

Salt: The Impact on Heart Disease and Health

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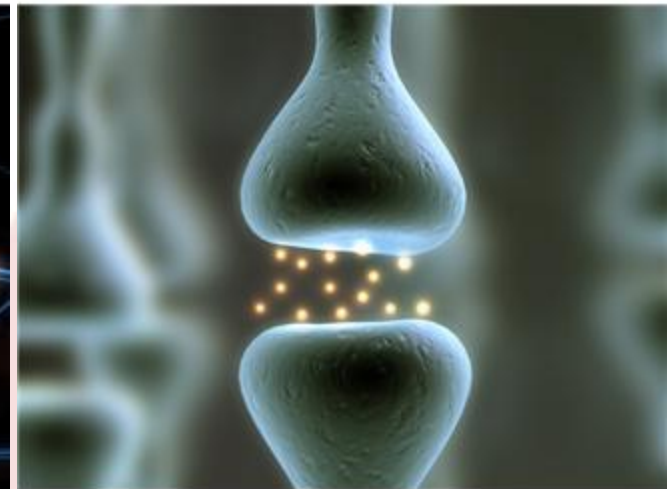
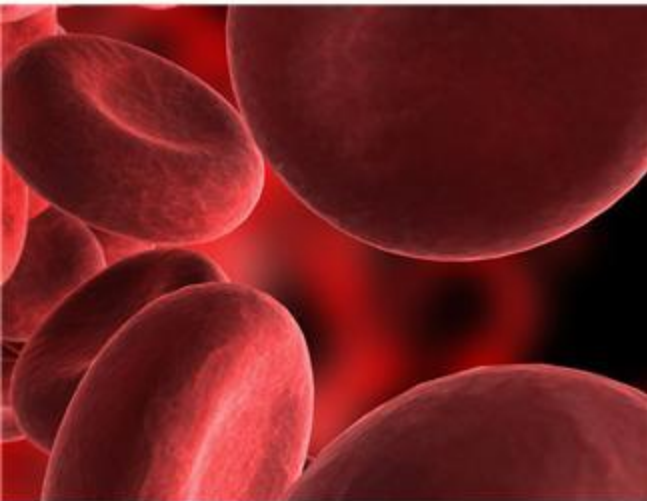
Irish Heart Foundation

Irish Heart Foundation

- The national charity fighting heart disease and stroke.
- We rely on charitable donations for 90% of our funding.
- We support, educate and train people to save lives, campaign for patients, promote positive health programmes, support research and provide vital information.

The Role of Salt in the Body

- Helps maintain fluid and mineral balance inside and outside of the body's cells.
- Involved in how nerves and muscles work.



How does excess Salt affect Health?

Salt is linked to:

- **Cardiovascular Disease**
(stroke, heart disease and heart failure)
- **High Blood Pressure**
- Kidney Disease/Kidney Stones
- Obesity
- Osteoporosis
- Stomach Cancer
- Water retention/bloating

**Also thought to
exacerbate
symptoms of:**

- Diabetes
- Asthma
- Alzheimer's



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Cardiovascular Disease in Ireland

Deaths from CVD are decreasing but it is still the leading cause of death in Ireland.

1980 - 51%

1990 - 46%

1997 - 43%

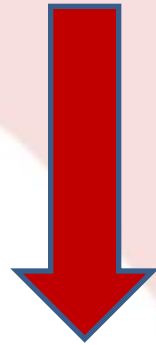
2000 - 39%

2004 - 37%

2005 - 36%

2006 - 35%

2007 - 35%



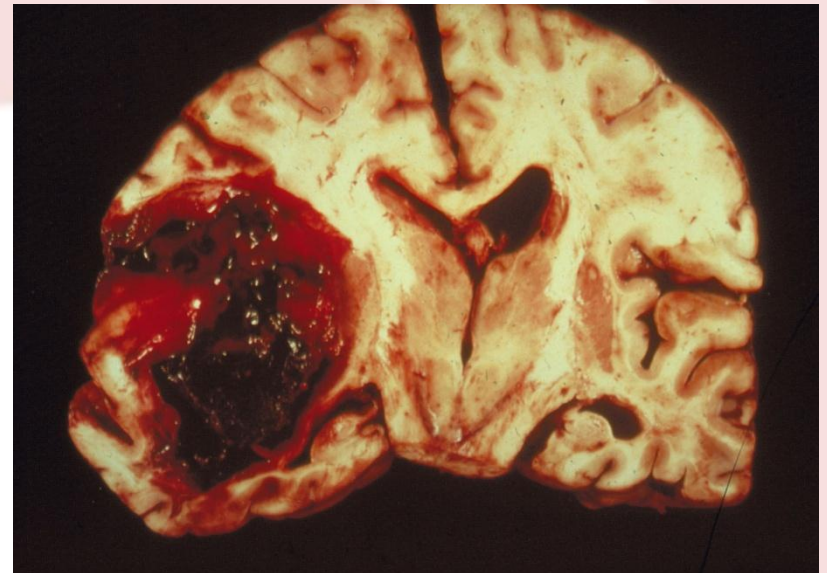
- **Preventive measures** (reduced cholesterol, smoking)

