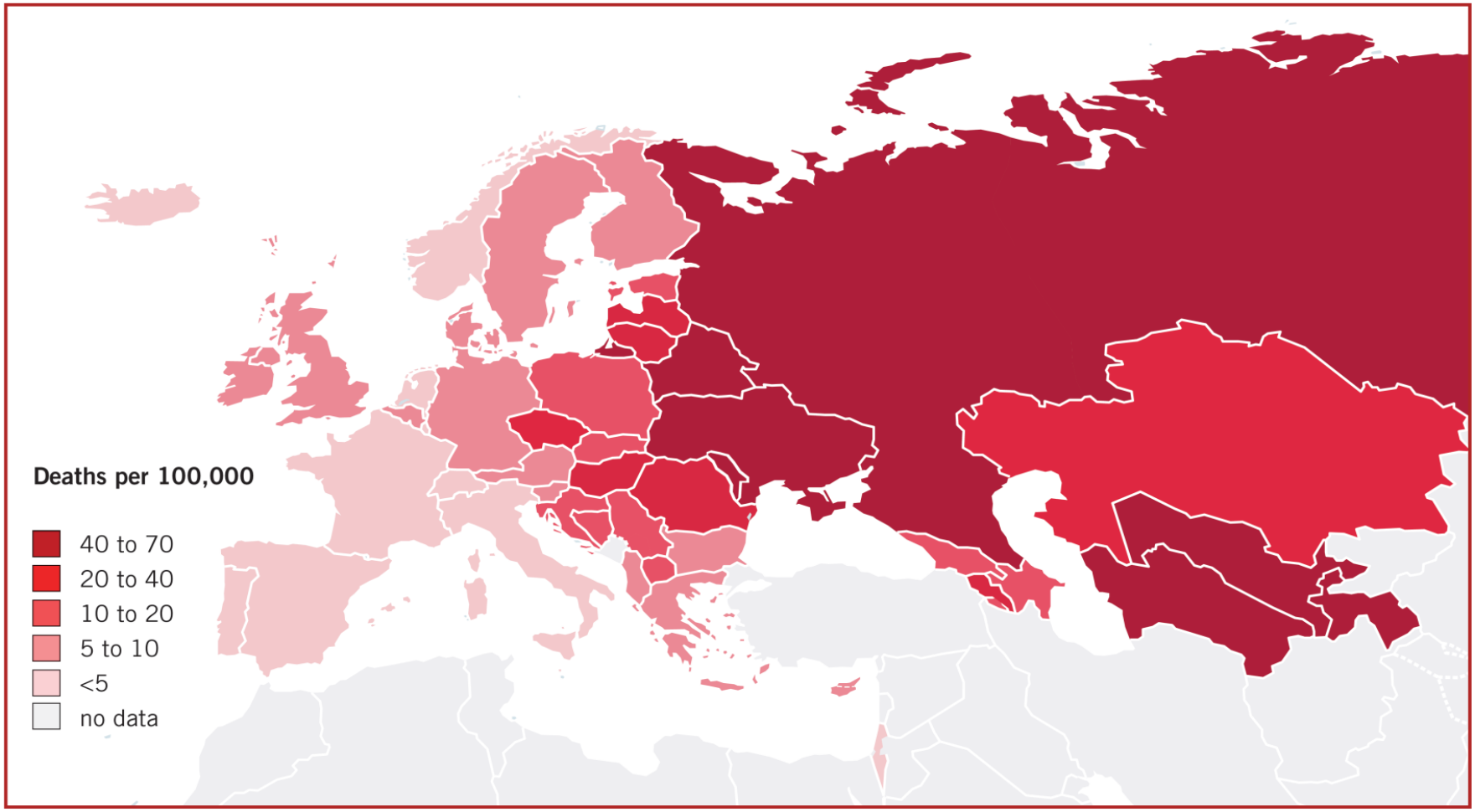
Age-standardised death rates from CHD, women aged under 65, latest available year, Europe



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Identifying the most effective and cost-effective public health nutrition policy options for CVD prevention

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- Increasing evidence suggests that the largest benefits might be achieved by "upstream" comprehensive, multi-level interventions (for instance policies targeted at decreasing salt and saturated and trans fat consumption, or increasing fruit and vegetable intake)

- Effective population-wide interventions appear to be consistently cost-effective and often cost-saving

- However, the adoption, implementation and evaluation of the most effective policies remain patchy and variable across Europe

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EuroHeart II – work package 5

Key Informant Interviews in 14 countries

- Belgium
- Czech Republic
- England
- Estonia
- Finland
- Germany
- Greece
- Iceland
- Ireland
- Italy
- Malta
- Poland
- Portugal
- Slovenia

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EuroHeart II – work package 5

Key Informant Interviews in 14 countries

- **Perceive that regulatory interventions are more effective than self-regulation – equity often quoted**
  - **But voluntary approaches easier to achieve**
- **Think that regulation of trans fat could be achieved – and likely also salt**
- **Find that regulation is particularly necessary with regard to school meals and foods and drinks sold in schools**
- **Find that lack of data and evidence makes it hard to assess cost-effectiveness**

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Key Informant Interviews in 14 countries

Barriers identified:

- Lack of political will
- Lack of resources/capacity
- Influence of food industry
- No consensus/collaboration
- Lack of country-specific data and evidence
- No support
- Lack of national nutritional policy

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Europe or member state level?

