



THE GEORGE INSTITUTE
for International Health



Monitoring the nutrition content in the food supply

Professor Bruce Neal

Conflict of interest statement

Current support and support in the last five calendar years from commercial entities (most recent support)

- > *Consultant/Advisor/Consultant Fee, paid advisory boards or fees for attending a meeting* – Pfizer (2005), Roche (2009), Takeda (2010), Pepsico (2010).
- > *Lecture fees (honoraria) travel fees or reimbursements when speaking at the invitation of a commercial entity* – Amgen (2007), AstraZeneca (2010), GlaxoSmithKline (2007), Pfizer (2007), Roche (2005), Sanofi Aventis (2006), Servier (2008), Tanabe (2007).
- > *Research support from a commercial entity* – Johnson and Johnson (2010), Merck Schering Plough (2010), Servier (2010), United Healthcare Group (2010).
- > *Employment by a commercial entity* – none.
- > *Equity ownership/stock options* - none.
- > *Patents and/or royalties that might be viewed as creating a potential conflict of interest* – none.
- > *Any other financial support that might be viewed as creating a potential conflict of interest* – none.
- > *Any other non-financial roles that might be viewed as creating a potential conflict of interest* – Professor Neal interacts regularly with multiple large corporations in the Pharmaceutical Industry, the Food Processing Industry and the Quick Service Restaurant industry in Australia and overseas, in his efforts to achieve negotiated solutions to major public health problems.

Conflict of interest statement

Current support and support in the last five calendar years from commercial entities (most recent support)

- > **Consultant/Advisor** / *Consultant Fee, paid advisory boards or fees for attending a meeting*
– Pfizer (2005), Roche (2009), Takeda (2010), **Pepsico (2010)**.
- > *Lecture fees (honoraria) travel fees or reimbursements when speaking at the invitation of a commercial entity* – Amgen (2007), AstraZeneca (2010), GlaxoSmithKline (2007), Pfizer (2007), Roche (2005), Sanofi Aventis (2006), Servier (2008), Tanabe (2007).
- > *Research support from a commercial entity* – Johnson and Johnson (2010), Merck Schering Plough (2010), Servier (2010), United Healthcare Group (2010).
- > *Employment by a commercial entity* – none.
- > *Equity ownership/stock options* - none.
- > *Patents and/or royalties that might be viewed as creating a potential conflict of interest* – none.
- > *Any other financial support that might be viewed as creating a potential conflict of interest* – none.
- > **Any other non-financial roles** *that might be viewed as creating a potential conflict of interest* – **Professor Neal interacts regularly with multiple large corporations in the Pharmaceutical Industry, the Food Processing Industry and the Quick Service Restaurant industry** in Australia and overseas, in his efforts to achieve negotiated solutions to major public health problems.

Overview

- > **Why the food supply is so important**
- > **A new food monitoring initiative**

Blood pressure in Australia

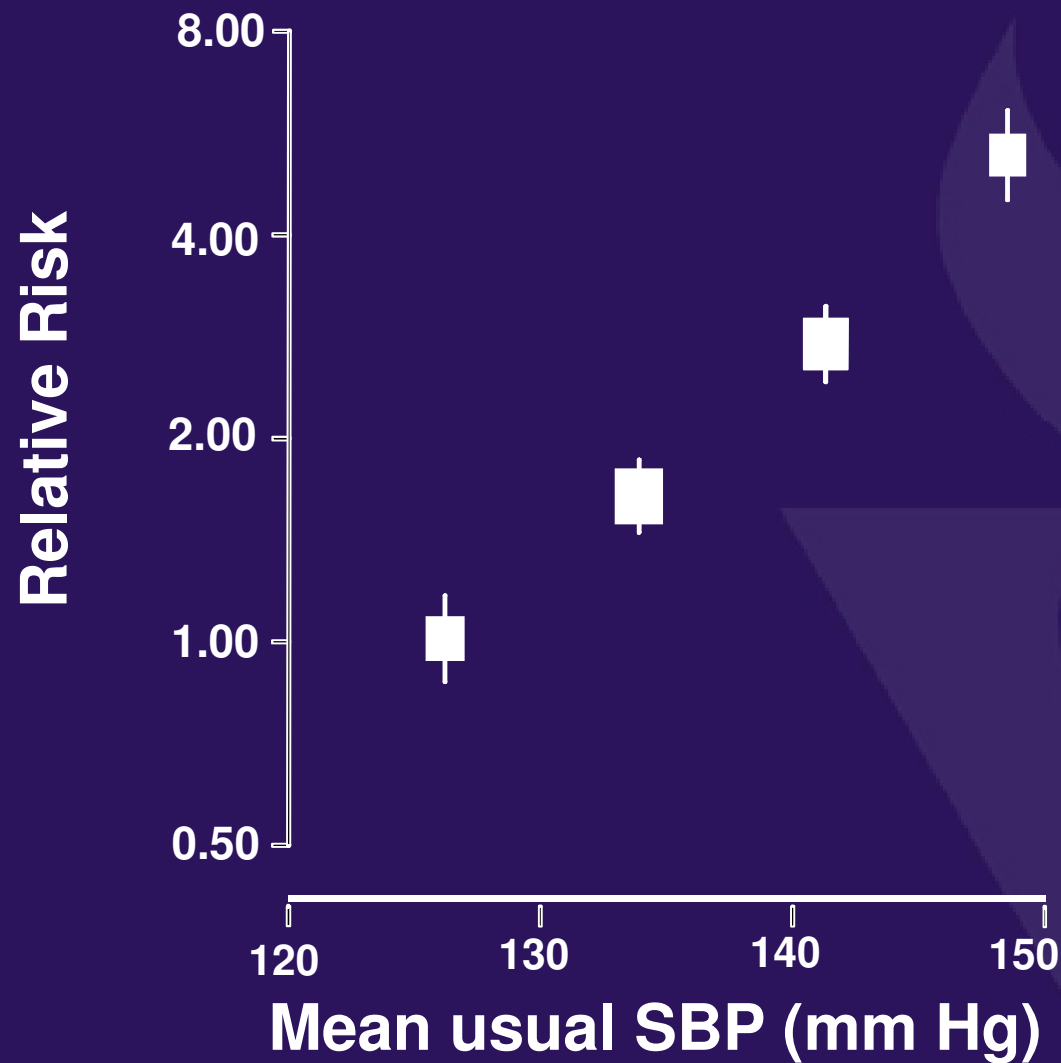
- > **Second leading cause of total disease burden (7.6%) after tobacco (7.8%)**
- > **Despite huge clinical prevention effort and expenditure targeted at blood pressure**

Australian Institute of Health and Welfare, 2008
Begg S et al, 2003, PHE 82 Canberra AIHW

