

# The epidemiological transition and non-communicable diseases.

2015 Yves Kluyskens

# *Global life expectancy:*

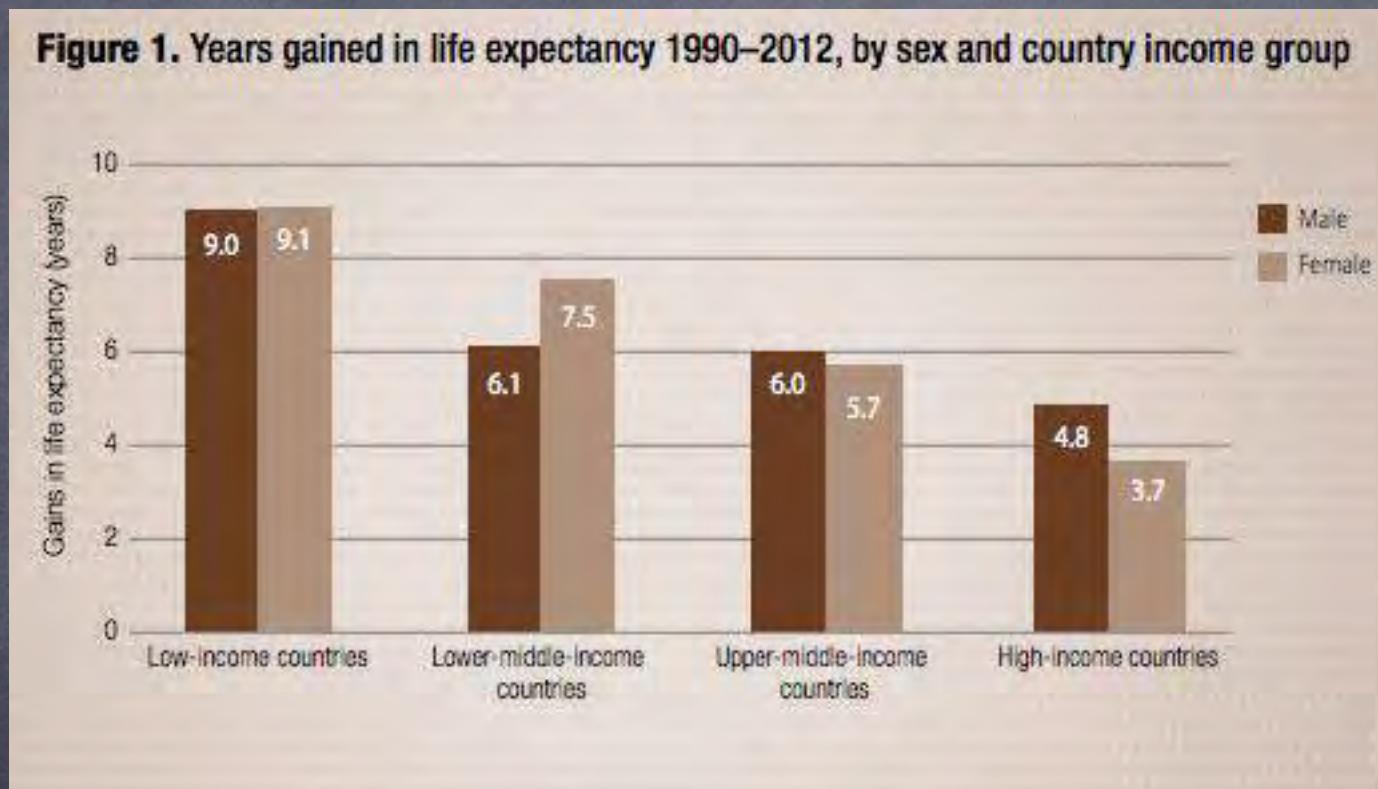