- **Treatments** (surgery, medication)

Challenge: IMPACT study showing levels flattening out (Bennett et al, 2006)

CVD in Ireland

- Despite reductions in mortality, it has been estimated that there will be a sharp rise in the prevalence of CVD in the next 10 years.
- Due to increasing levels of:
 - Obesity
 - Diabetes
 - **High blood pressure**
 - Smoking
- Rates of heart disease are expected to rise by 50%, stroke by 48%, high blood pressure by 40% (IPH, 2010).

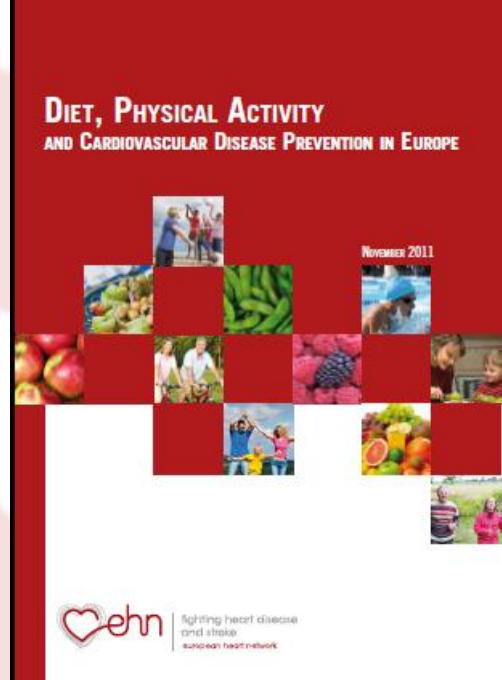


Economic Cost of CVD

- In 2006, CVD cost the EU over €192 billion:
 - €110 billion on health care
 - €82 billion in lost productivity and informal health care costs (European Heart Network, 2008).
- Total stroke costs are estimated to increase by more than 50% between 2007-2021 up to €1,266 million (IHF, 2010).

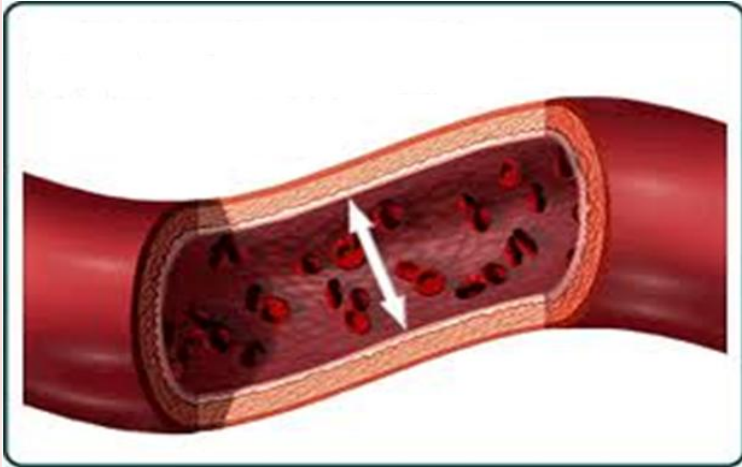
Cardiovascular Disease

- CVD is largely preventable.
- Even small changes to risk factor levels can dramatically reduce death and disability.
- Prevention efforts have a much greater impact if directed at the whole population.
- A preventive approach is cost-effective
 - Diet-related ill health in the UK costs €7.7 billion



Blood Pressure

- Blood pressure: the amount of pressure exerted by circulating blood on the walls of blood vessels.



- Composed of two numbers:
 - *Systolic BP*: the heart muscle squeezes blood out of the heart.
 - *Diastolic BP*: the heart muscle relaxes and blood flows back into the heart.