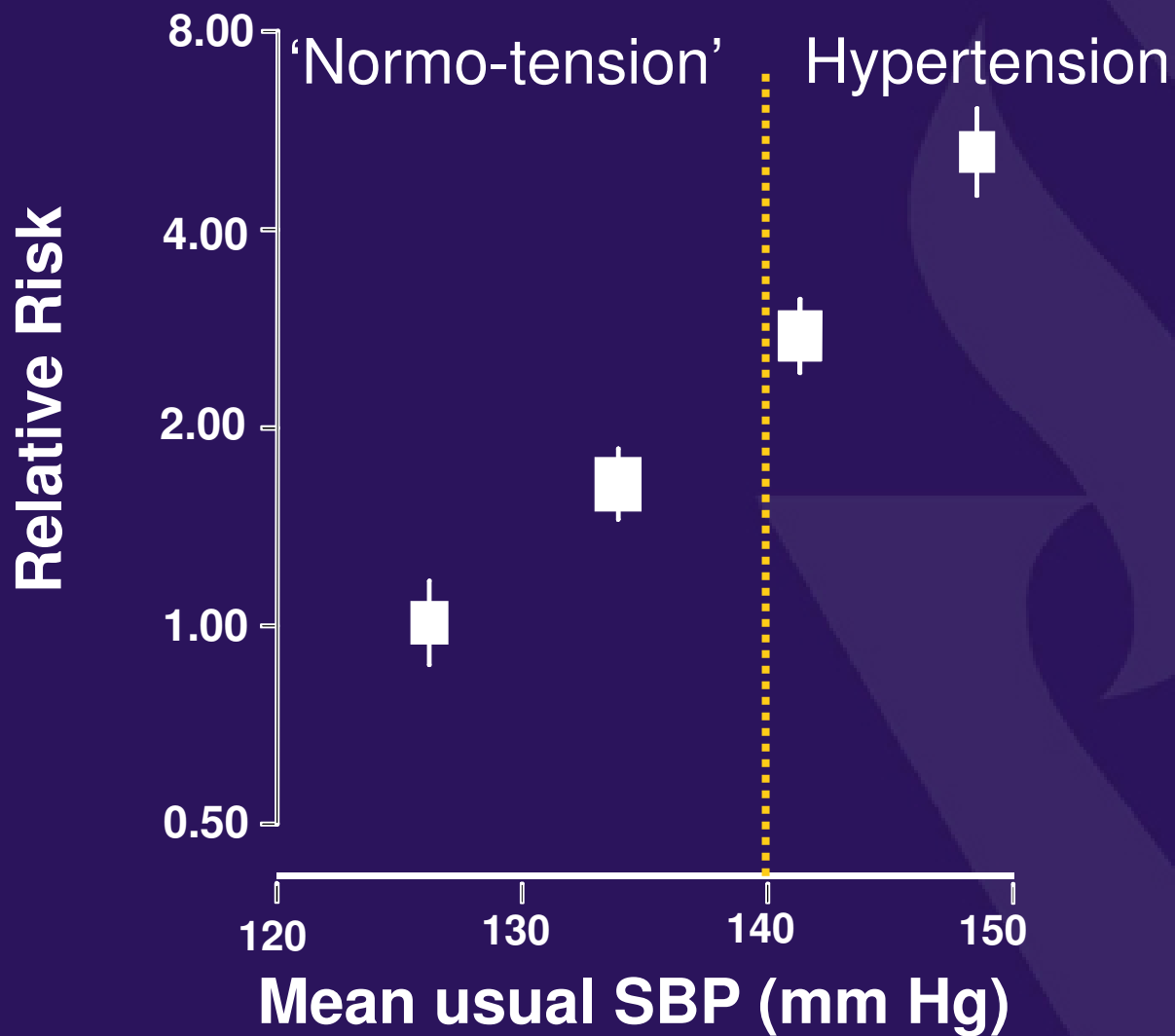
Why does the problem persist?

- > **Because it was so large in the first place**
- > **Because our current strategies are having only limited impact**

