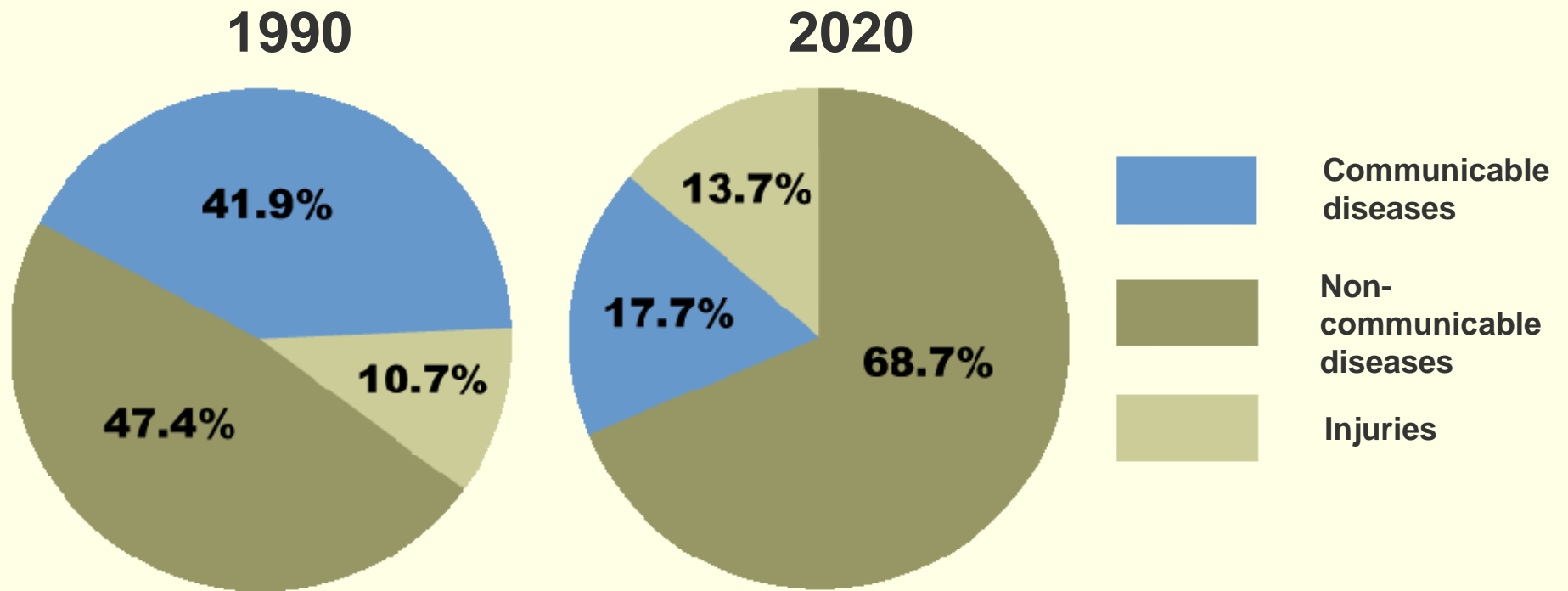


Nurses campaigning to combat chronic disease

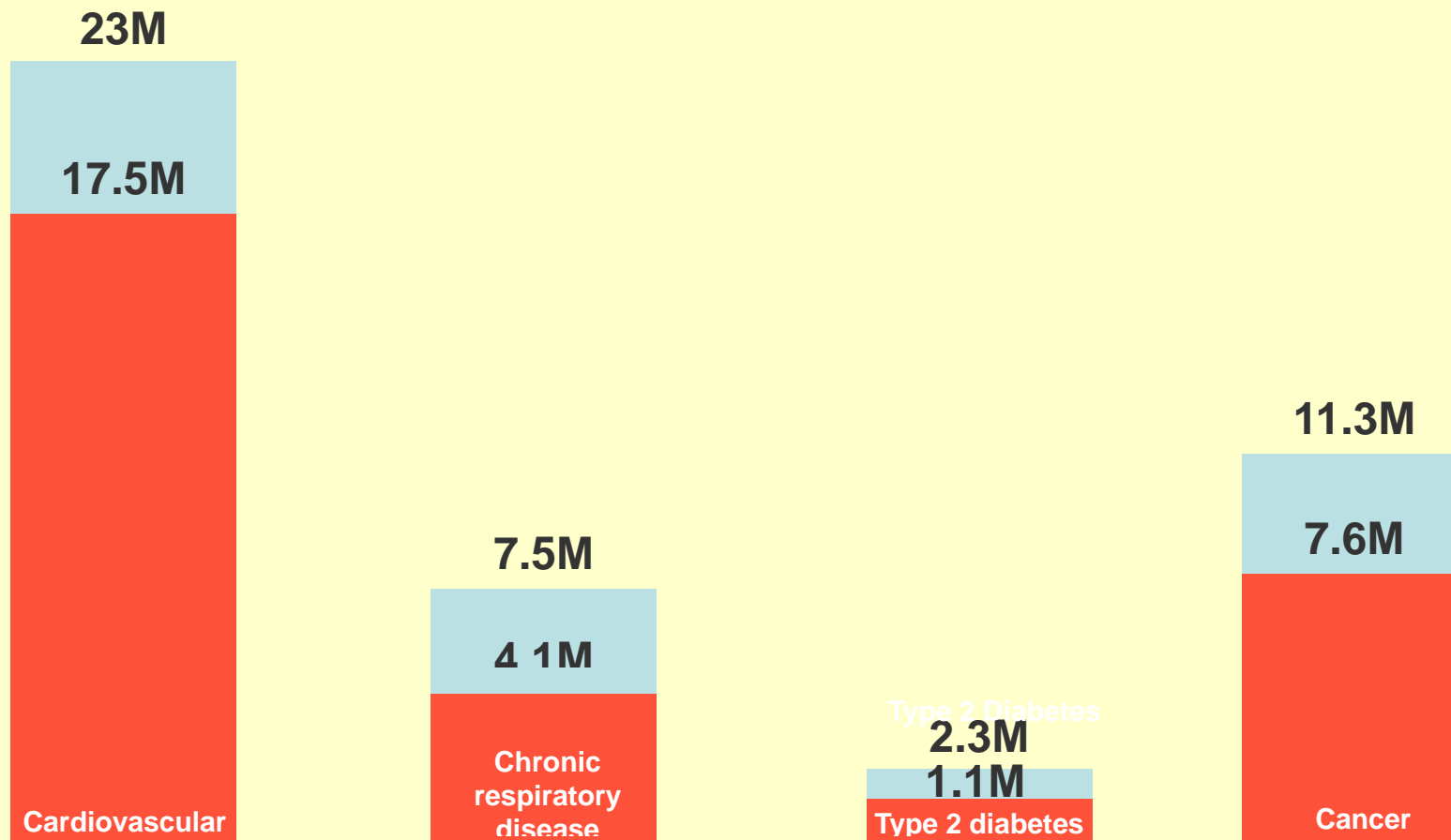
Christine Hancock
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+44 (0)20 7637 4330