**1950: 46**

**1990: 65**

**2015: 71,5**

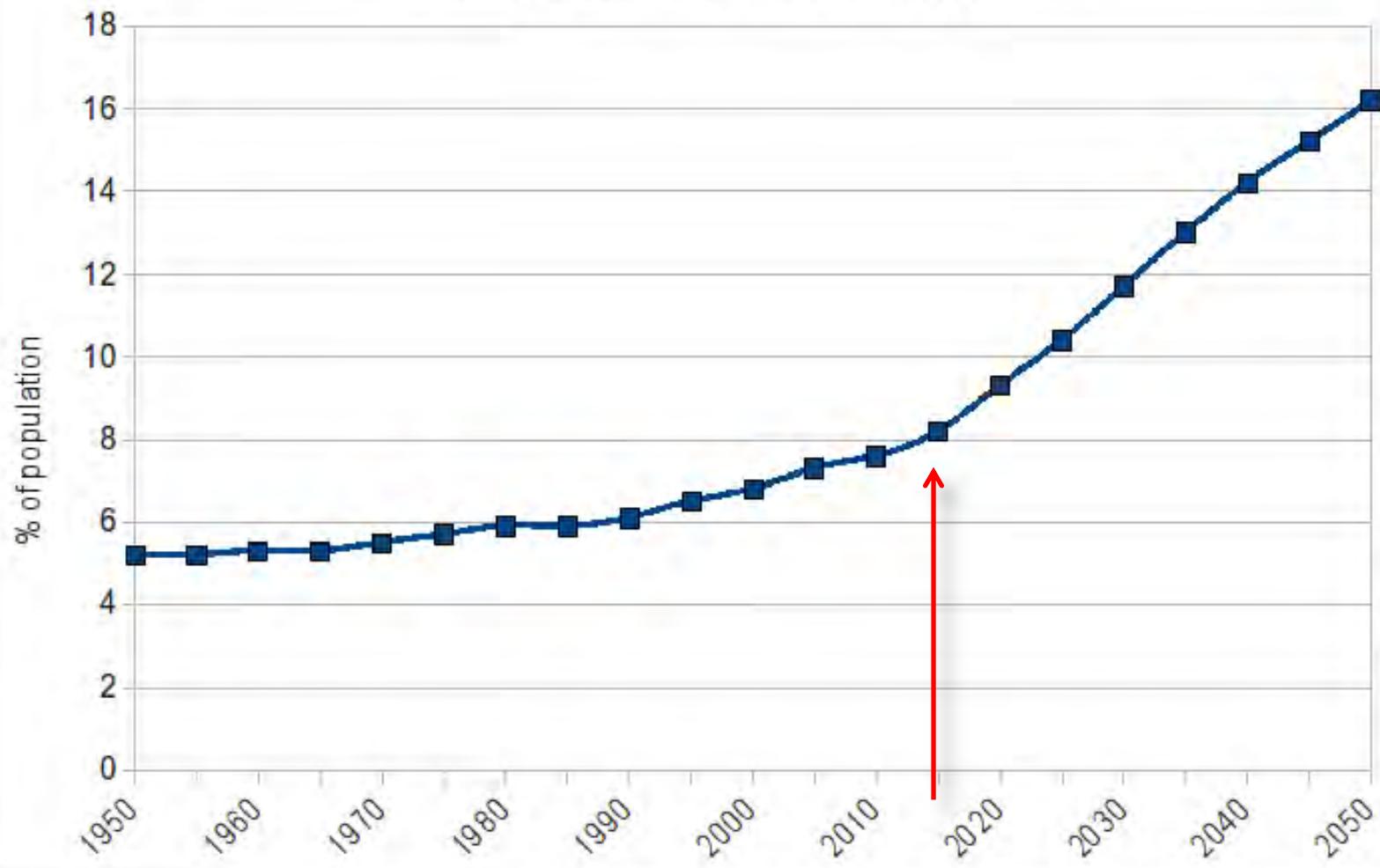
# *Years gained in life expectancy 1990-2012*