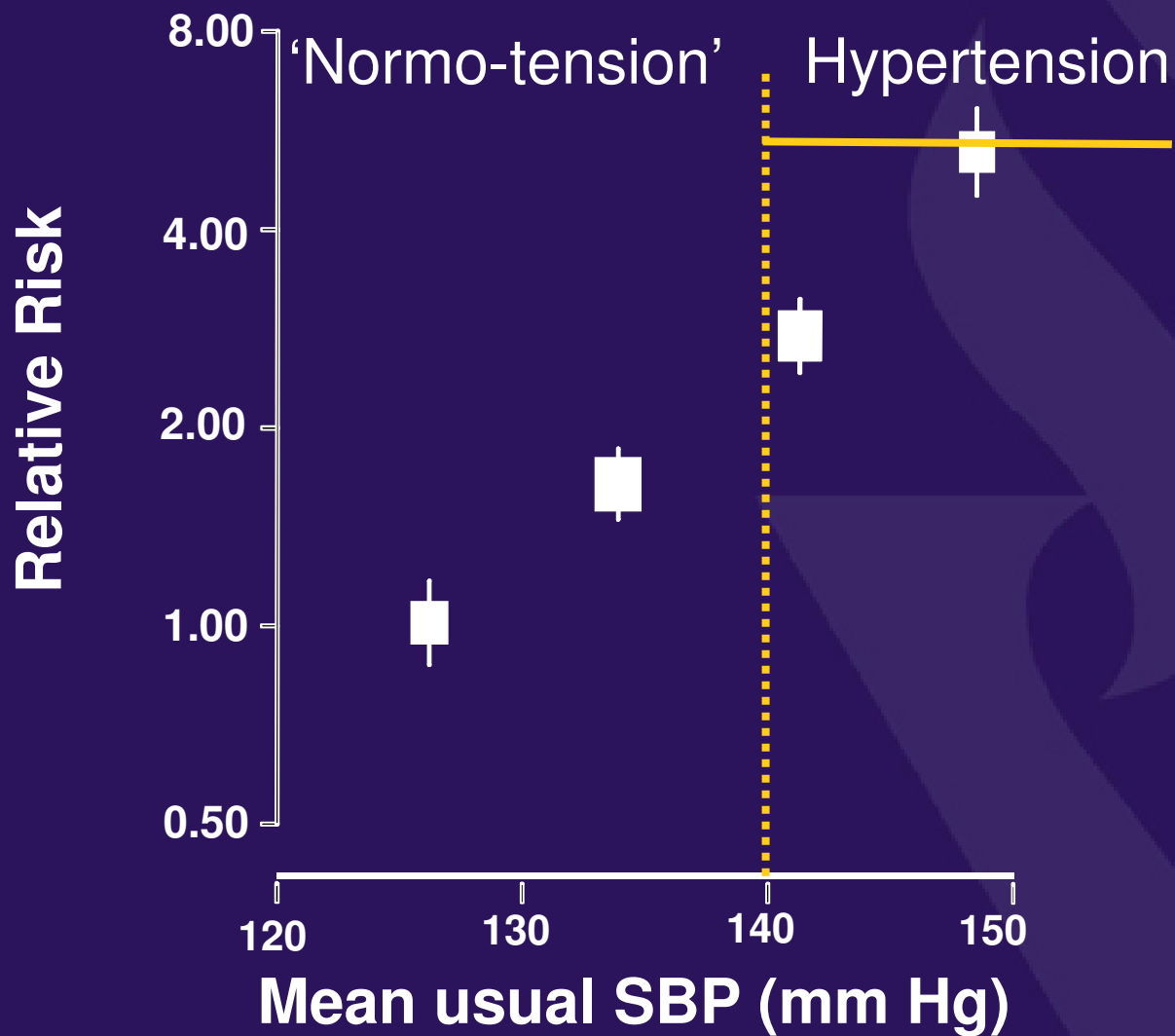
Blood pressure and stroke



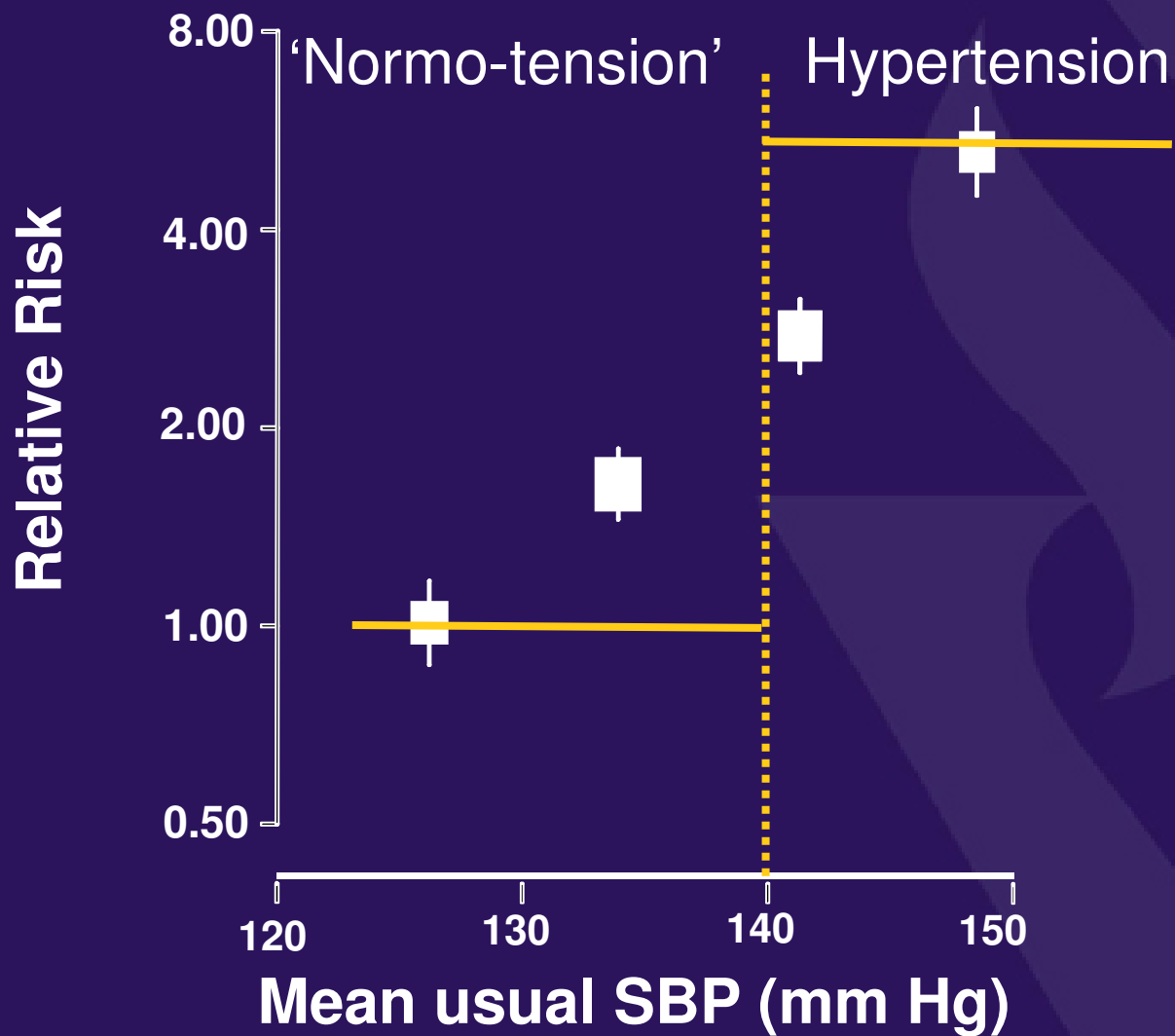
Blood pressure and stroke



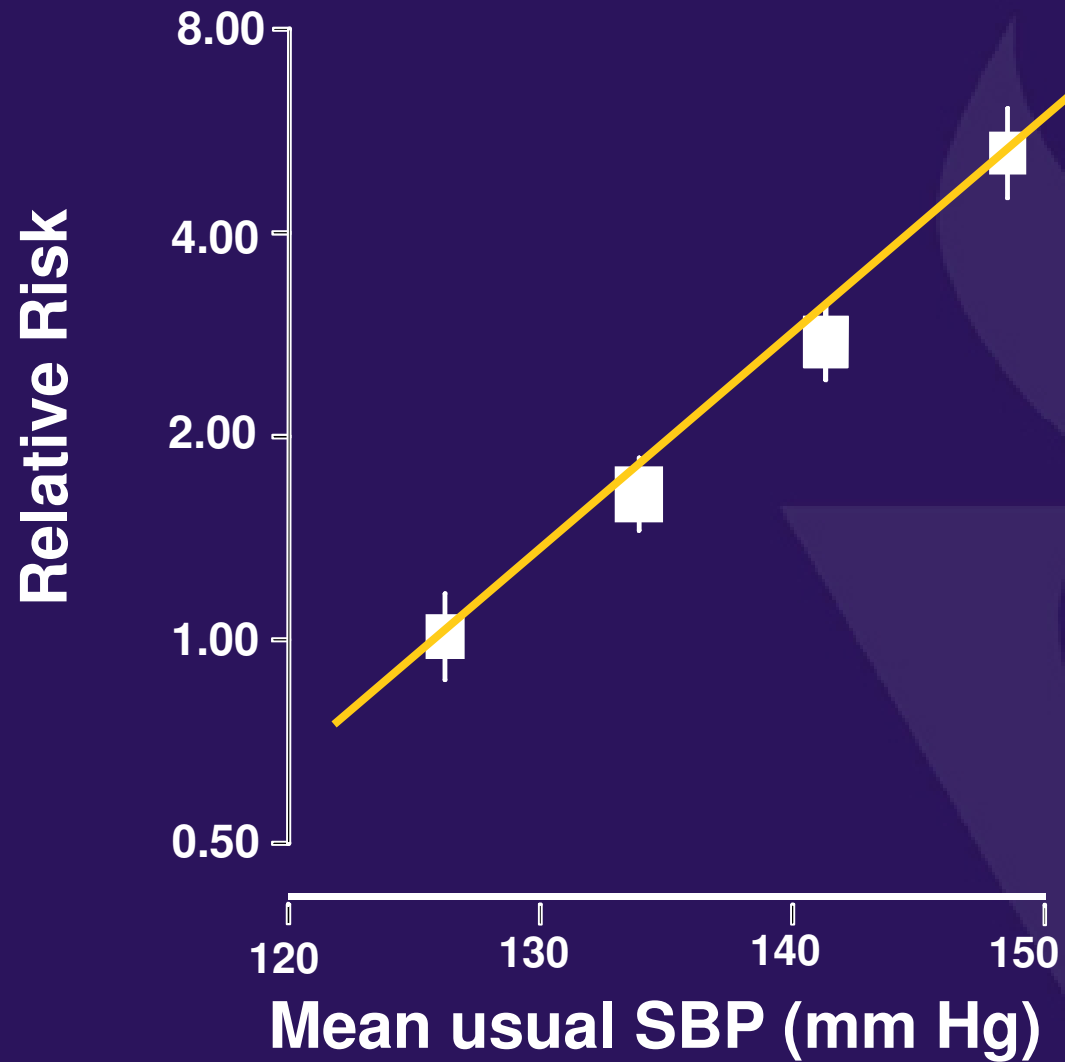
Blood pressure and stroke



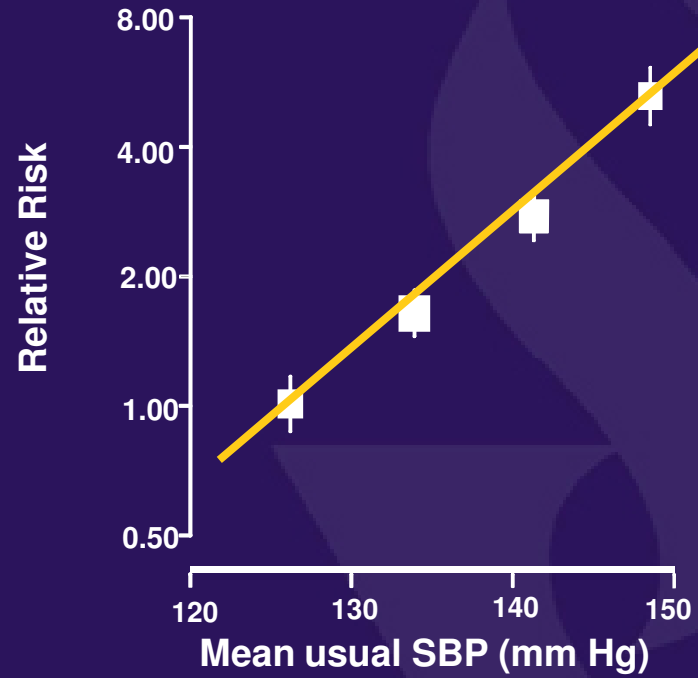