Global burden of disease



Source: Harvard School of Public Health

Annual deaths worldwide **2005** Estimated annual deaths worldwide **2030**



10 facts about NCD 1/2

- NCD is responsible for **60%** of all deaths worldwide – **35 million** people died from chronic disease in 2005
- **80%** of NCD deaths occur in low- and middle-income countries
- Almost **half** of NCD deaths occur in people under the age of 70
- Around the world, chronic NCD affects women and men almost **equally**
- The major risk factors for chronic NCD are an **unhealthy diet, physical inactivity** and **tobacco use**

10 facts about NCD 2/2

- Without action, **17 million** people will die prematurely this year from a NCD
- **1 billion** adults are overweight – without action, this figure will surpass **1.5 billion** by 2015
- **22 million** children under five years old are overweight
- Tobacco use causes at least **5 million** deaths each year
- If the major risk factors for chronic disease were eliminated, at least **80%** of heart disease, stroke and type 2 diabetes would be prevented; and **40%** of cancer would be prevented

Source: WHO, Preventing Chronic Disease: A Vital Investment, October 2005.

Scale of problem in South Africa

- Alarminglly **high and rising** levels of **obesity**:
 - Women: 2005: **77%** overweight → 2015: **79%** overweight
 - Men: 2005: **51%** overweight → 2015: **56%** overweight

Source: WHO, *Impact of Chronic Diseases in Countries – South Africa report*, 2005.

The question is what can we do?



It turns out we know exactly what to do:

Prevention works



No tobacco



Increased physical activity



Healthier diet

It's simple, affordable and effective

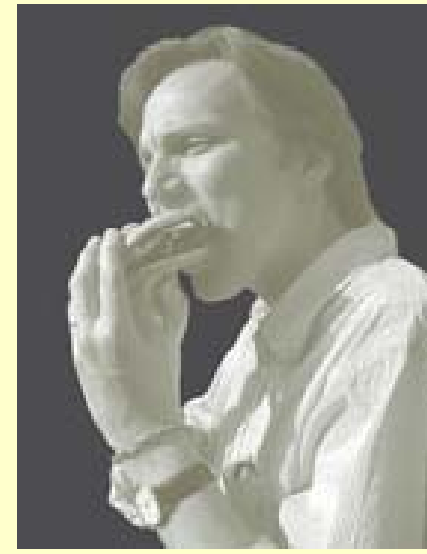
C3 focuses on 3 risk factors



Tobacco

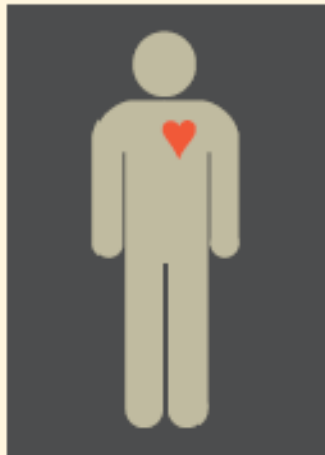


**Lack of
physical activity**



Poor diet

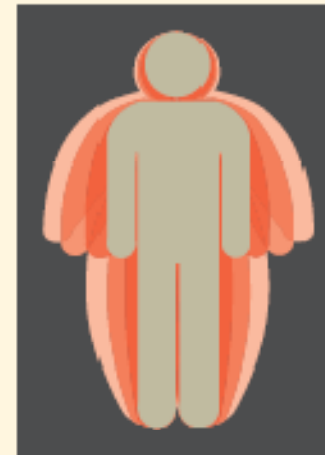
which lead to **4** chronic diseases
that cause over **50** percent of deaths worldwide



