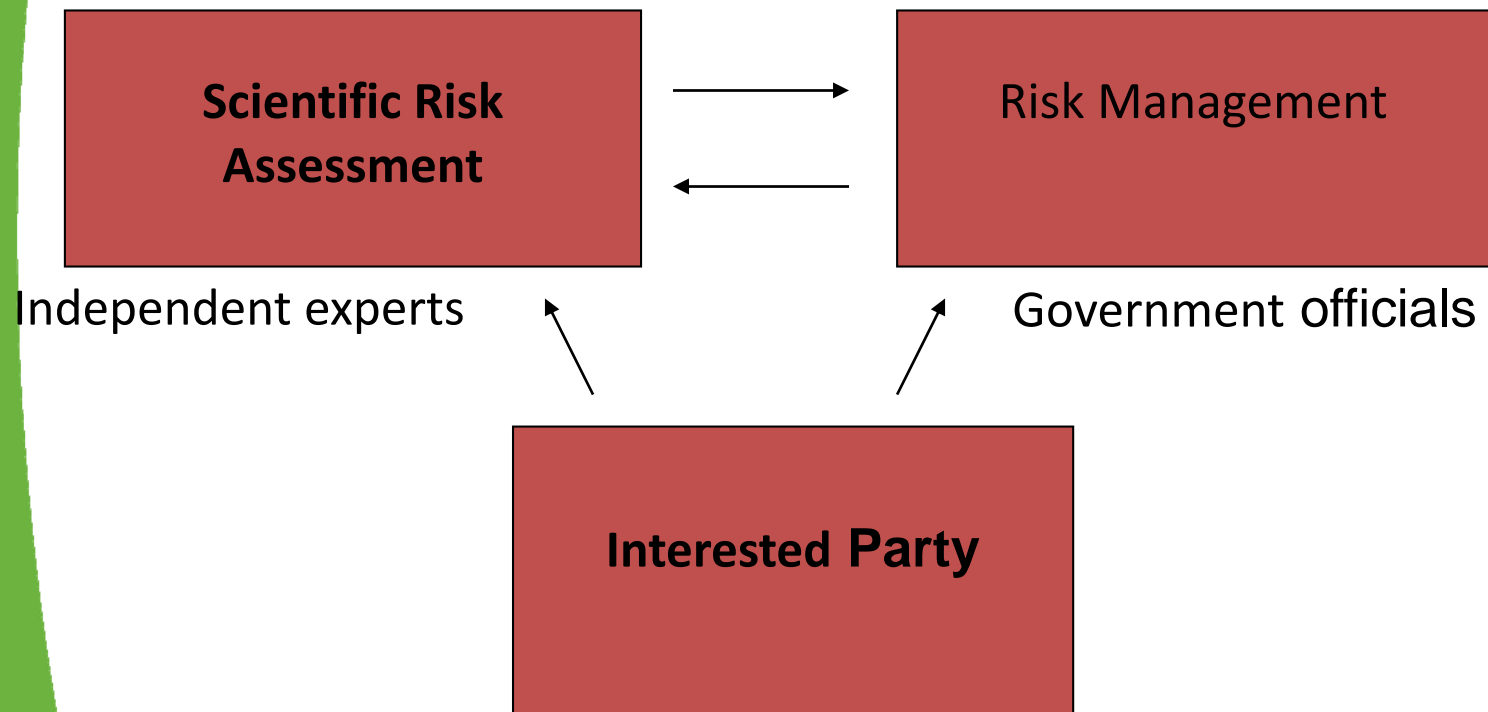




Salt reduction- Evidence for action

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Food Standards Agency

Policy Development



Scientific Advisory Committee on Nutrition (SACN)

- Advise government on scientific aspects of nutrition and health
- Operates 'principles of public life' and 'Nolan' procedures
- Open, transparent and consultative
- Consider evidence against: **Framework for Risk Assessment**

Study design- Causation

Type	Ability to 'prove' causation
Randomised controlled trials	Strong
Cohort studies	Moderate
Case-control	Weak (rarely used by SACN)
Cross sectional	Weak (rarely used by SACN)
Ecological	Very weak (not used by SACN)



Salt Risk Assessment

COMA Recommendation (1994):

for a reduction in adult salt consumption to 6g per day as there is a link between salt intake and blood pressure (hypertension)

Terms of reference

In September 2001, SACN was asked by the Food Standards Agency, supported by the Chief Medical Officer of Wales, to:

- review the evidence since the 1994 COMA recommendations on salt intake, taking into account the submissions that had been received from interested parties
- consider making recommendations for children