- EU should lead on nutrition issues that cross borders

- But member states must act in parallel

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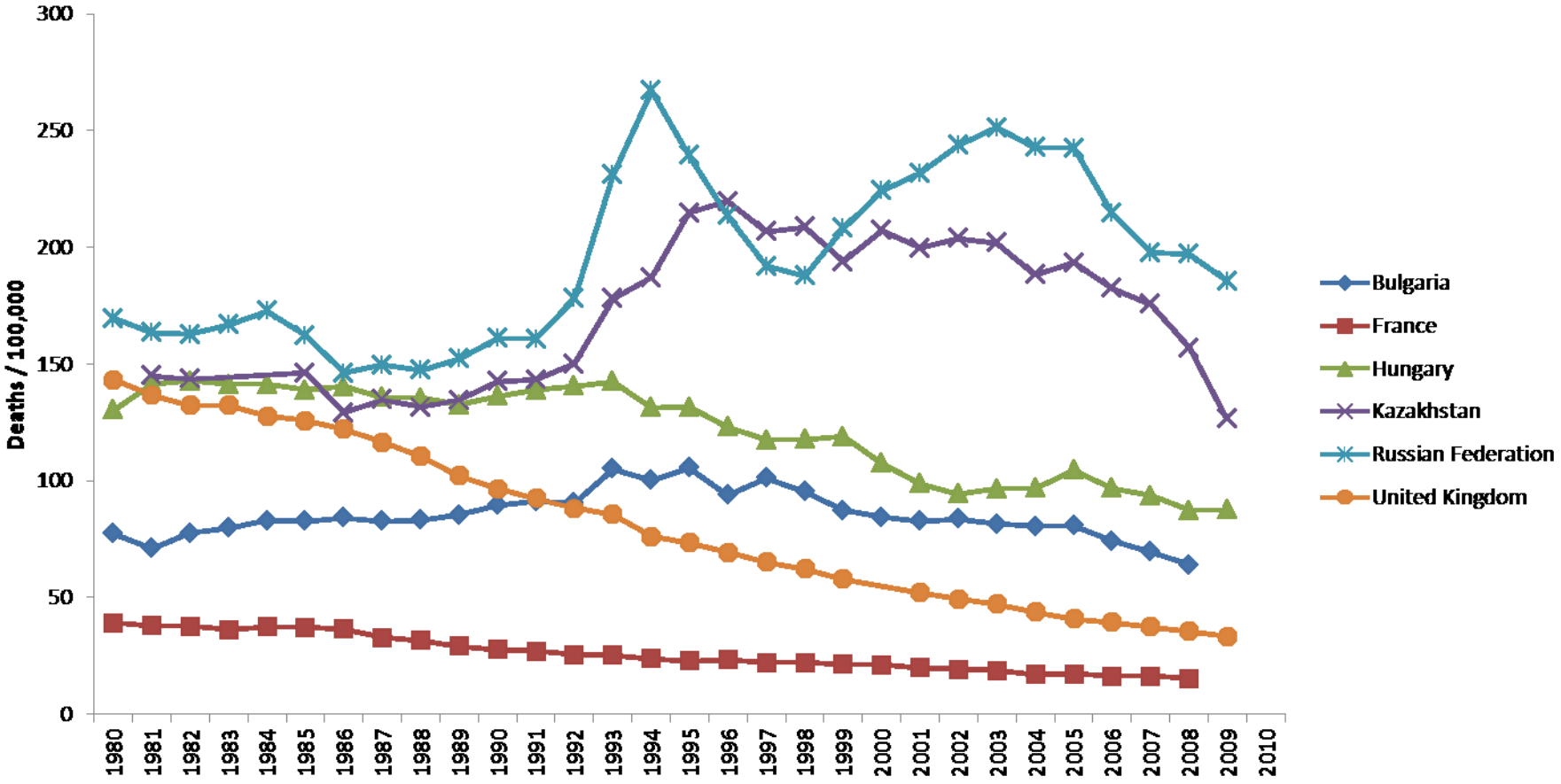
Death rates from CHD, men aged 0 to 64 years, 1980 to 2010, selected countries



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Trends in age-specific coronary heart disease mortality in the European Union over three decades: 1980–2009