**Figure 1. Years gained in life expectancy 1990–2012, by sex and country income group**



## Percentage of the World Population Over 65, 1950-2050

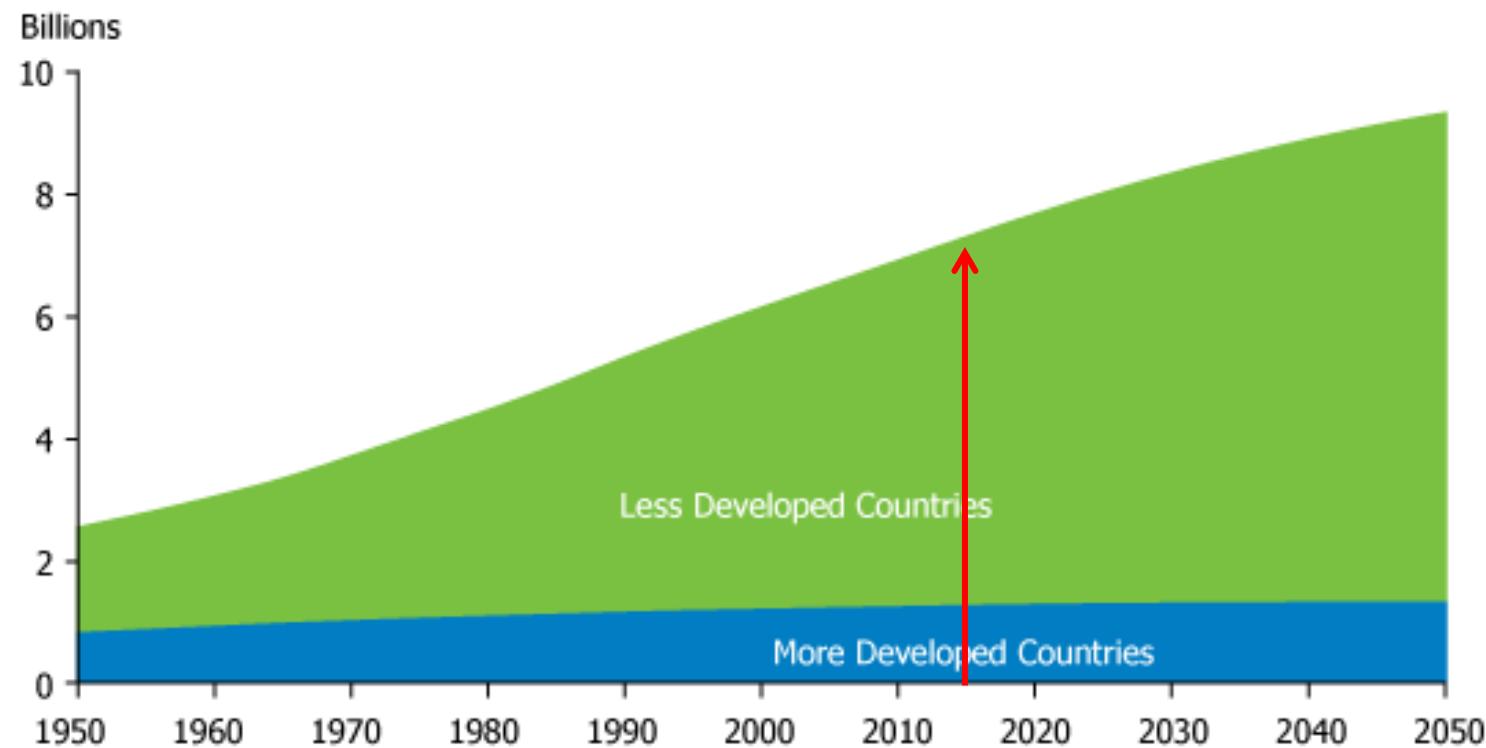
Source: UN World Population Prospect, 2008