Average daily salt intake in the UK

Age (years)	Salt (g/d)	
	Male	Female
4-6 ¹	5.3	4.7
7-10 ¹	6.1	5.5
11-14 ¹	6.9	5.8
15-18 ¹	8.3	5.8
19-64 ²	11.0	8.1
>65 ³	6.8	5.3

24 h Na excretion

¹The National Diet and Nutrition Survey: young people aged 4-18 years (1997)

²The National Diet and Nutrition Survey: 19-64 years (2000/1)

³The National Diet and Nutrition Survey: people aged 65 and over (1994/5)



Public request for evidence



SACN Terms of Reference



SACN risk assessment



Draft report public consultation



SACN consider and revise report



SACN report finalised



Salt and Health

Scientific Advisory
Committee on Nutrition

2003

The Stationery Office

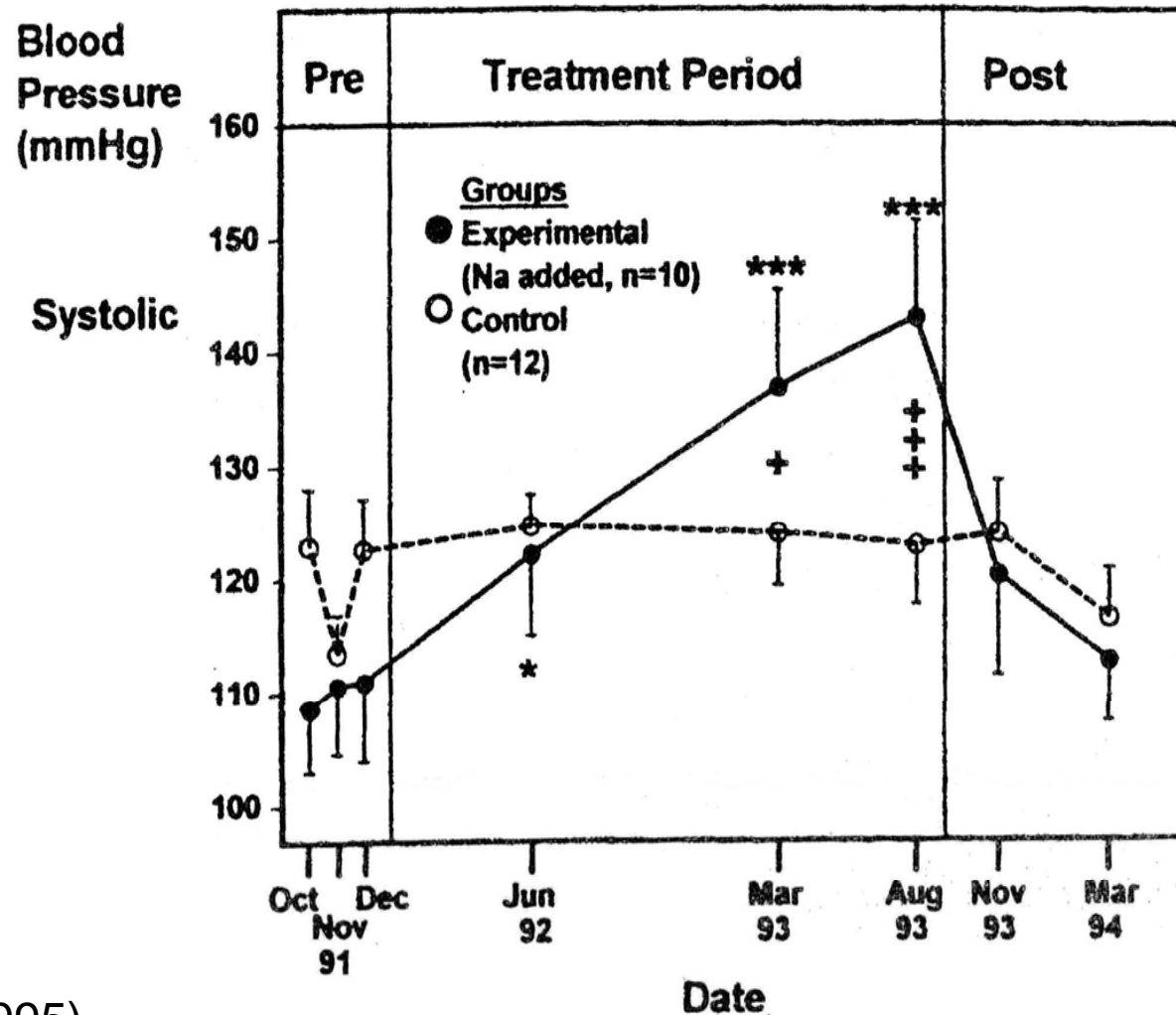
www.sacn.gov.uk



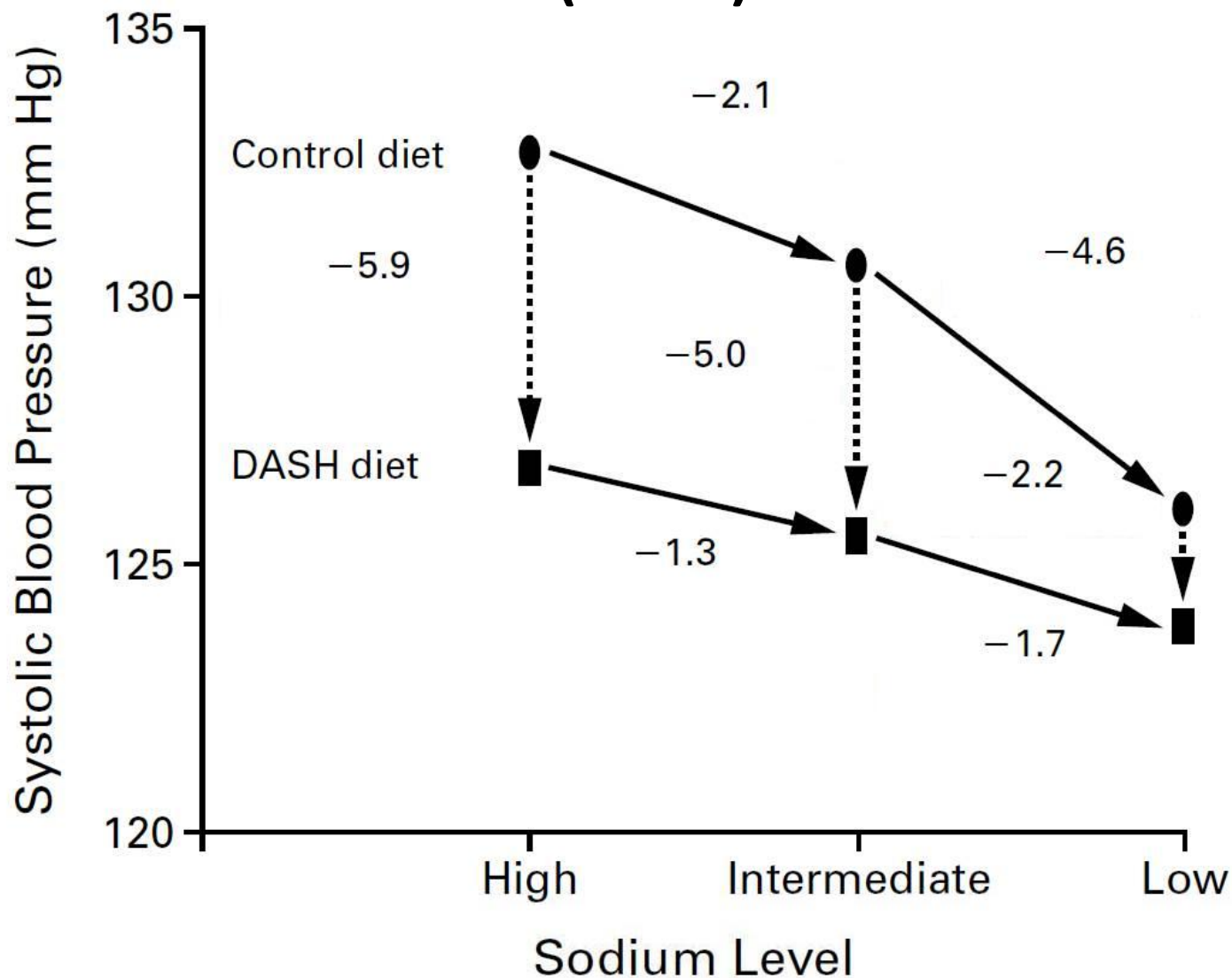
Important study design issues

- Dietary intake methodology alone not considered reliable
- Studies with 24h measures of Na excretion given greater weight