Blood Pressure and Salt

- High blood pressure is a major cause of CVD and the biggest risk factor globally.
- High blood pressure: 140/90 (Diabetes: 140/80)



- No universally accepted explanation of how increased salt intake increases blood pressure but several mechanisms are likely to play a role (EHN,2011)

High Blood Pressure in Ireland

SLÁN 2007

- 60% Irish population have high blood pressure.
- Of these, 57% are not on medication.
- Of those on medication, 70% are not controlled.



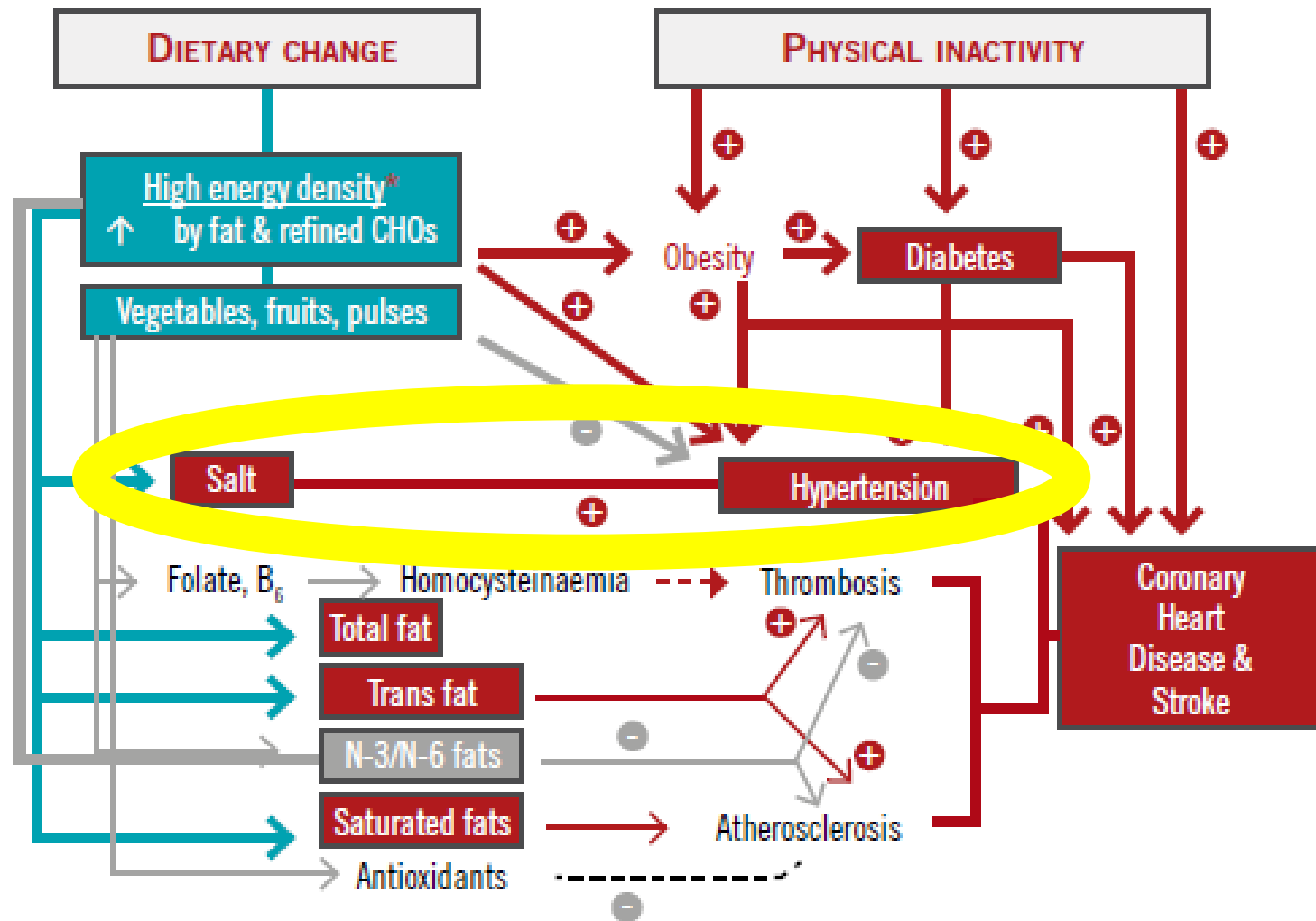
Evidence for Salt

- **Epidemiology** INTERSALT + 50 other studies
- **Migration** Kenya
- **Intervention** Portuguese villages. New born babies
- **Treatment** DASH-Na, Meta-analysis. Dose response
- **Animal** All caused or aggravated by salt.
- **Genetic** All defects so far result in a decreased ability of the kidney to excrete sodium



Wealth of convincing scientific evidence showing a causal link between sodium and high blood pressure.