Cardiovascular



**Chronic
Respiratory
Disease**



**Type 2
Diabetes**



Cancer

Evidence on tobacco



- The totality of the evidence is overwhelming
- The evidence for action is already beyond reasonable doubt:
 - We should not postpone intervention while p values accumulate
 - We no longer have the luxury of time for intervention



Tobacco



- Globally, about **1.3 billion** people smoke
 - 84% of smokers live in developing/transition economies.
- Regional and gender variations
 - Men: 35% in developed countries and 50% in developing countries smoke.
 - Women: 22% in developed countries and 9% in developing countries smoke.
- **5 million** people die prematurely from tobacco use each year
 - By 2020, this figure could increase to **10 million**.

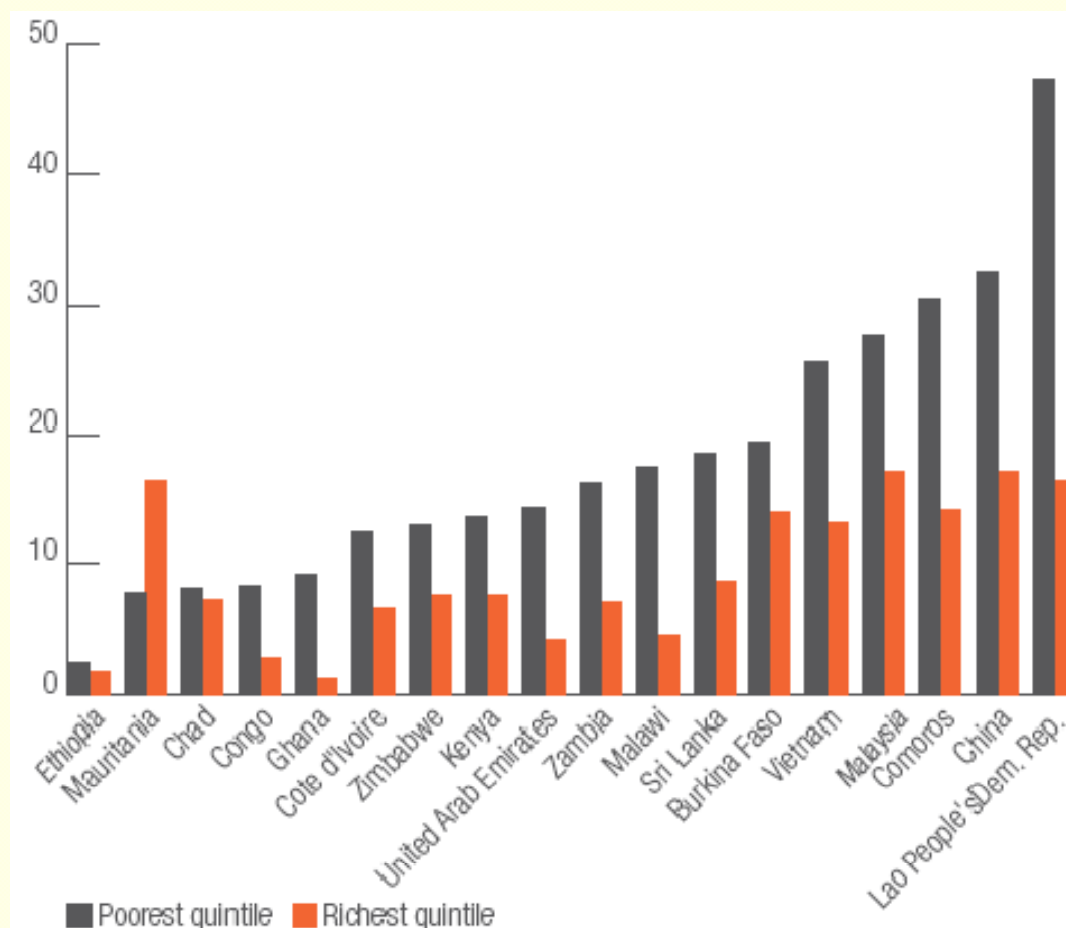


Source: *The Tobacco Atlas* and WHO

Economic disadvantage and smoking



- Smokers tend to be from socioeconomically disadvantaged sectors of society
- This graph shows the prevalence of daily smoking in the poorest and richest quintiles in selected low- and middle-income countries



Source: OxHA, *Chronic disease: an economic perspective* (2006); WHO World Health Survey