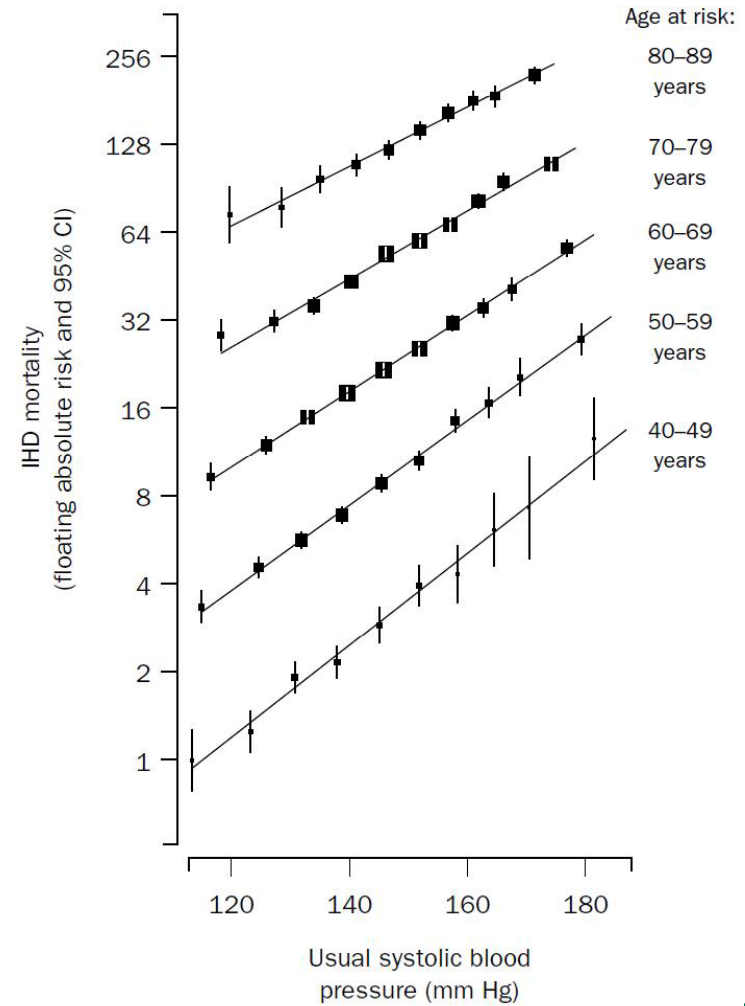
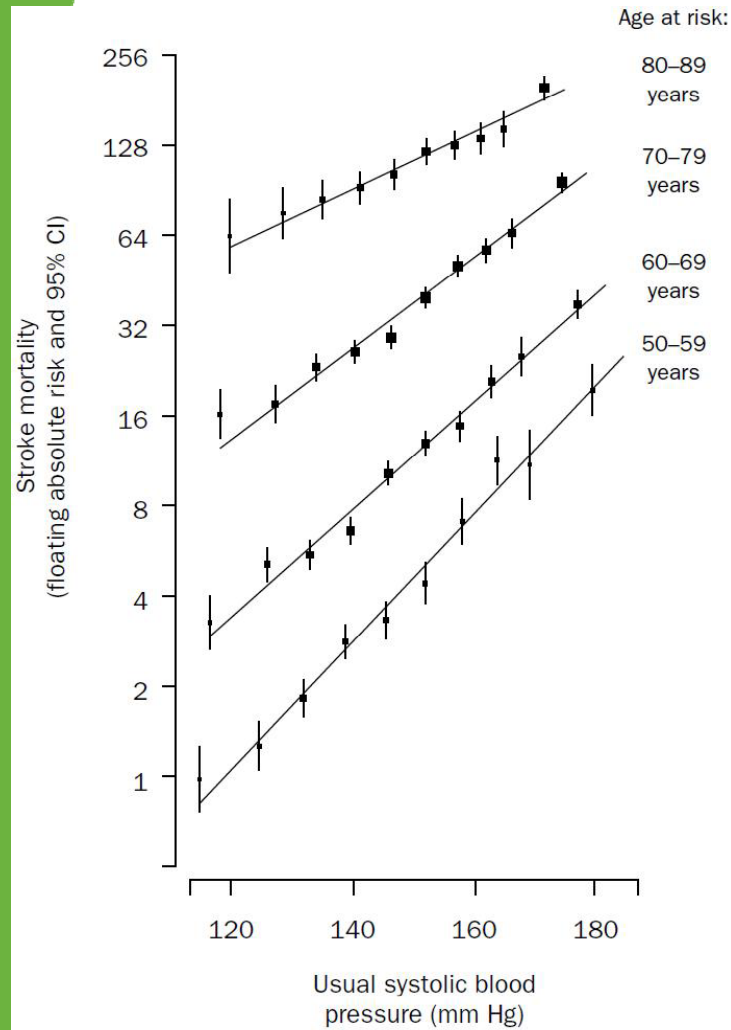
The effect of salt on blood pressure of Chimpanzees