Population growth >60 y. 1,9 %

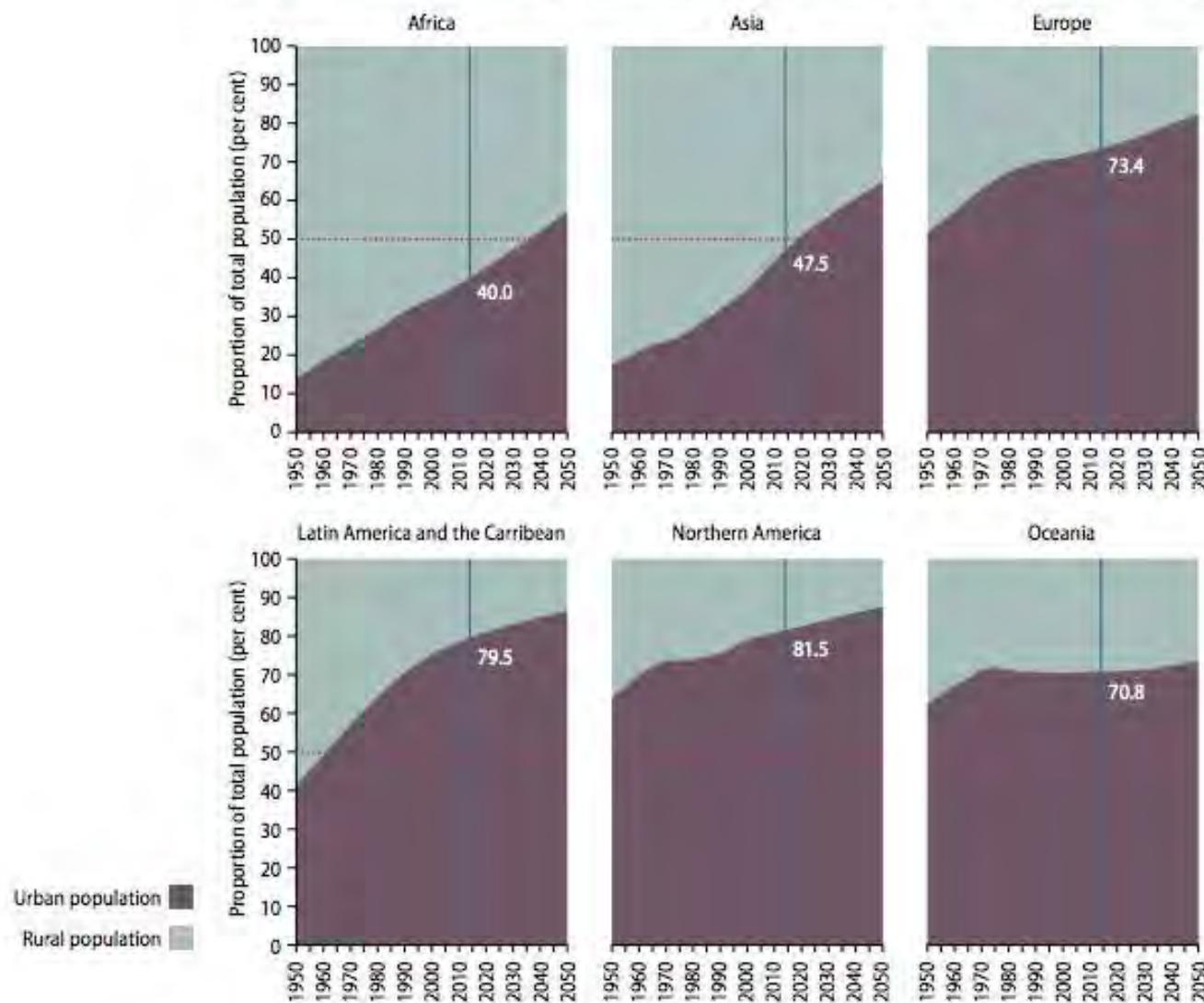
# World population

World Population Growth



Source: United Nations Population Division, *World Population Prospects: The 2010 Revision*, medium variant (2011).

### Urban and rural population as proportion of total population, by major areas, 1950–2050



# *Births and deaths (2012)*

- **140.000.000 births**
- **57.000.000 deaths:**
  - 6.300.000 U5 mortality
  - 1.200.000 AIDS
  - 1.200.000 TBC
  - 600.000 malaria

# *Births and deaths (2012)*

- **140.000.000 births**
- **57.000.000 deaths:**
  - **38.000.000 NCD (68%):**
    - **17.500.000 CV Diseases**
    - **8.200.000 cancer**
    - **4.000.000 COPD**
    - **1.500.000 diabetes**