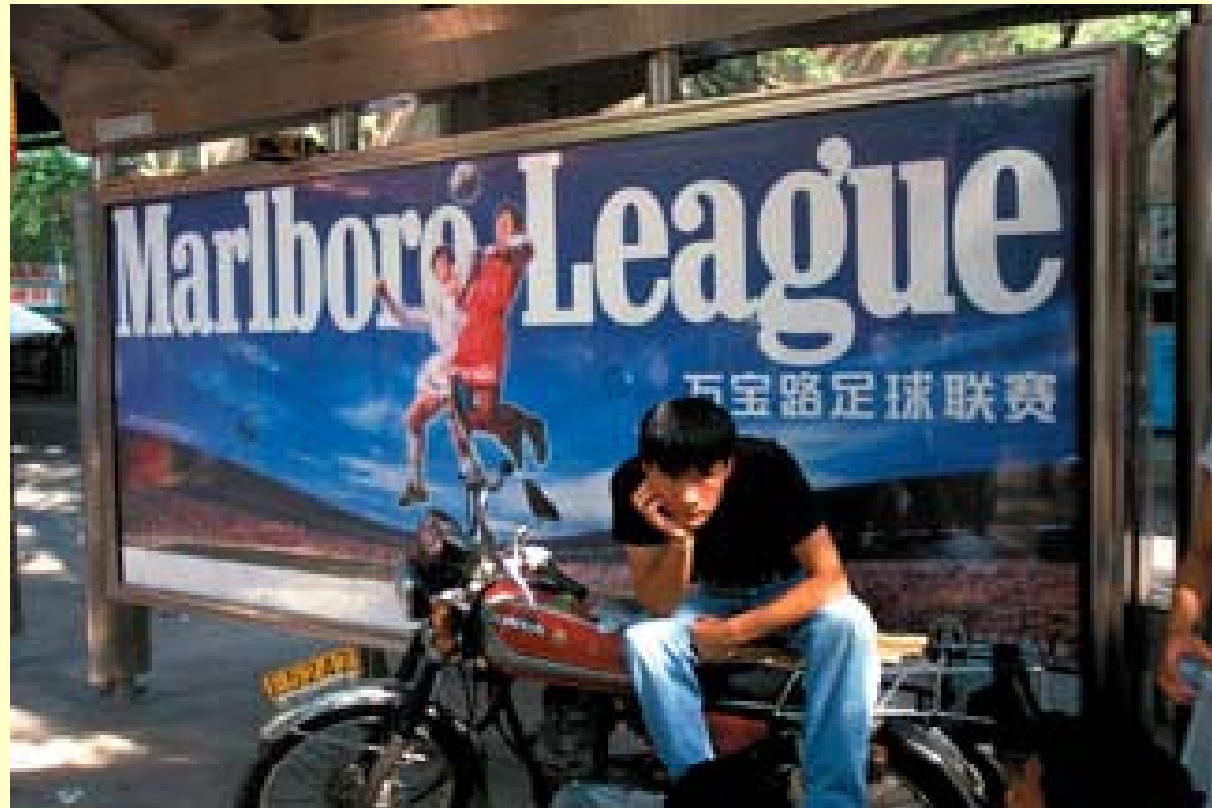
Tobacco



Cigarette smoking is influenced by:

- Fiscal measures – high taxation
- Advertising bans
- Prohibiting smoking in public places
- No vending machines available
- Health campaigns to stop smoking
- Transport smoking bans
- Campaign groups
- Health warnings on packets
- Medical advice repeatedly