Blood pressure and stroke



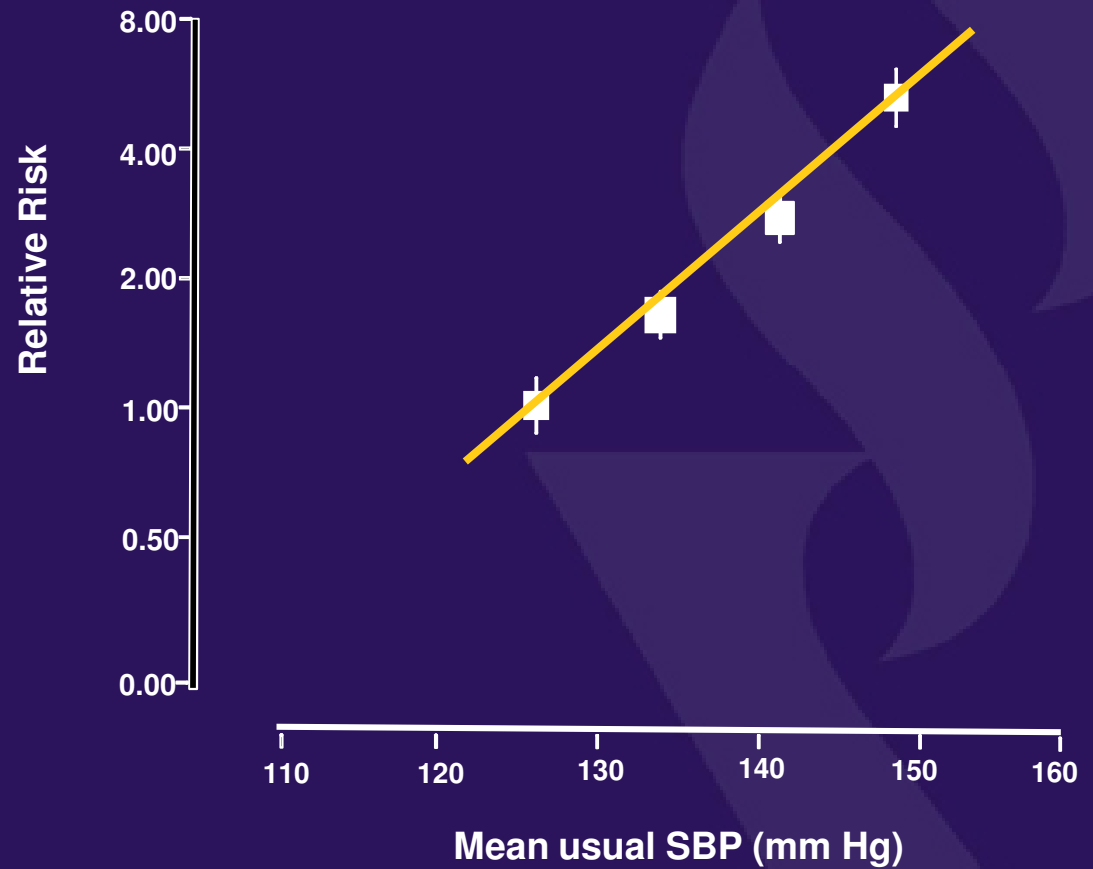
Blood pressure and stroke



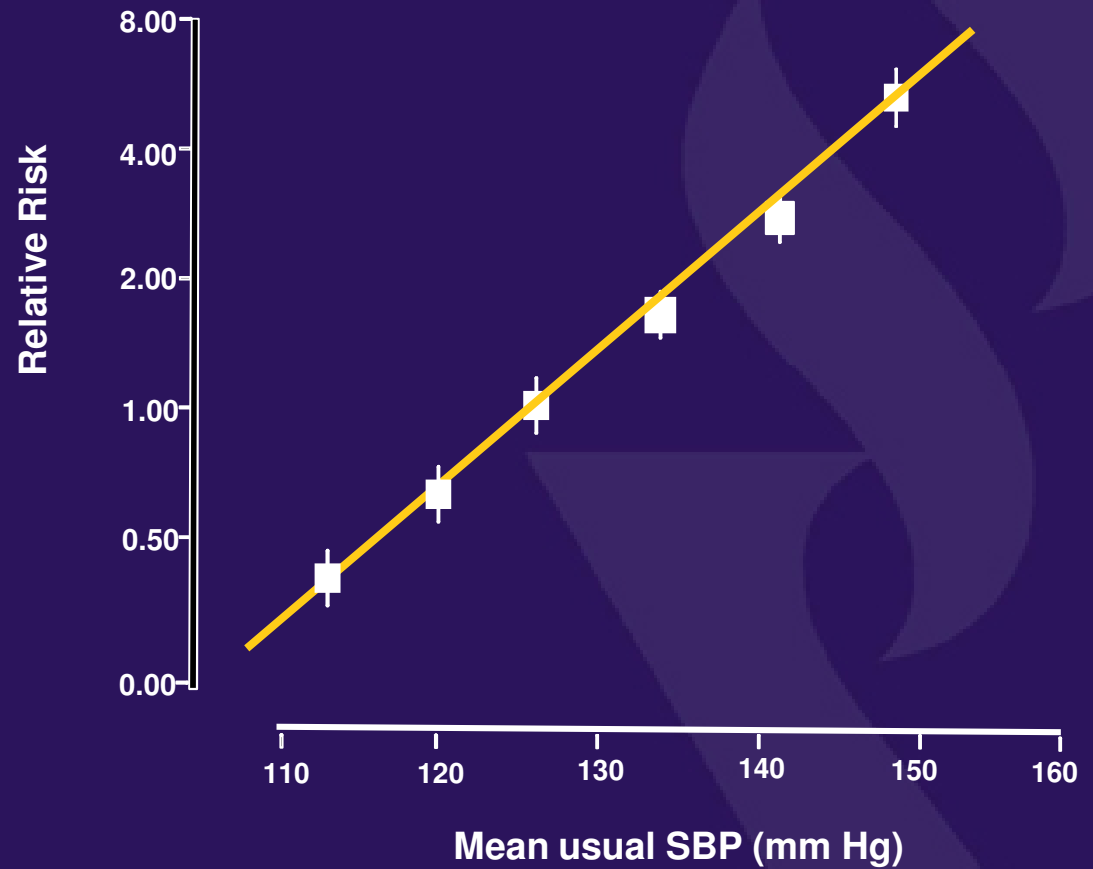
Blood pressure and stroke



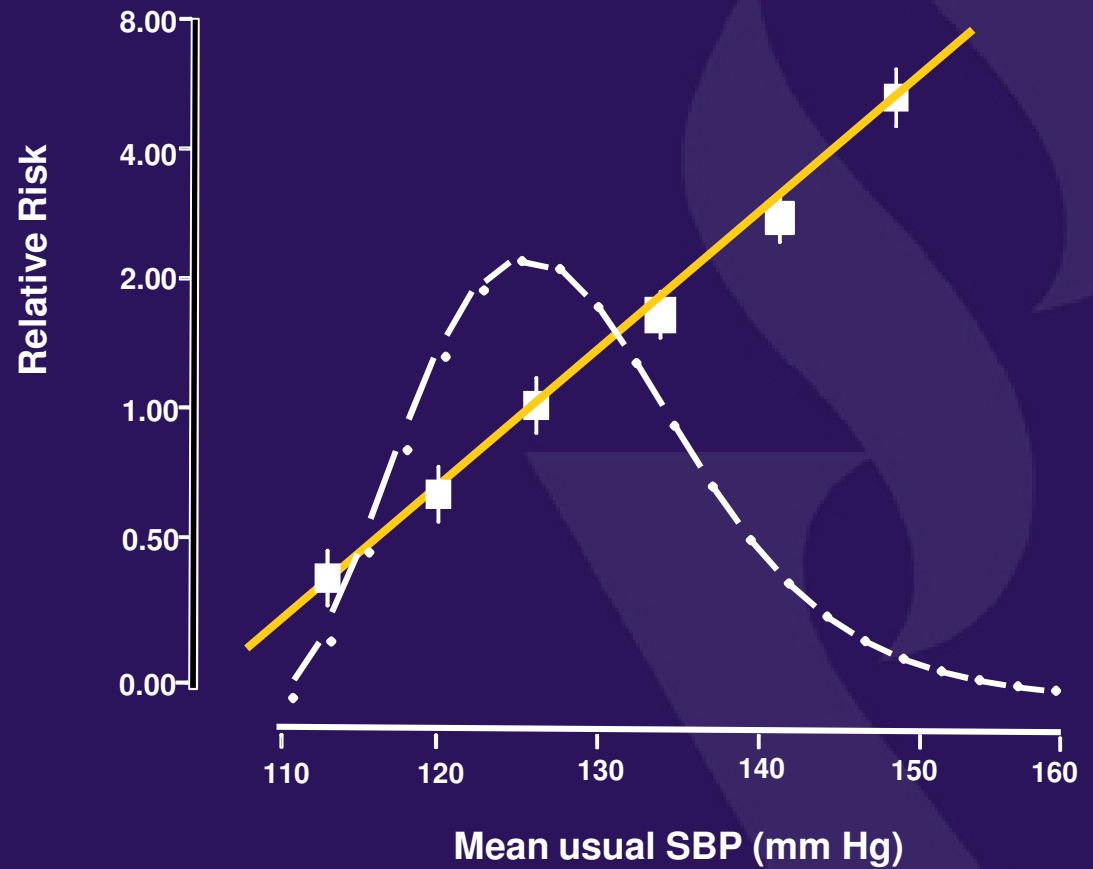