The Dietary Approaches to Stop Hypertension (DASH)

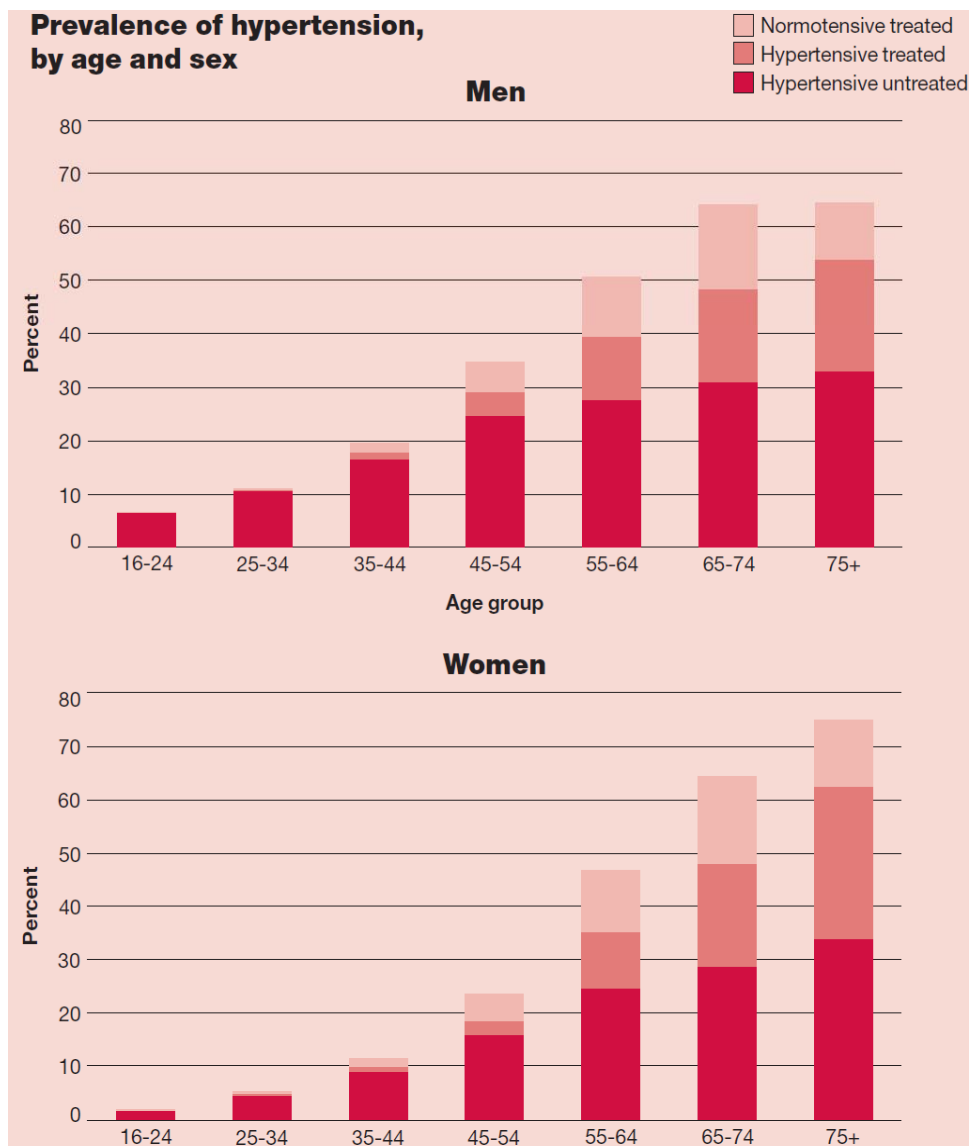


Continuous Risk of Blood Pressure



Prospective Studies Collaboration, 2002

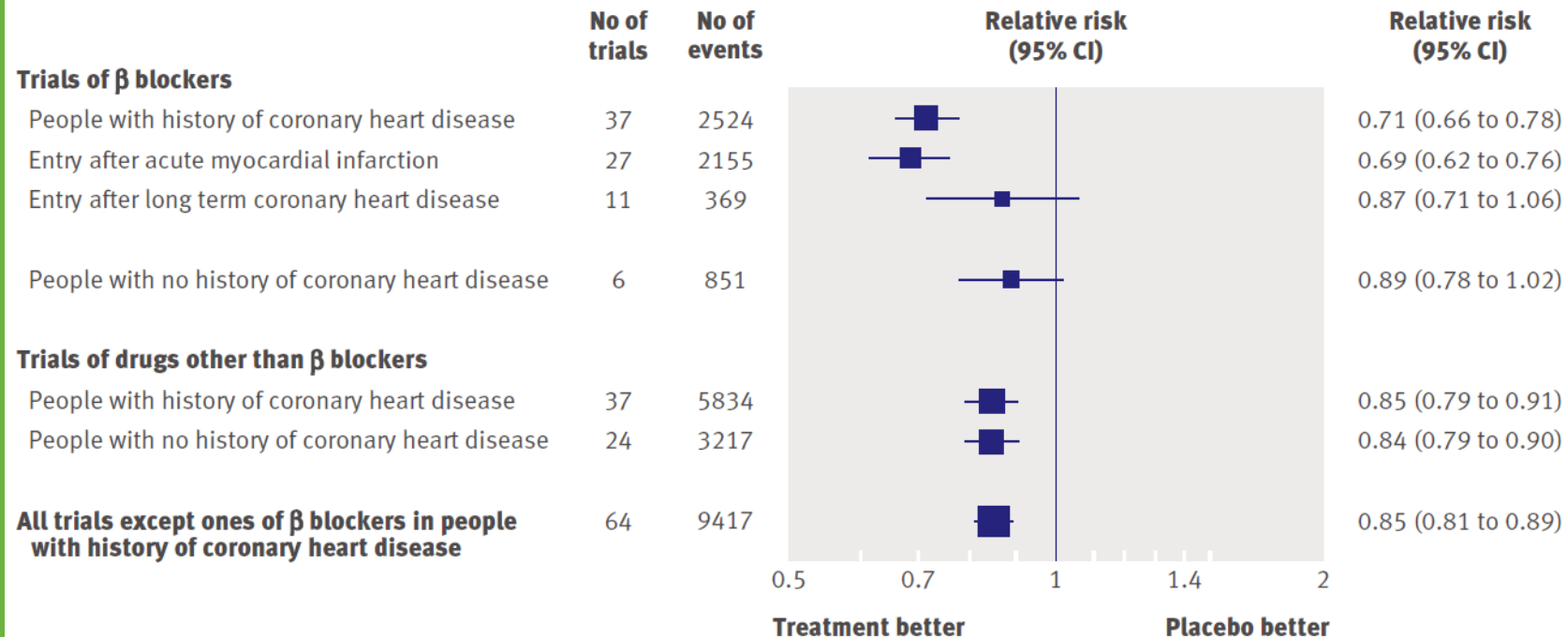
High blood pressure in the UK



Health Survey for England, 2003

Lowering blood pressure reduces cardiovascular disease risk

Blood pressure lowering drugs in the prevention of - meta-analysis of 147 randomised trials



Law, Morris & Wald (2009)

Long-term effects on health and premature mortality

- Insufficient reliable data to reach clear conclusions
- Reflects difficulties of carrying out large scale studies over a long period of time required to assess long-term effects
- Also problems with isolating effects of salt intake from other factors



Could salt reduction endanger to health?

SACN concluded

- Evidence for direct association between salt intake and blood pressure has increased
- Lowering average salt intake of the population would
 - proportionally lower average blood pressure levels
 - confer significant public health benefits by decreasing the burden of cardiovascular disease
- For adults, the recommended target intake of 6g salt per day remains valid
- For infants and children, health benefits would be gained from a reduction in average salt consumption to the recommended target intakes
- Substantial reductions in the current average salt intake of the population required in order to reach recommended targets

Daily average maximum salt intakes for infants and children

Age	Average max. salt intake (g/d)
0-6 months	<1
7-12 months	1
1-3 years	2
4-6 years	3
7-10 years	5
11-14 years	6

How can this be achieved

- Individual targeted approach not appropriate
- Population-based approach required: adoption of a healthy balanced diet low in salt and saturated and total fat and rich in fruit, vegetables and complex carbohydrates
- Reduction in salt content of processed foods & drinks