# *The epidemiological transition*

**Stage 1: infectious diseases, malnutrition,  
child and maternal mortality**

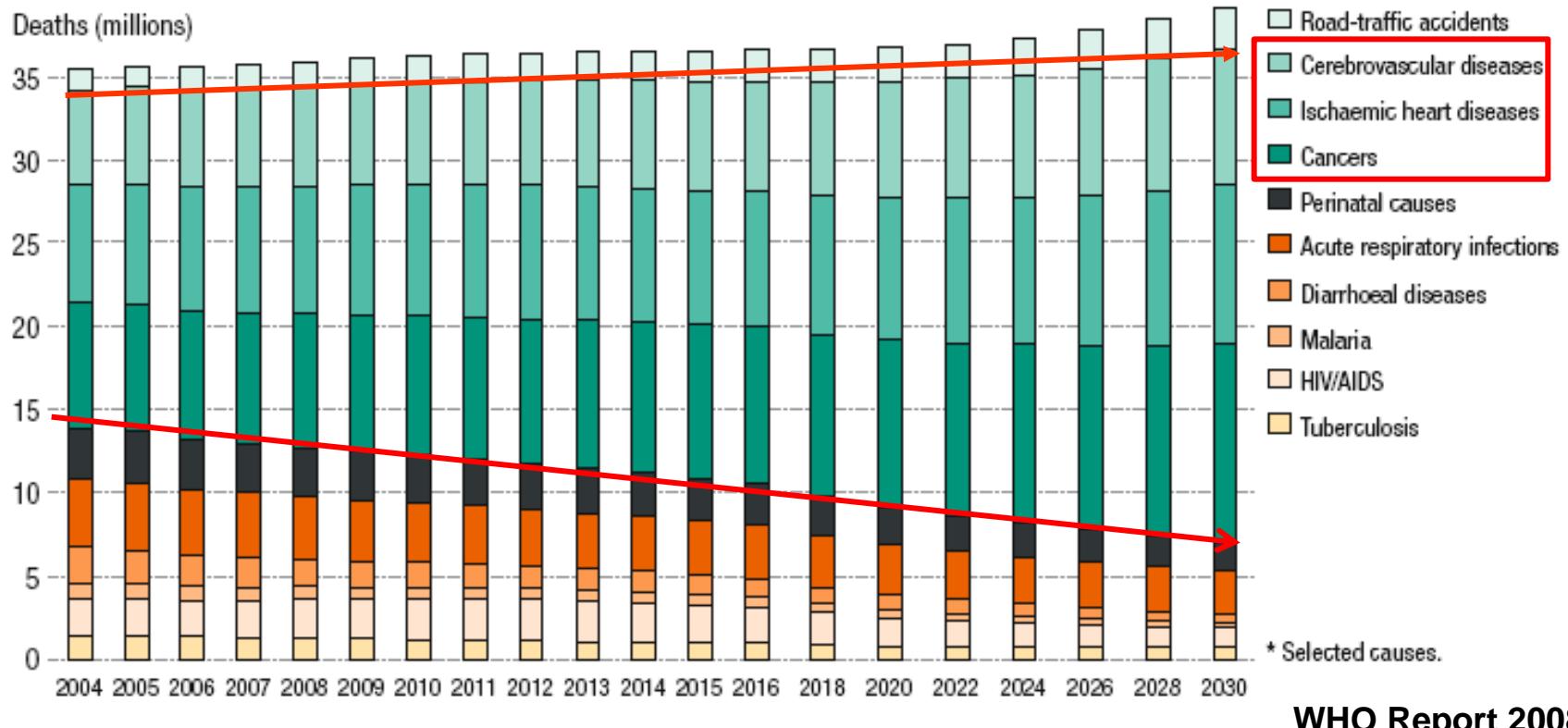
**Stage 2: cardiovascular diseases > infections**