What about lower blood pressure levels?



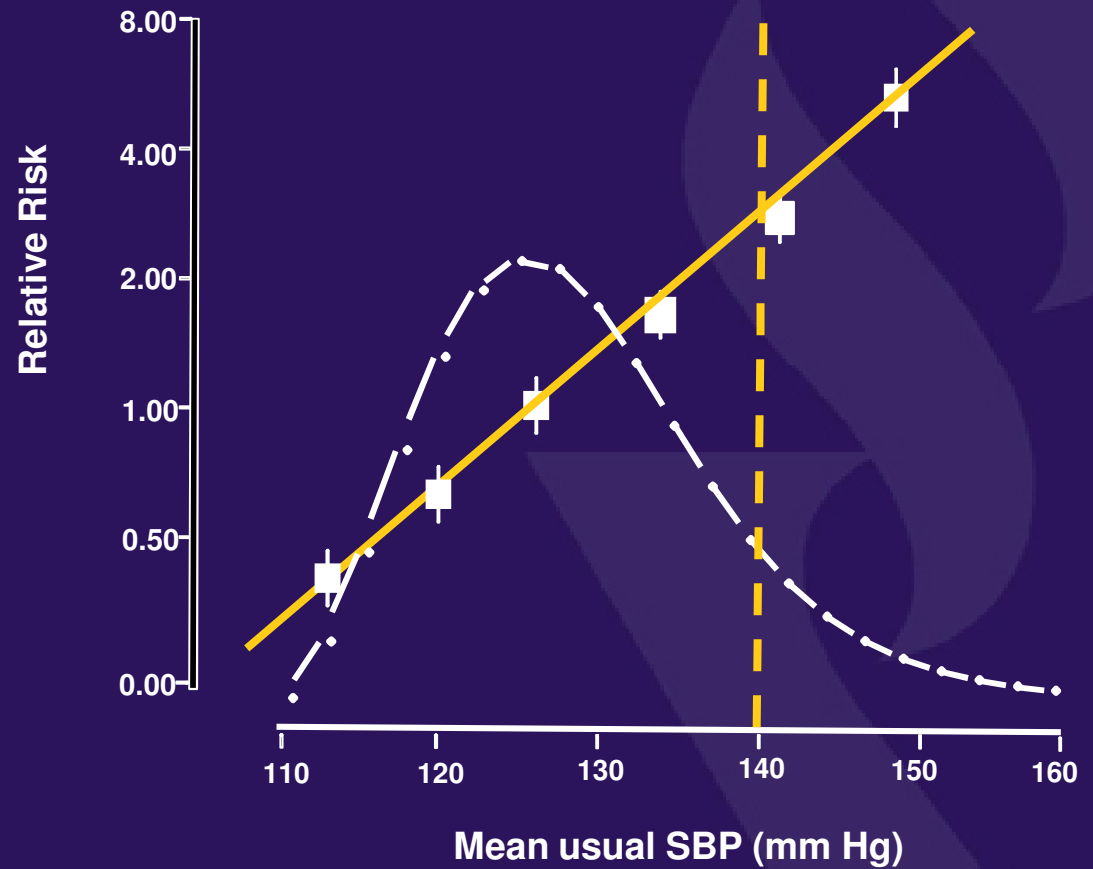
Same continuous association



Population blood pressure levels

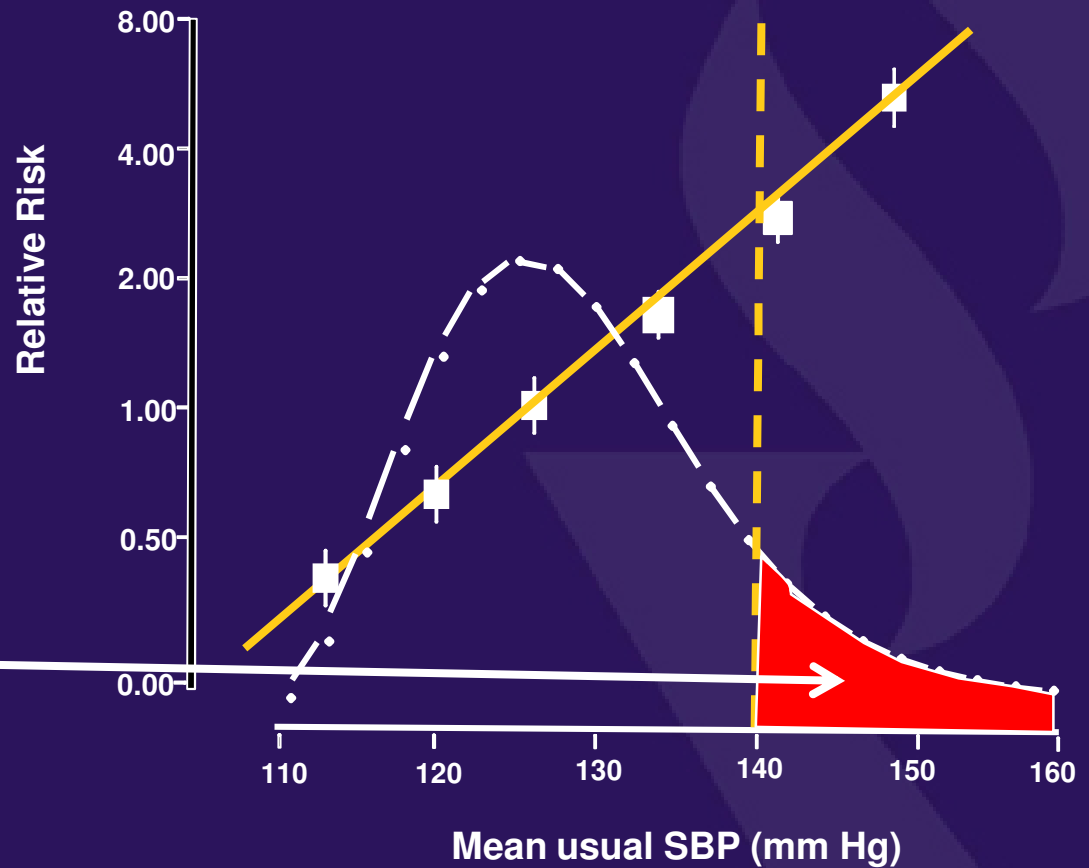


How does 'hypertension' fit into this?