The effect of dietary advice to reduce salt intake

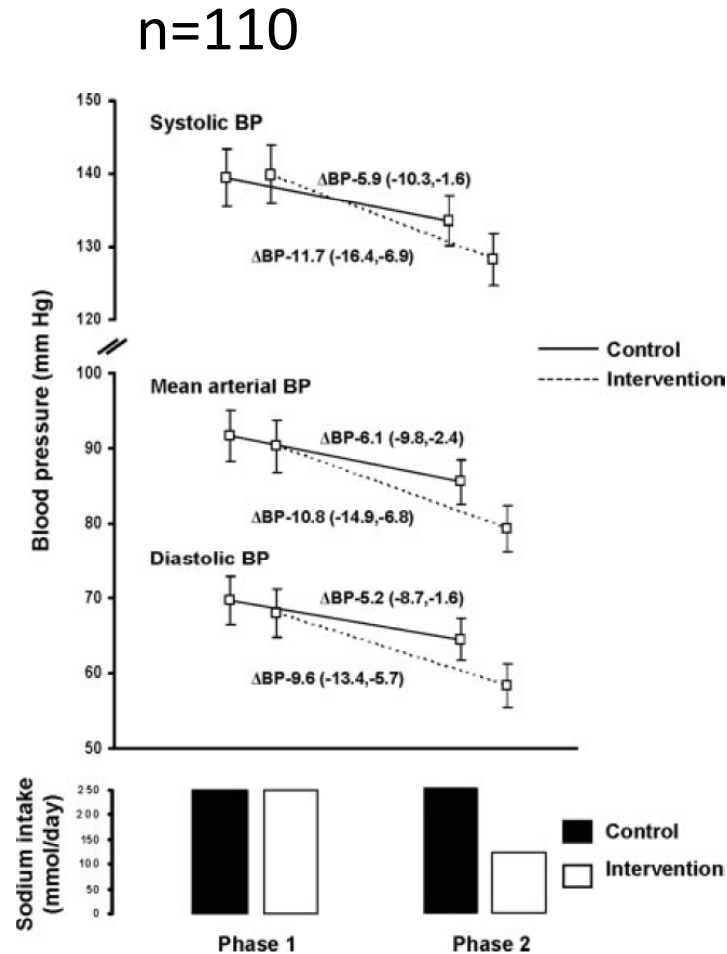
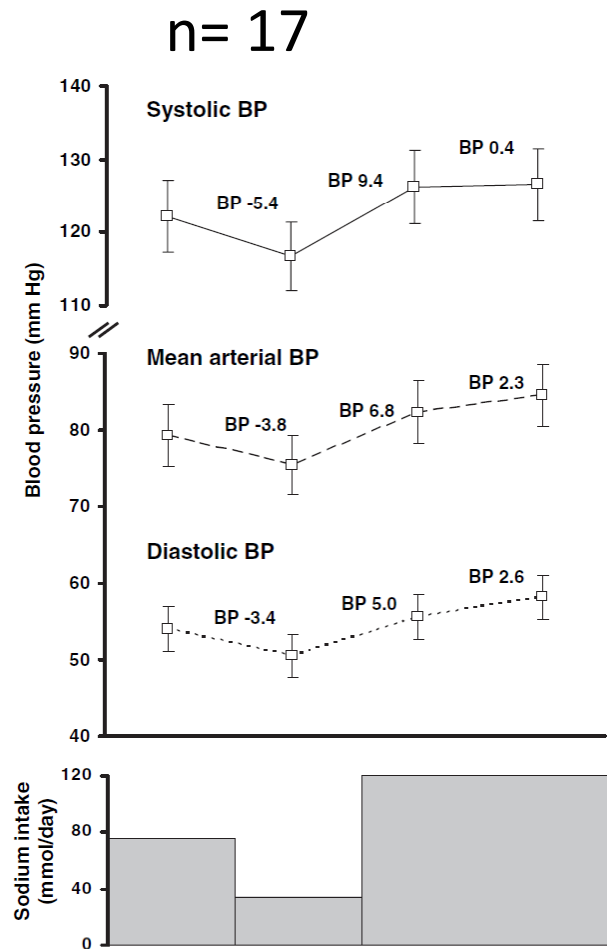
The Trials of Hypertension Prevention (TOHP) phase II

	Salt reduction <i>compared to control group</i>	Reduction in systolic blood pressure <i>compared to control group</i>
6 months	4.6g/day	2.9 mm Hg
36 months	1.4g/day	1.2 mm Hg

TOHP Collaborative Research Group, 1997

Post SACN

Change in Salt Intake Affects Blood Pressure of Chimpanzees



Elliott et al. (2010)

Salt intake, stroke, and cardiovascular disease - meta-analysis of prospective studies