**Stage 3: civilization (lifestyle) diseases,  
cancers and injuries**

**Stage 4: degenerative diseases**

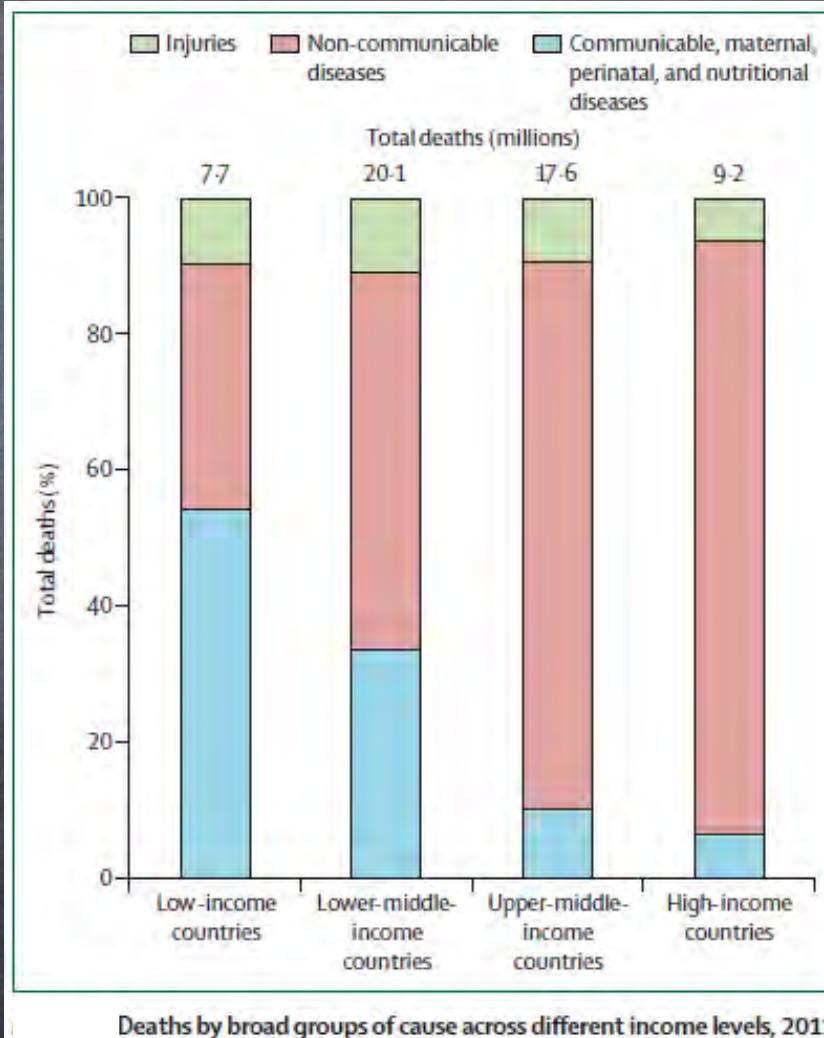
# *Shift to chronic NCD*

The shift towards noncommunicable diseases and accidents as causes of death\*