Who get the strokes and the heart attacks?

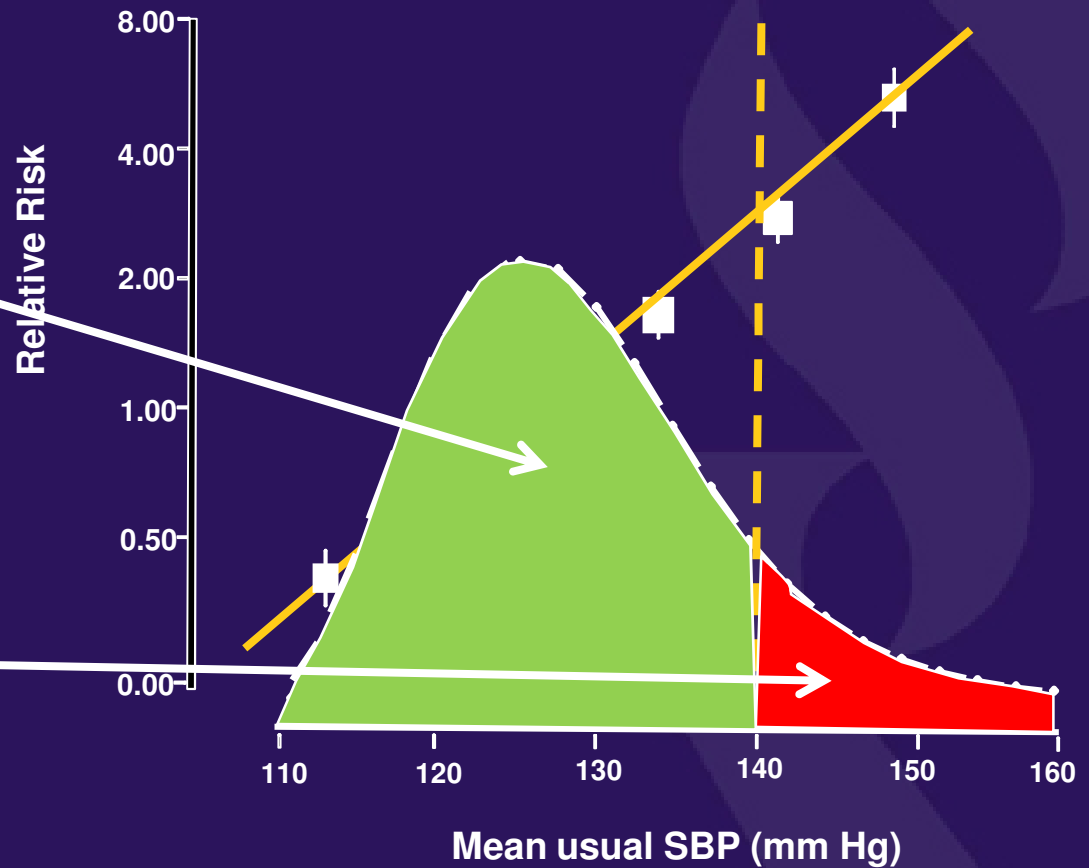
A few people with a high risk



Who get the strokes and the heart attacks?

A lot of people with a low risk

A few people with a high risk

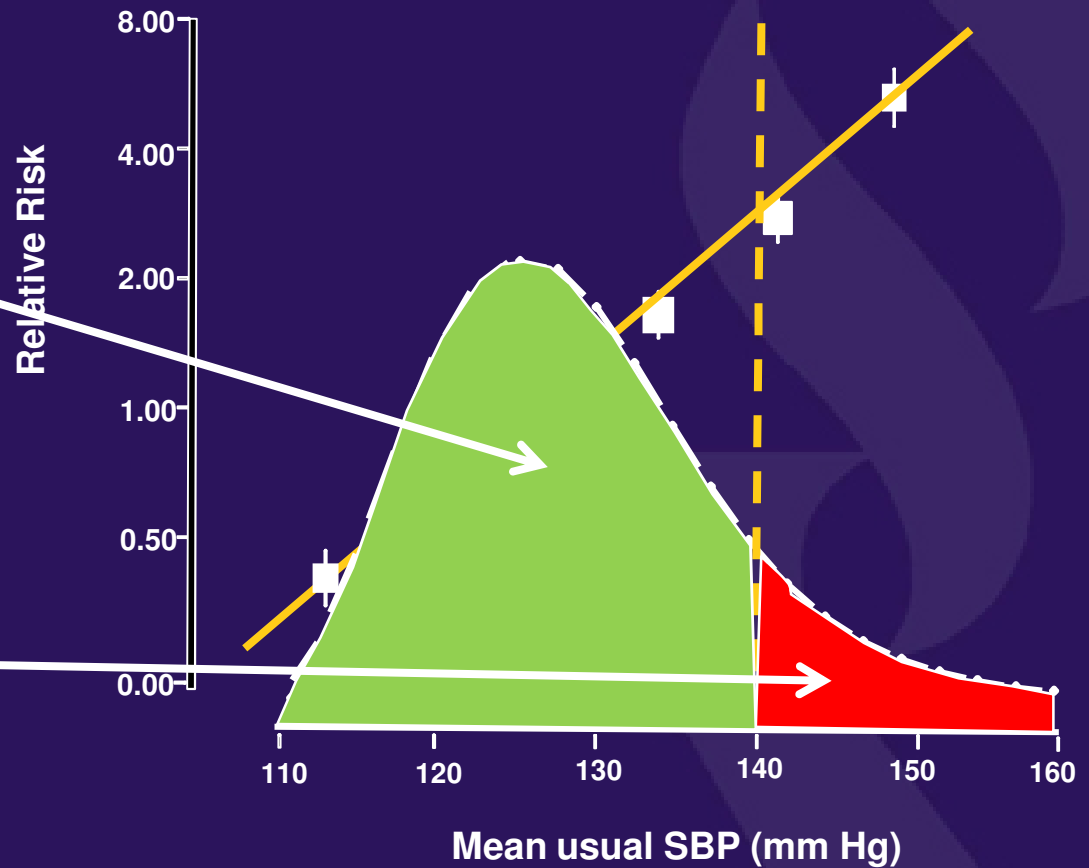


Who get the strokes and the heart attacks?