Advertising is a powerful influence

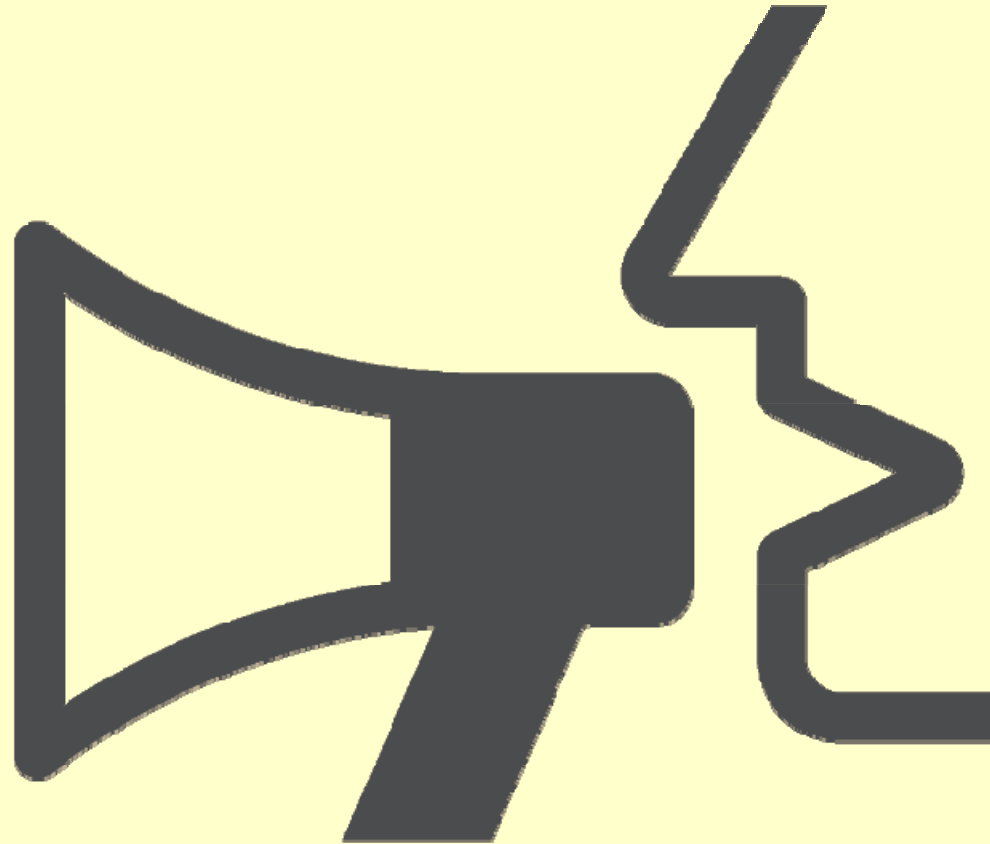


There is confusion and mixed messages

Low fat
Balance
Low carb
High protein
Physical activity
Cut fat

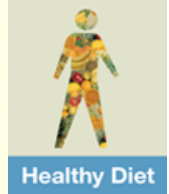
Diet

Moderation
Light
Balance
Fat is fine
Sugar free



**The issues are not simple:
Food is not tobacco**





Eating habits

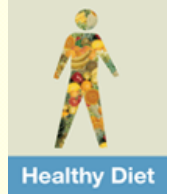
- In developed countries, families eat together less frequently, and snacking is on the increase.
- Increasingly, food is eaten outside the home or in 'ready to eat' form
- Portion size is increasing.
- US: Children's average calorie intake per day from snacks increased from 240 in 1977 to 409 in 1998.



Source: Adair and Popkin, 2005; Salinsky 2006 NHPF

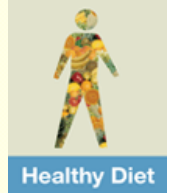
'Health nanny' messages are problematic





- **What is a healthy diet?**
 - **Calories**
 - Recommended daily calorie intake for women is 2,000kcal and 2,500kcal for men.
 - **Fat**
 - Recommended daily intake is no more than 70g for women, 95g for men.
 - **Salt**
 - Recommended daily intake is no more than 6g.
 - **High fibre**
 - **Moderate protein intake**
 - **Sugar**
 - Recommended daily intake is no more than 50g for women, 70g for men.

Recommendations



- Base meals on starchy foods such as potatoes, bread, rice and pasta, choosing wholegrain where possible.
- Eat plenty of fibre-rich foods – such as oats, beans, peas, lentils, grains, seeds, fruit and vegetables, as well as wholegrain bread and brown rice and pasta.
- Eat at least five portions of a variety of fruit and vegetables each day, in place of foods higher in fat and calories.
- Eat a low-fat diet and avoid increasing your fat and/or calorie intake.
- Eat as little as possible of:
 - fried foods
 - drinks and confectionery high in added sugars
 - other food and drinks high in fat and sugar, such as some take-away and fast foods.
- Eat breakfast.
- Watch the portion size of meals and snacks, and how often you are eating.
- For adults, minimise the calories you take in from alcohol.

Source: NICE, 2007

Reduction in stroke mortality

- 15% reduction, if all complied with tablets (but compliance is poor!)

But compare:

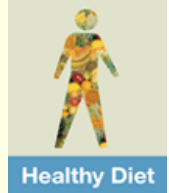
- 22% reduction, if no one put extra salt on food (without taking any medication at all!)

And then consider what would happen with:

- General reduction in fat and an increase in exercise!

Source: Farley and Cohen, *Prescription for a Healthy Nation*, 2005

Benefits of 5-a-day



Five servings of fruit and vegetables each day reduces the risk of:

- Cardiovascular disease by 28%*
- Type 2 diabetes by 24%**
- Some gastrointestinal cancers by 20%***

Sources:

* H.-C. Hung 2005 (*J Nat Cancer Ins*)

** F.B. Hu 2001 (*New Eng J Med*)

*** WHO 2003



A global issue

- **Obesity is increasing most rapidly in lower- and middle-income countries.**
 - **In Asia, North Africa and Latin America, rates of increase in obesity are two to five times higher than in the USA.**
- **The burden of obesity is increasingly falling on the poor.**

Source: Popkin and Gordon-Larsen, 2004

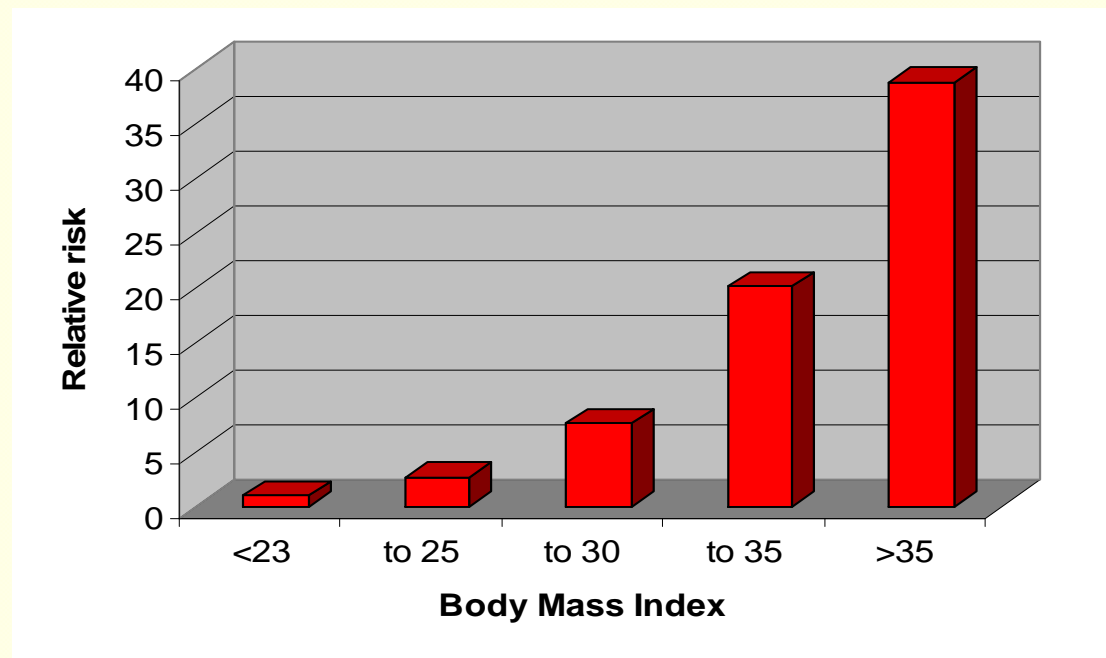
Obesity is seen as a problem of the rich.