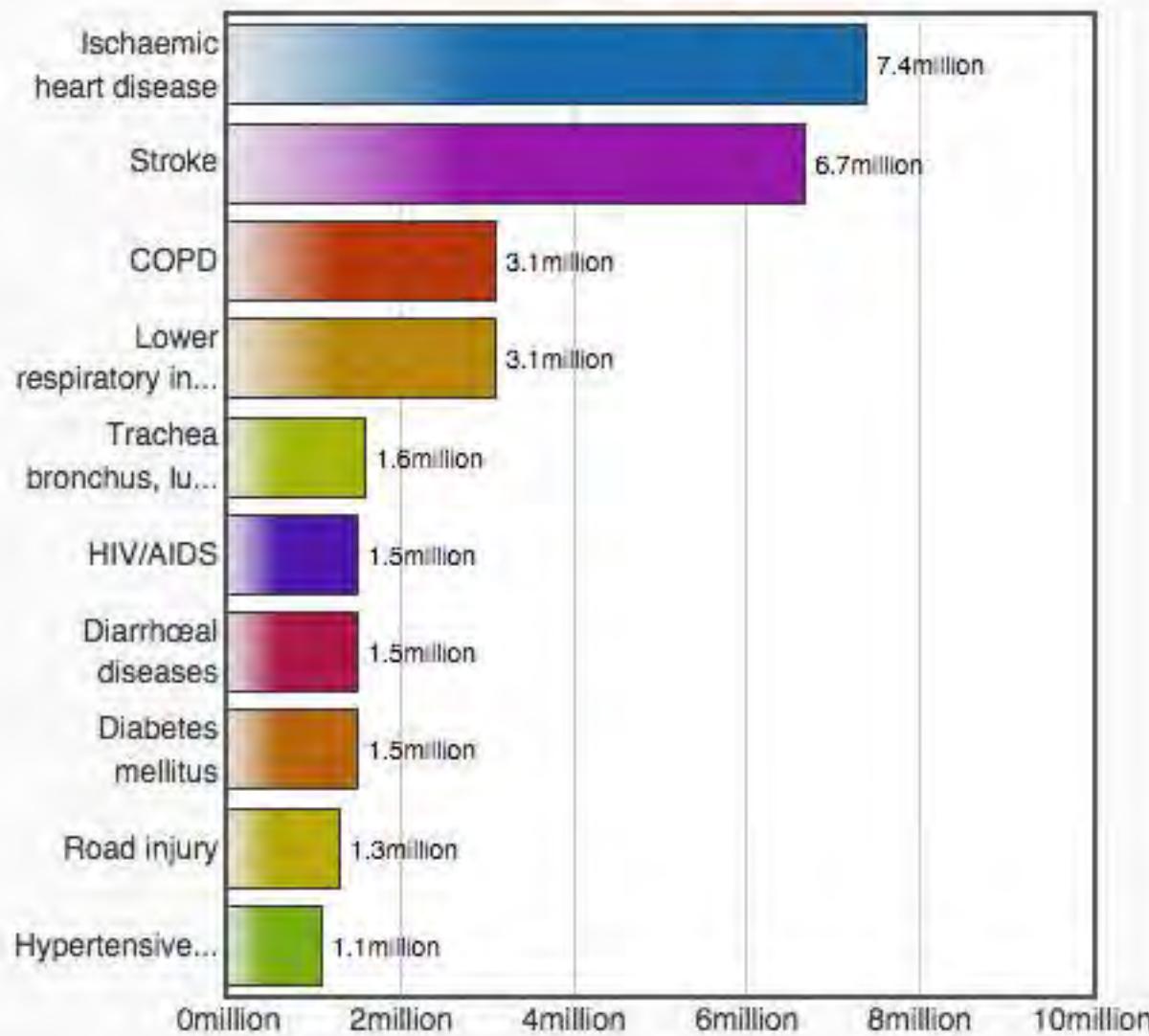
actually nearly 80% of mortality from NCD in LMIC

# *Causes of death (by WB income groups)*





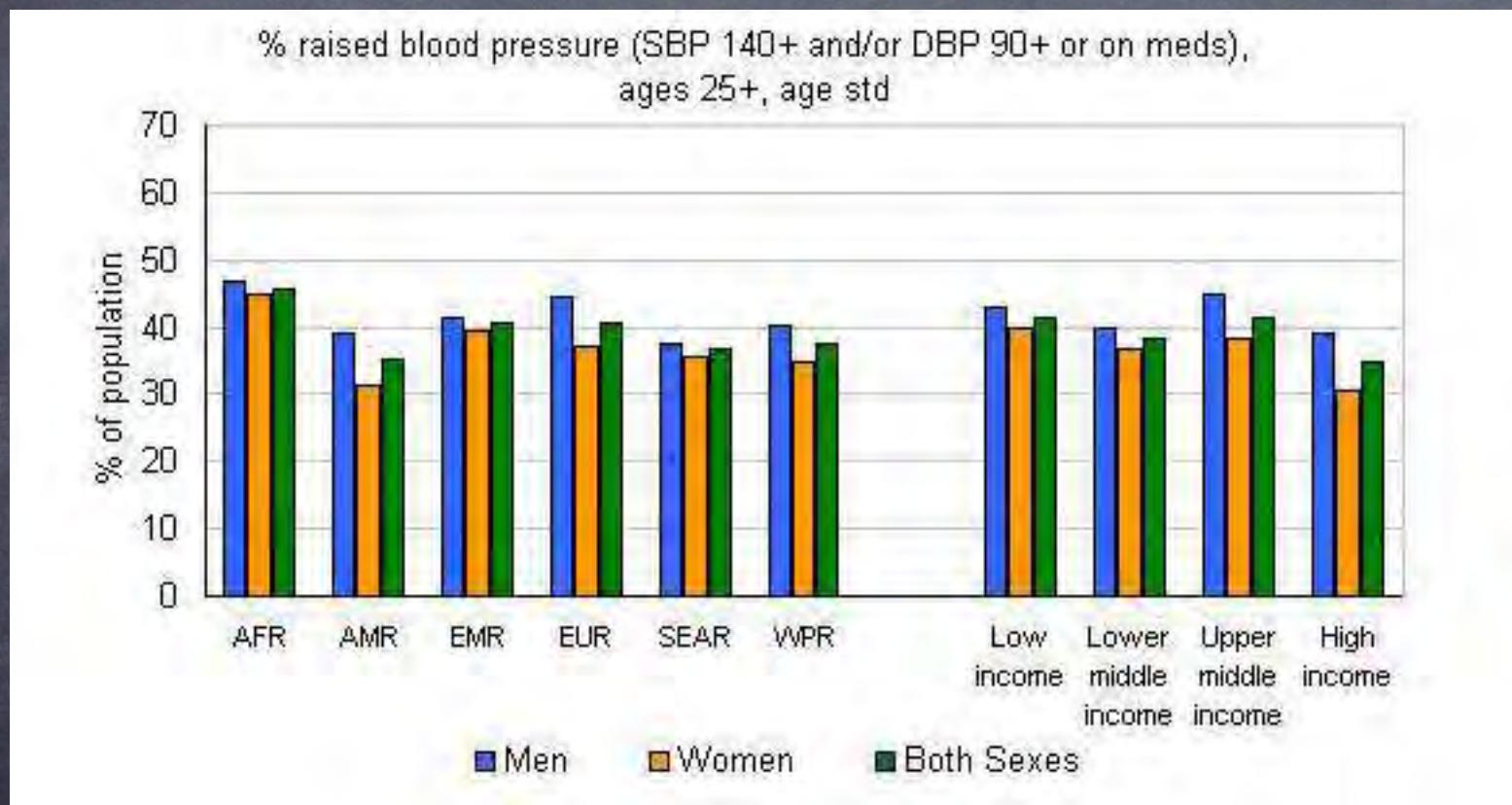
## The 10 leading causes of death in the world 2012