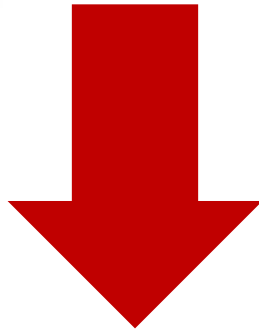
Role of Diet and Physical Inactivity in CVD



* Energy density reduced by water-holding, bulky foods, e.g. tubers, cereals, vegetables, fruits, pulses.

Potential Impact of Salt Reduction

A reduction of 3g/day salt intake would reduce stroke mortality by an estimated 13% and coronary heart disease mortality by 10%



Approximately 700 deaths per year in Ireland.

Effects of Excess Salt on Children

- Habits laid down for later life.
- Salt is a learned taste preference.

New research in the last decade:

- Recent Irish research found children as young as 10 years of age with significant risk factors including raised blood pressure (Kilbride et al, 2013).

Salt

Thirst

Soft
Drinks

Obesity

Case Study 7 year old

Recommended
maximum salt
intake: 5g/day

Breakfast	Portion size	Salt per portion
Multigrain hoops with semi-skimmed milk	1 x 30g bowl + 125mls milk	0.5g
Snack: Chocolate digestive biscuit	2 biscuits	0.5g
Lunch		
Homemade ham and cheddar cheese sandwich	140g	2.5g
Ready salted crisps	25g (multi-pack bag)	0.4g
Sliced apple	1 x medium	trace
Snack: Bread and peanut butter	1 slice wholemeal bread with 15g peanut butter	0.6g
Evening Meal		
Sausages	2 sausages	1.6g
Baked beans	Half a small tin (105g)	1.0g
Oven chips	100g	0.3g
Ice cream with sliced banana	1 scoop ice cream with half a medium banana	0.1g
Drinking chocolate	200mls semi-skimmed milk (1 mug) and 18g drinking chocolate (3 heaped spoonfuls)	0.5g
	Total salt	8g

IHF's role in relation to Salt

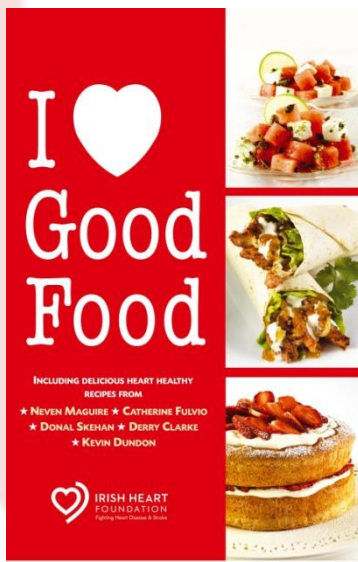
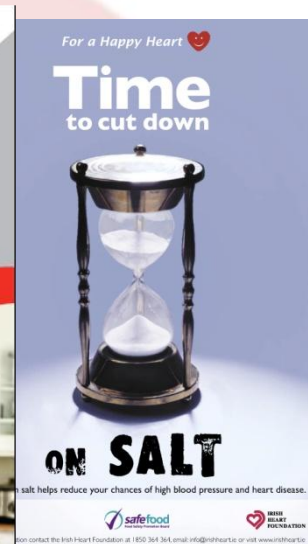
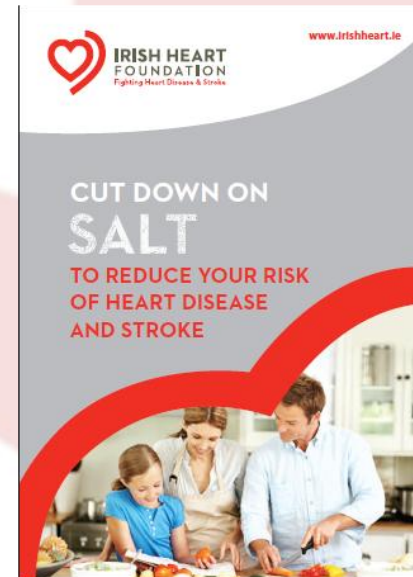
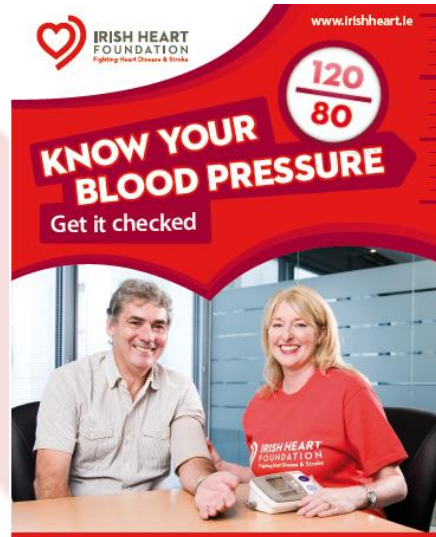
- Information for the public
 - Leaflets
 - Campaigns