A lot of people with a low risk

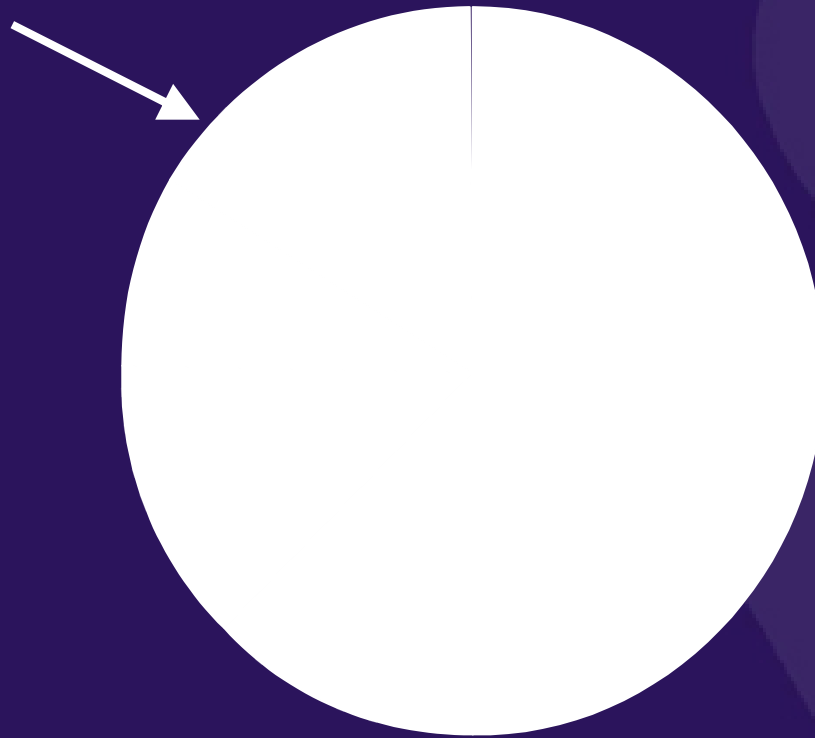
EQUALS

A few people with a high risk



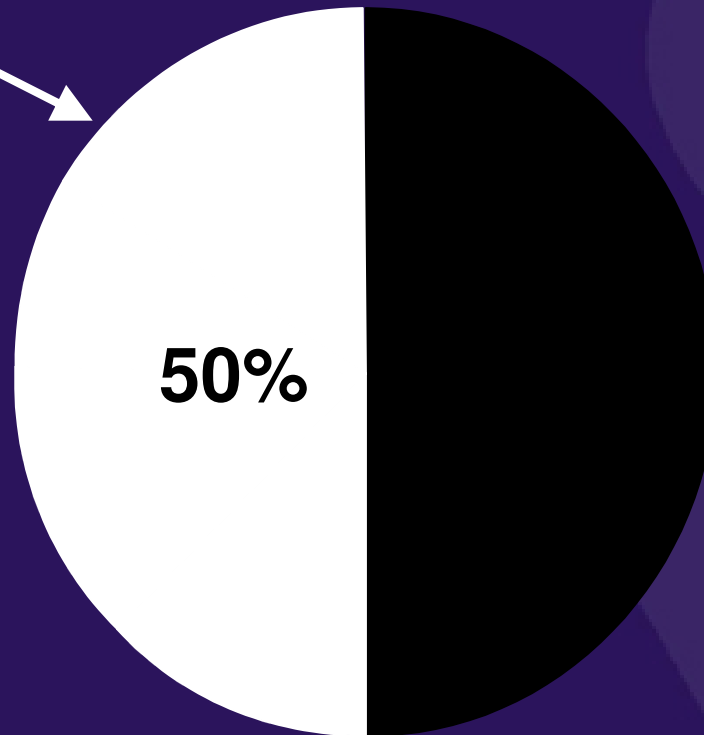
Effectiveness of clinical approaches to prevention

Total disease burden caused by blood pressure



Effectiveness of hypertension-based approach

Disease burden that can **potentially** be addressed by targeting people with hypertension

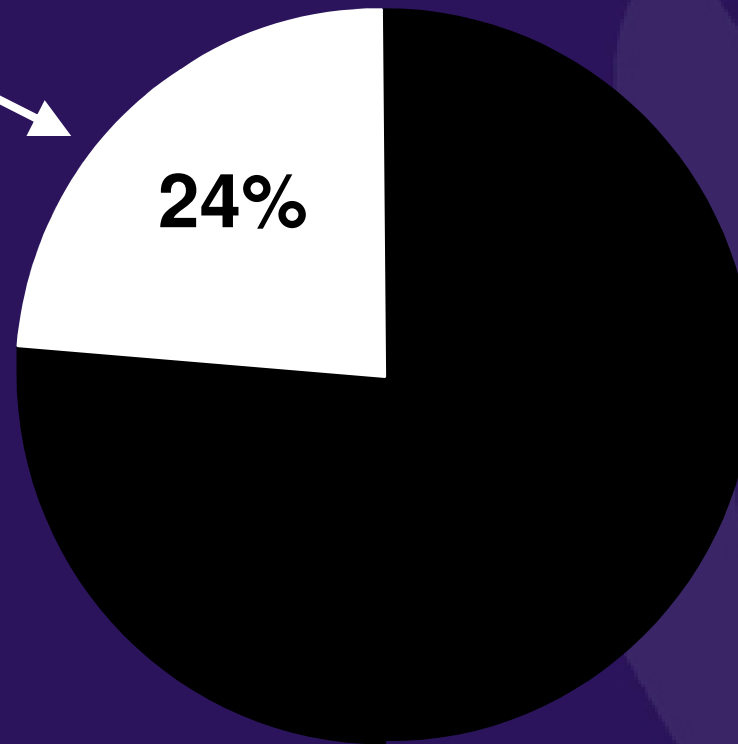


Hypertension management

- > In 2000 an estimated 27% Australian adults (>25 years) had hypertension
 - > 47% of those were being treated

Effectiveness of hypertension-based approaches

Disease burden actually addressed in Australia by **treating** people with hypertension

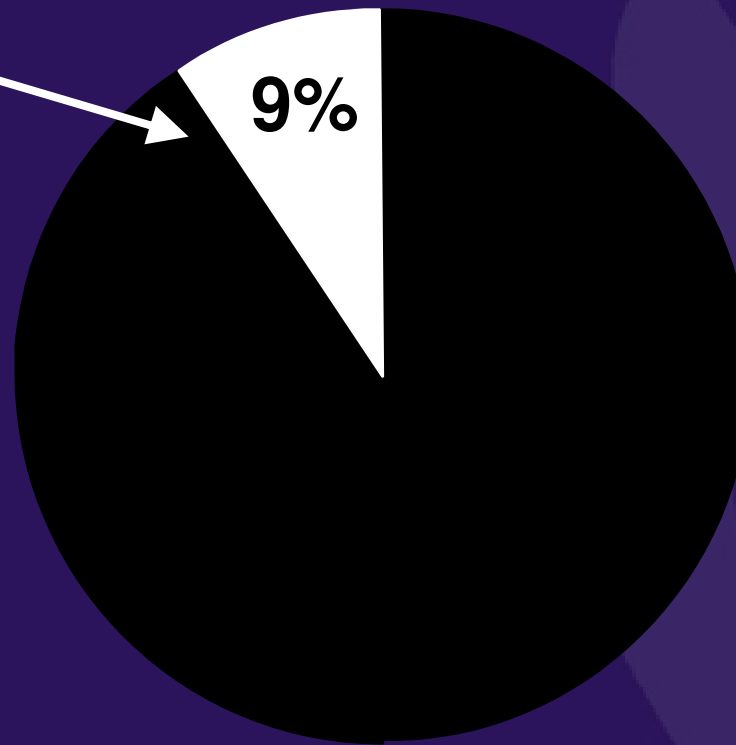


Hypertension management

- > In 2000 an estimated 27% Australian adults (>25 years) had hypertension
 - > 47% of those were being treated
 - > 40% of those treated achieved a goal systolic blood pressure of less than 140mmHg

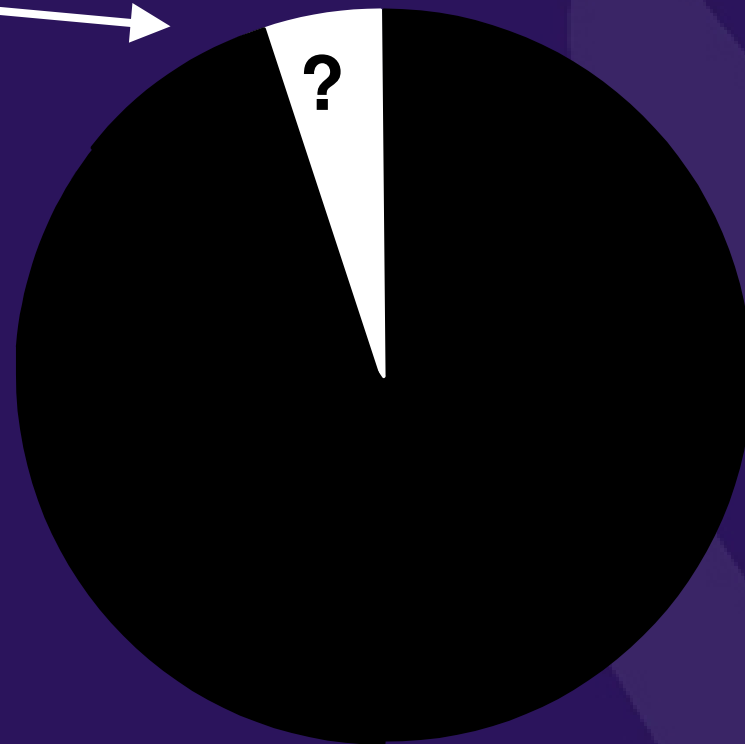
Effectiveness of hypertension-based approaches