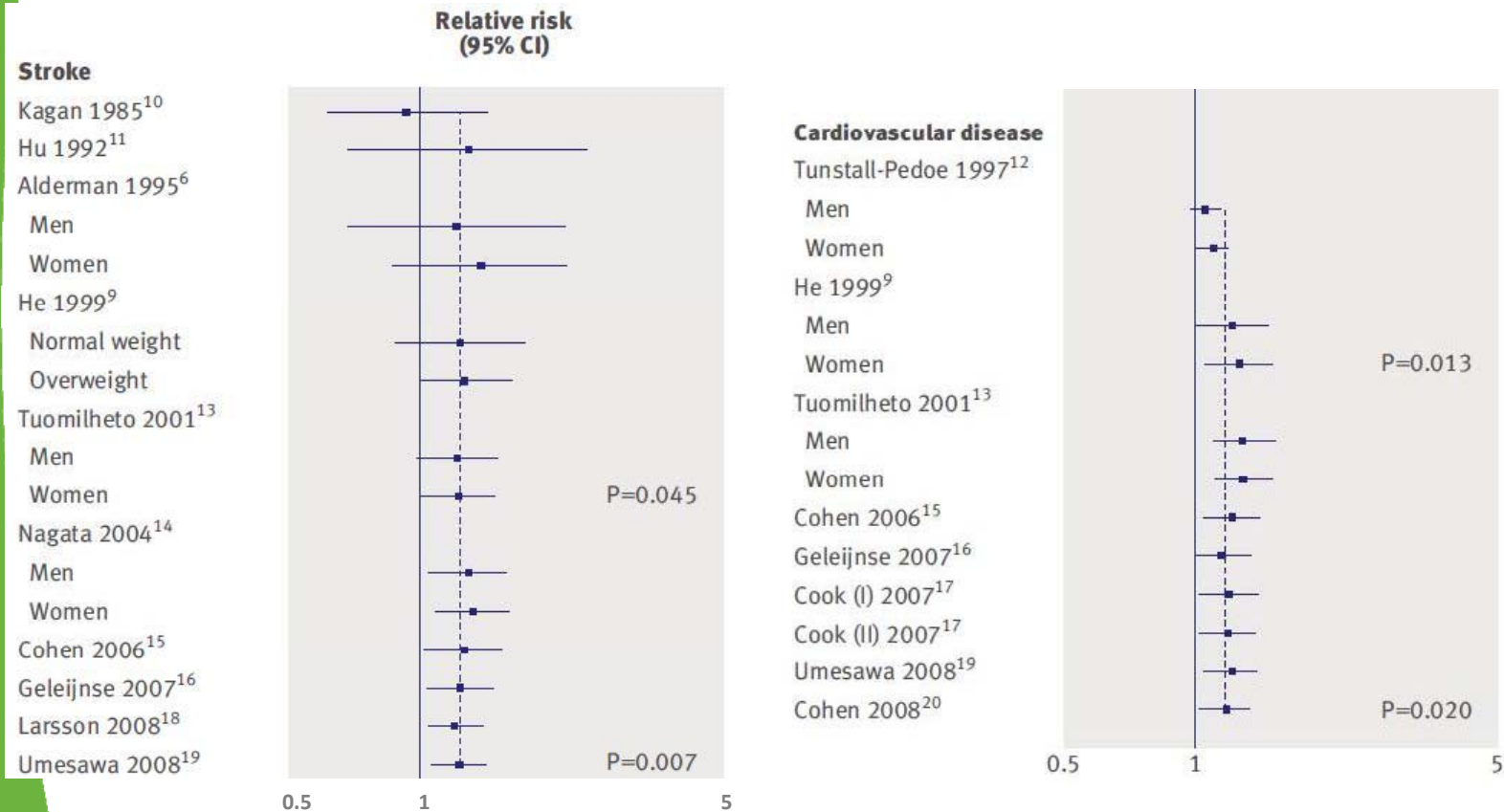


Fig 3 | Cumulative meta-analysis. Evaluation of time trends (year of publication) in relation between habitual sodium intake and risk of stroke or cardiovascular disease



TOO MUCH SALT
IS BAD FOR
YOUR HEART
Sid the Slug

 FOOD
STANDARDS
AGENCY
www.salt.gov.uk

 The
STRROKE
Association

 Food
Standards
Agency
food.gov.uk

The UK Advertising Standards Authority agreed:

- Too much salt is bad for your heart
- As salt intake is a risk factor for hypertension
- Reducing salt intake reduces blood pressure
- Reducing blood pressure reduces CVD risk
- And this is in line with SACN and other international experts

Conclusion

- High blood pressure is a serious public health problem
- Salt is an important contributor to high blood pressure
- Reducing salt intake reduces risk of CVD which saves lives