In fact, it is soaring alongside under-nutrition

Obesity's impact on health

- Risk of developing type 2 diabetes, relative to BMI
- Study of 84,941 nurses
- 16-year follow-up



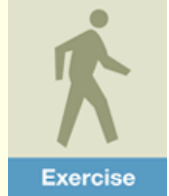
Source: NEJM, 2001

NICE obesity guidelines: BMI

- Healthy weight: **18.5–24.9**
- Overweight: **25–29.9**
- Obesity I: **30–34.9**
- Obesity II: **35–39.9**
- Obesity III: **40 or more**

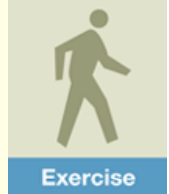
**BMI = the individual's body weight divided
by the square of his/her height (kg/m²)**

Physical activity transition



A transition in physical activity is occurring – we lead **increasingly sedentary** lives:

- urbanisation means less manual work
- transportation options remove the need to walk or cycle
- safety fears keep children – and older people – indoors
- TV and video games are the new play



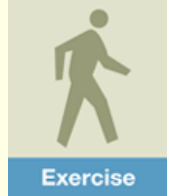
Benefits of physical activity

- Compared with people who do not reach the recommended levels of physical activity, active people have:
 - almost **half** the risk of dying from coronary heart disease
 - a **27% lower** risk of stroke
 - a **33–50% lower** risk of developing type 2 diabetes
 - **40–50% lower** risk of colon cancer, and reduced risk of other cancers, e.g. breast cancer.
- Plus, benefits for musculoskeletal health and mental health.



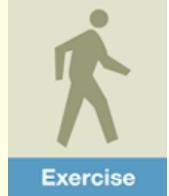
Source: 'At least five a week' – report from the CMO of England and Wales, 2004

Physical activity



- **Recommended levels**
 - **For adults –**
 - At least **30 minutes a day** of moderate-intensity physical activity on **five or more days of the week**.
 - The 30 minutes can be made up of bouts of activity of 10 minutes or more.
 - **For children and young people –**
 - At least **60 minutes** of moderate-intensity physical activity **every day**.

Defining 'moderate intensity'



- When doing 'moderate intensity' physical activity, a person will usually experience:
 - an **increase in breathing rate**
 - an **increase in heart rate** (to the point at which the pulse can be felt)
 - a feeling of **increased warmth**.
- Moderate intensity activity does not cause extreme fatigue when continued for an extended period.