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It was hypothesised that observed reductions in CHD mortality had occurred largely within older age groups, and that rates in younger groups may be plateauing or increasing as the gains from reduced smoking rates are increasingly cancelled out by increasing rates of obesity and diabetes

Conclusions:

- **There is limited evidence to support the hypothesis that CHD mortality rates in younger age groups are plateauing in the EU as a whole, However, in some countries there was evidence of recent plateauing in some age groups**
- **Two EU Member States - Greece and Lithuania - have recorded a net increase in age-standardised CHD mortality rates for those less than 45 years of age**
- **Substantial inequalities persist between EU Member States**

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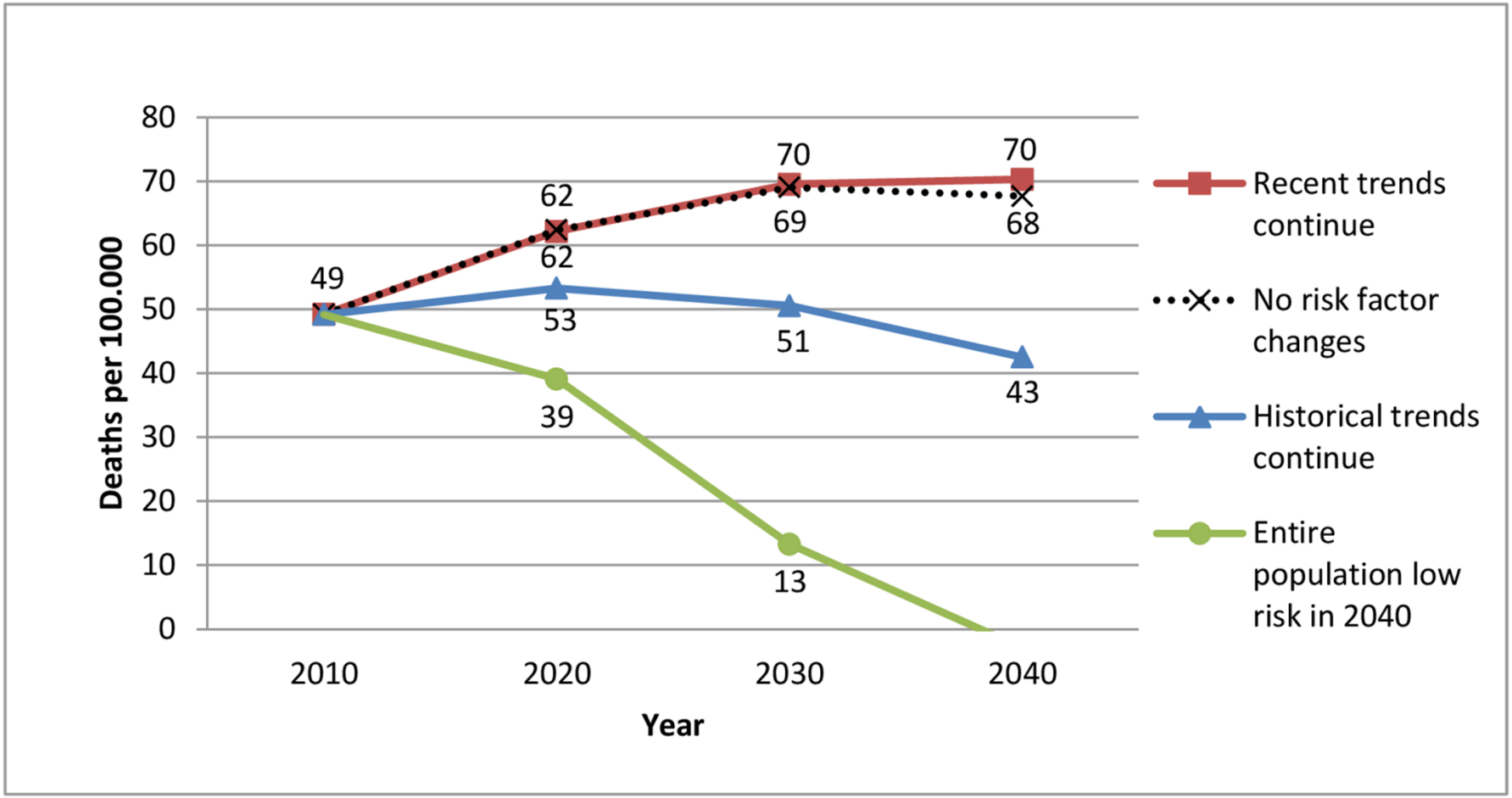
Population Assessment of Future Trajectories in Coronary Heart Disease Mortality – Iceland

Future CHD mortality rate among 25-74 year olds in three different risk-factor scenarios



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Contact

www:ehnheart.org