FOOD SHOPPING CARD
Check how much fat, sugar and salt is in your food

	Sugars	Fat	Saturates	Salt
HIGH per 100g	Over 15g	Over 20g	Over 5g	Over 1.5g
MEDIUM per 100g	Between 5g and 15g	Between 3g and 20g	Between 1.5g and 5g	Between 0.3g and 1.5g
LOW per 100g	5g and below	3g and below	1.5g and below	0.3g and below

The amount you eat of a particular food affects how much sugars, fat, saturates and salt you will get from it.

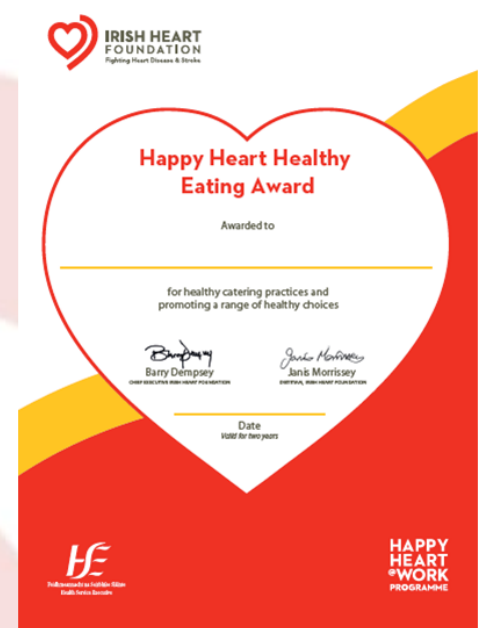

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IHF's role in relation to Salt

Health promotion initiatives

- Workplaces
- Schools
- Catering establishments



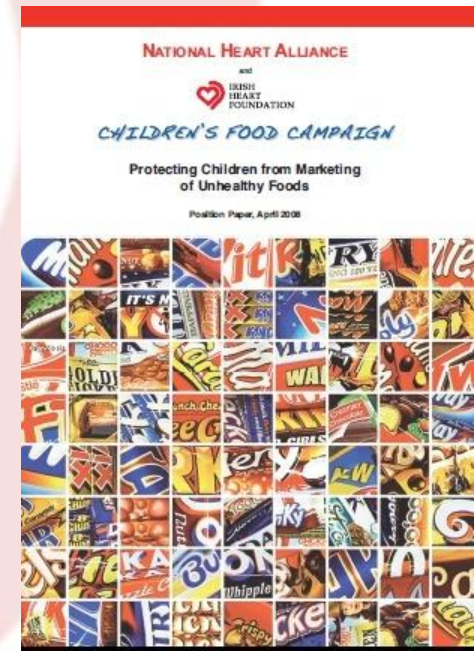
IHF's role in relation to Salt

- Advocacy
 - Food labelling & food marketing to children
 - Links with FSAI, Safefood, HSE, DoH, academia...
 - IHF Blood Pressure and Nutrition Councils