Source: 'At least five a week' – report from the CMO of England and Wales, 2004

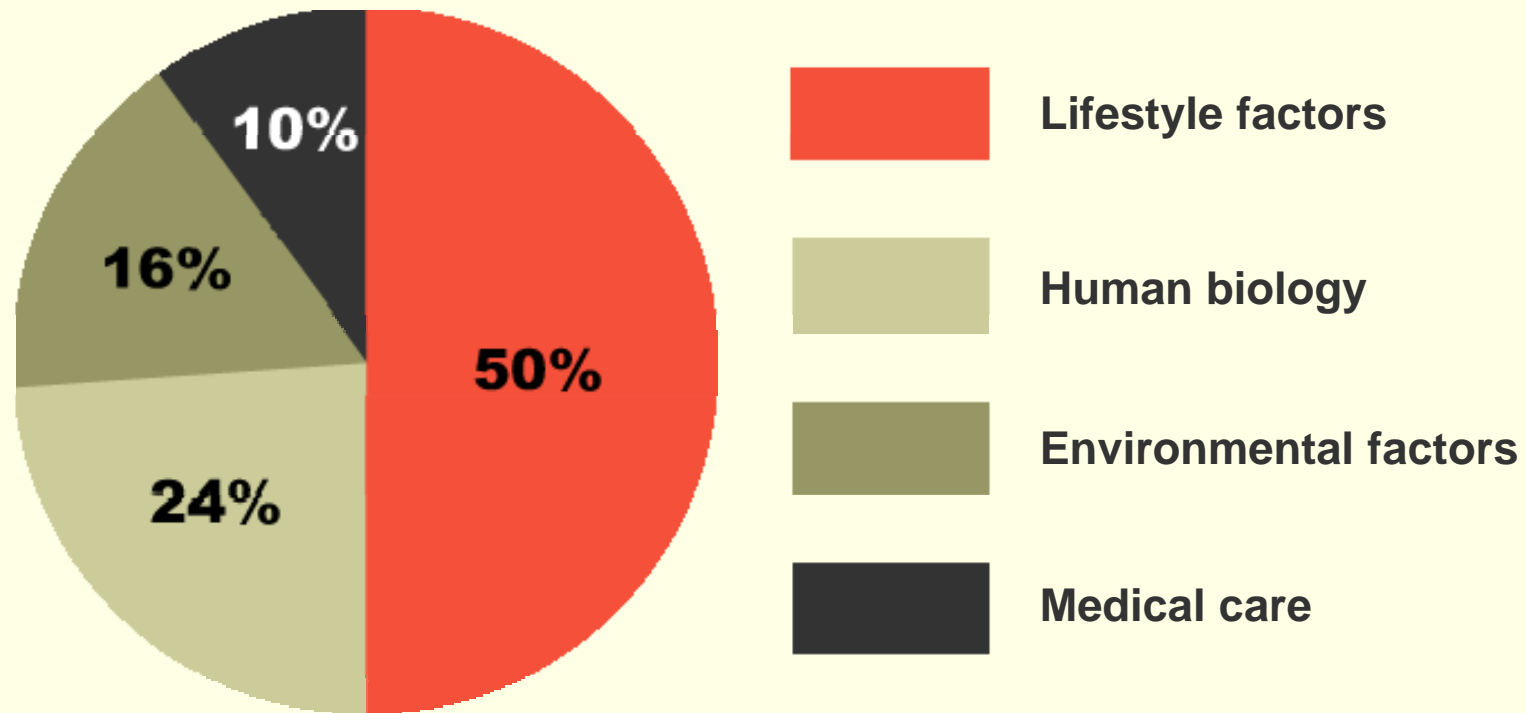


Examples

- Brisk walking
- Cycling
- Swimming (with moderate effort)
- Stair climbing (with moderate effort)
- General house cleaning
- Painting and decorating
- Gardening – digging, pushing mower or sweeping leaves
- General callisthenics (sit-ups, push-ups, chin-ups)
- Gentle racquet sports such as table tennis and badminton (social)
- Golf – walking, wheeling or carrying clubs

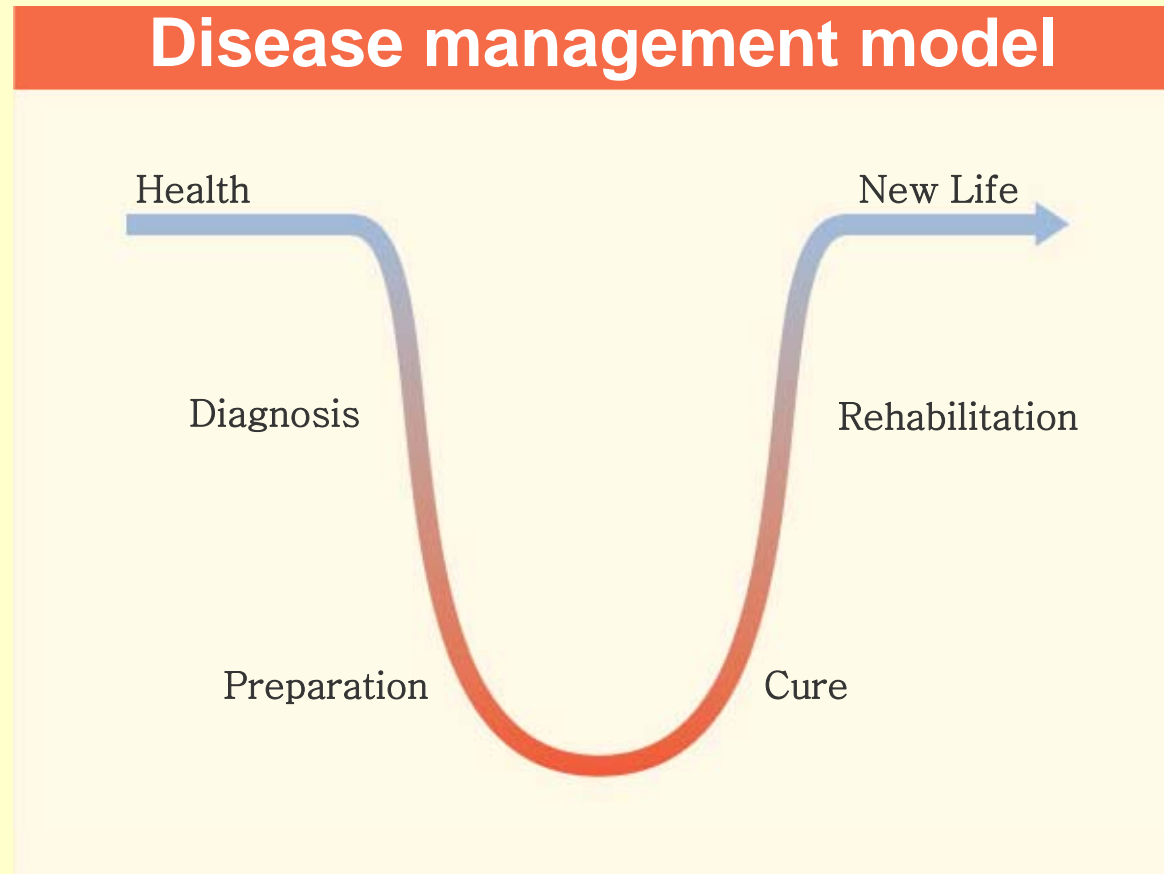


What matters most in health?