Disease burden reasonably effectively addressed by **achieving BP targets** in people with hypertension



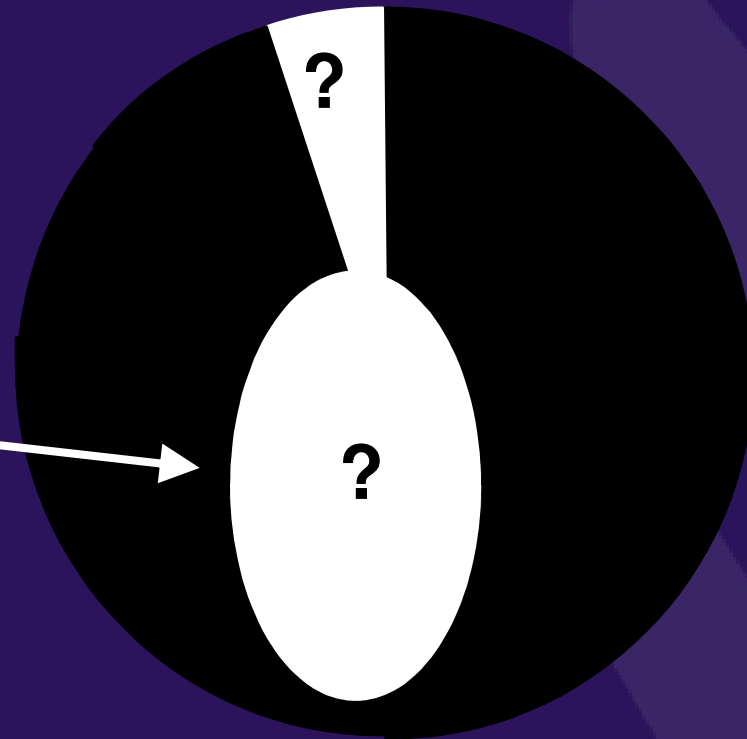
Additional considerations (II)

Actual disease burden averted by treating hypertensives will be **substantially less** because few achieve optimal BP (115/70mmHg)



High risk individuals

Additional
disease burden
addressed by
targeting BP
treatments at
**high risk
individuals**



Costs of the hypertension program

- > **About A\$1 billion each year**
 - > **0.5 billion on drugs**
 - > **0.5 billion on salary support for medical practitioners to diagnose, prescribe and monitor**

Costs of a salt reduction program

- > **A\$10-20 million a year (about 1-2% the sum expended on the hypertension program) would provide for a gold plated national salt reduction program**
- > **Would avert a similar amount of disease (and would be mostly additive)**

Why monitor food composition

- > **Robust, repeated estimation of food composition can be used to drive improvements in the food supply**
- > **Central in an environment dominated defined by voluntary, non-regulated, agreements**

Overall goal

- > **To bring together standardised data about the composition of processed foods that can be used to drive national and international improvements in the food supply**

Specific objectives (1)

- 1. To compare against applicable benchmarks national estimates of the mean levels of saturated fat, total fat, sugars, salt, energy density and serve size in each food category**
- 2. To compare between countries the mean levels of saturated fat, total fat, sugars, salt, energy density and serve size in each food category**

Specific objectives (2)

- 3. To compare between companies the mean levels of saturated fat, total fat, sugars, salt, energy density and serve size for selected food categories**
- 4. To track changes over time in the mean levels of saturated fat, total fat, sugars, salt, energy density and serve size in food categories by country and by company.**

Design

- > **The project will comprise systematic annual surveys of processed foods done in developed and developing countries around the world**

Countries to be included

- > **No in principle restriction**
- > **In practice the availability of data and resources will initially limit the countries involved**
- > **The goal will be to include a broad geographic coverage of countries**
- > **In some countries processed foods may mostly be consumed in particular areas**

Foods to be included (1)

- > **The objective will be to include all products in each food category in rank order of market share until at least 80% market coverage is achieved**
 - > **This will require access to a full listing of products in each food category with corresponding market share data**

Foods to be included (2)

- > **To include all products in each food category as identified from a systematic survey of the leading processed food retailers (large-, medium- and small-sized) until an estimated 80% of market coverage**
 - > **Will require an in depth knowledge of the retail patterns in the country and will be somewhat subjective**

Data sources and data collection

- > **There will be four main sources from which we will obtain information about food composition:**
 1. **Data provided direct by food processing companies as electronic spreadsheets or printed materials**
 2. **Data extracted from company websites**
 3. **Data taken from other nutrient databases and**
 4. **Data copied from the Nutrition Information Panels (NIPs) on product labels in-store**
- > **The data will be entered into a bespoke password protected database via the Internet**

Categorisation of foods

- > **A system that is broadly applicable and that reflects both industry practices and consumer purchasing patterns**
 - > **Review of existing databases**
 - > **Discussions with industry**
 - > **Discussions with collaborators**
 - > **Some flexibility to add categories if required**

Nutrient values to be collected

Variable	Format
Serving size	grams or millilitres
Energy	kilojoules / 100grams
Protein	grams / 100grams
Total fat	grams / 100grams
Saturated fat	grams / 100grams
Trans fat	grams / 100grams
Monounsaturated fat	grams / 100grams
Polyunsaturated fat	grams / 100grams
Carbohydrate	grams / 100grams
Sugars	grams / 100grams
Dietary fibre	grams / 100grams
Sodium	milligrams / 100grams
Calcium	milligrams / 100grams
Potassium	milligrams / 100grams

Other values to be collected

Variable	Format
Country	Country name
Food group	Refer to Appendix 1
Food category	Refer to Appendix 1
Sub-category (major)	Refer to Appendix 1
Sub-category (minor)	Refer to Appendix 1
Brand name	As per product label
Product title	As per product label
Data source	NIP, MANUF, WEB, OTHER
Date of data entry	Date (dd/mm/yyyy)
Front-of-pack labelling	Refer to Appendix 2
Health claim	Refer to Appendix 3

Analyses

- > **The primary analyses will focus on saturated fat, total fat, sugars, salt, energy density and serve size**
- > **In the first instance estimates will be made by product category for each country and for selected companies within each country**
- > **Comparisons will then be made between countries, between companies and against benchmarks**

Management

- > **Day-to-day operations by a Secretariat based at the George Institute in Sydney (management of the database, coordination, fund raising)**
- > **Broader decisions about goals and direction of the initiative by a Management Committee (comprised of Secretariat plus one nominated senior representative from each participating country)**

Data sharing

- > **Each contributing country will have full access to all the data in the database and will be free to independently analyse and publish all types of communications based upon the data from their own country**
- > **Analyses and outputs involving data from two or more participating countries will require the agreement of each of the relevant Management Committee members**

Authorship

- > **Primary publications involving all the countries in the name of the collaborative group (The International Food Composition Collaborative Group?)**
- > **Authorship of publications involving just a few countries will be at the discretion of the Management Committee members involved**

Key outputs

- > **Scientific reports in academic journals**
- > **Technical reports to industry, government and regulators**
- > **General media releases (positive and negative)**

Limitations

- > **No weighting by sales data**
- > **Incomplete global coverage**
- > **Incomplete data from some countries**

Strengths

- > **Standardised methods**
- > **Shared data**
- > **Translational focus**
- > **Global ambitions**
- > **'A priori' specification of objectives**
- > **Indisputable outputs**

Conclusions

- > **Improving the food supply offers enormous opportunity for population health gain**
- > **Objective third party monitoring offers substantial opportunity to advance the cause**



THE GEORGE INSTITUTE
for International Health



www.awash.org.au