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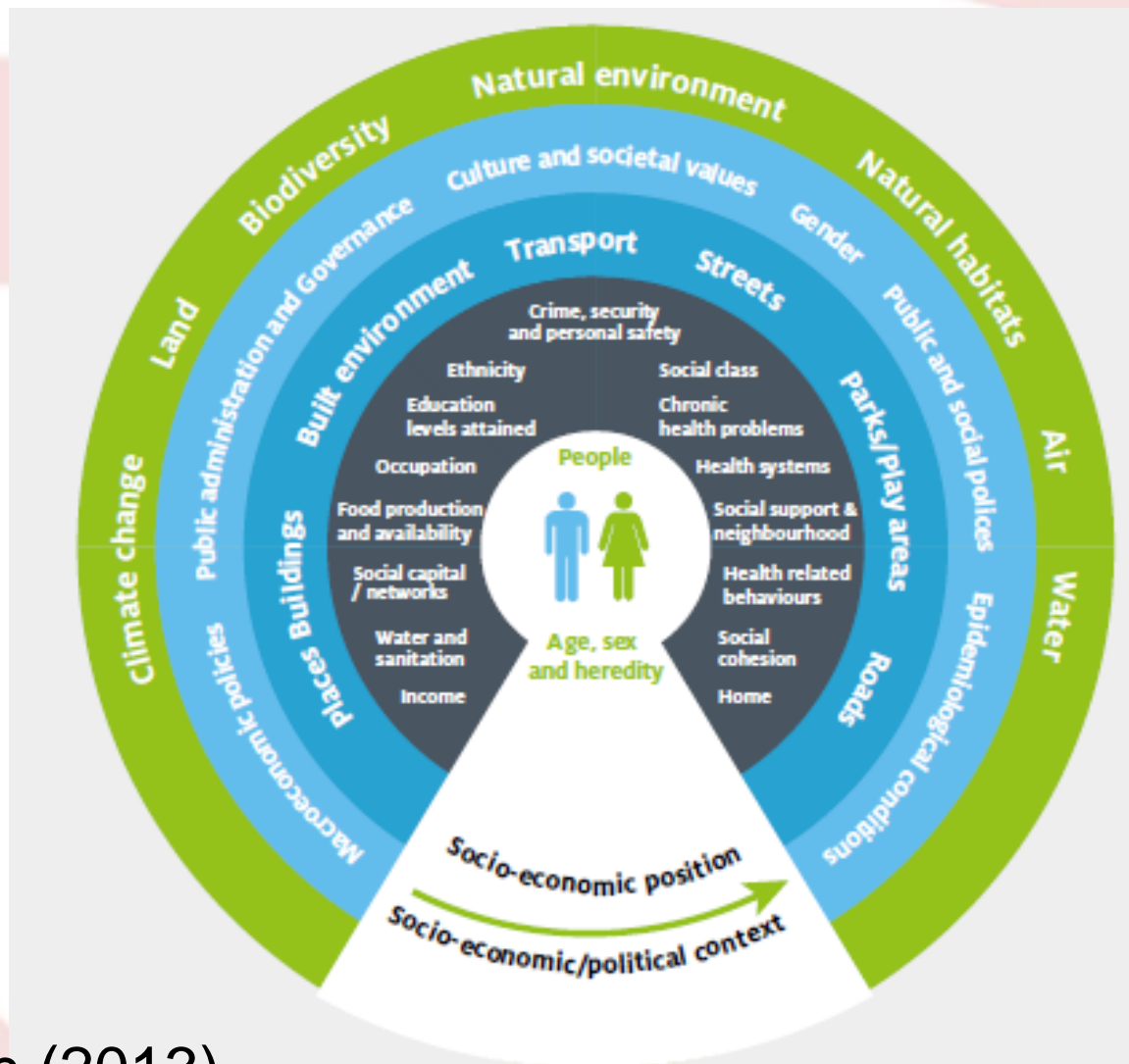
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Where next?

Determinants of Health



Where next?

Consumer education alone vs government-led policies

- **Consumer education**

Recent systematic review in US showed that salt intakes have **hardly changed** between 1953 and 2003 despite several education campaigns.

- **Government-led policies**

Data from European countries with a systematic multi-sectoral government-led approach have shown **substantial reduction** in salt intakes.

Where next? Policy Context

- *Healthy Ireland* Key Performance Indicator: Reduction in daily salt intake - adults should consume no more than 6g per day.
- *National Cardiovascular Health Policy*
 - Reduce salt content in foods as set out in the EU Salt Reduction Initiative, i.e. reduction by 16% in 4 years (2008-2012).
 - Achieve reduction to a target of no greater than 6g/day salt for adults
 - Particular attention to be given to salt reduction in children.



Where next?

- **Industry** – reformulation; labelling; marketing
- **Regulatory bodies** – monitoring; technical expertise
- **Public health/consumer** – continued education; improved food labelling end 2014 - mandatory inclusion of salt; media literacy for parents/children
- Vital: Government led, multi-sectoral approach
 - Ongoing research
 - Monitoring and evaluation

Thank You

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