Source: Hinkle et al., CDC 1997

Our health care models are treatment-based



'...diabetes is a clear illustration of the real issues in health care'

*Paul Krugman,
Princeton Economist and New York Times columnist*

Negative consequences are distant



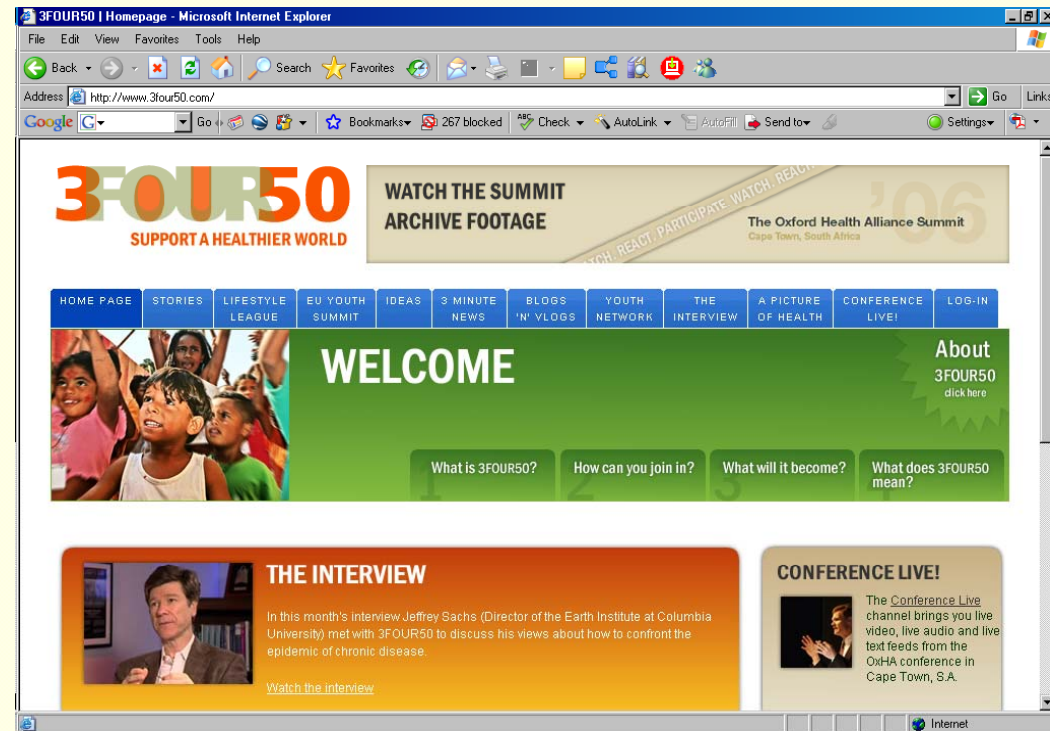
Online communities: new media

- The **3FOUR50 website** is about **3** risk factors; **four** chronic diseases; over **50%** of deaths in the world.
- An opportunity for people from different target audiences to connect and collaborate to create a healthier future.
- An awareness-raising and action-based online social network (400+ members) where people can build online coalitions and share their experience, success stories, research etc.



Using new media: 3FOUR50.com

- **3** risk factors; **four** chronic diseases; over **50%** of deaths in the world.
- An opportunity for people from different target audiences to connect and collaborate to create a healthier future.
- An awareness-raising and action-based online social network where people can share their experience, success stories, research etc.



What does 3FOUR50 offer?

- An opportunity for people from different target audiences to work together in a common space
- A first-rate resource centre for anyone wanting to find out about the impact of chronic diseases and see what's being done around the world to help prevent them
- A place for people to share their experiences, success stories, etc.
 - Blogs
 - Interviews
 - Photos
- An awareness raising and action-based online social network

DENOSA

- In conjunction with the International Council of Nurses and DENOSA (South African Nurses' Association) – ran a preliminary workshop in chronic disease prevention aimed at nurses.





‘Ought not the (nurse) that is giving counsel to a sick man who is indulging in a mode of life that is bad for his health to try first of all to change his life, and only proceed with the rest of his advice if the patient is willing to obey?’

[Plato, *Letters* 330c–330d] c.350 BC

C3 Collaborating for Health

C3 Collaborating for Health believes that only by working together can we make it easier to be healthy.

C3 works with many different people and organisations to promote 3 behaviour changes:

stopping smoking

eating a better diet

and

increasing physical activity.

Three risk factors

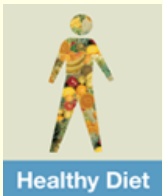
- **Three** risk factors cause **four** chronic diseases that cause **over half** of deaths worldwide.
- The risk factors are:



Tobacco use



Lack of physical activity



Unhealthy diet