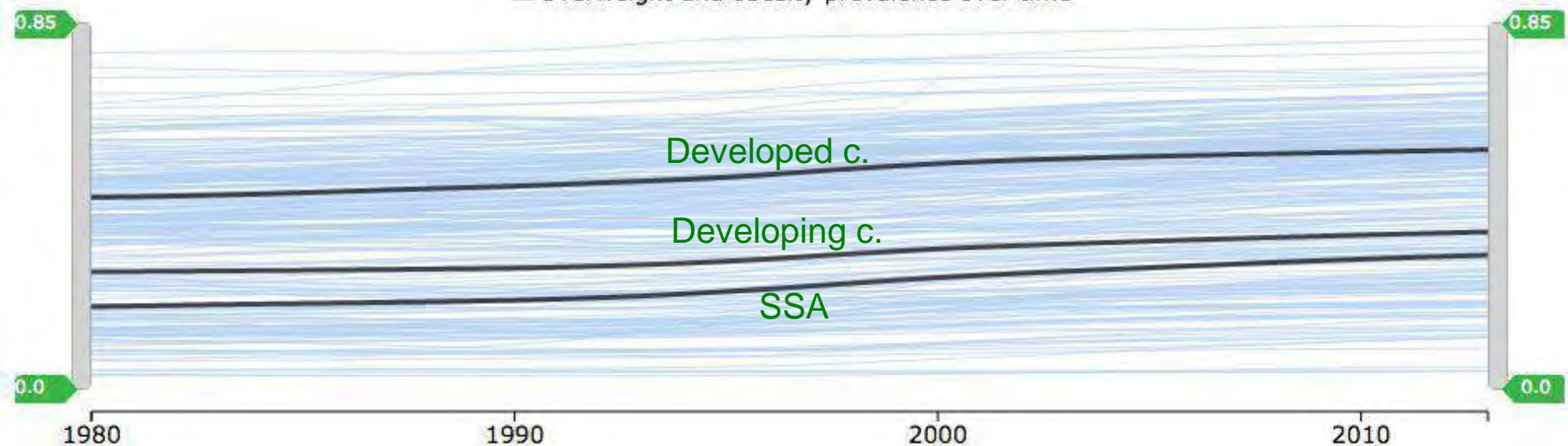
# *Major global risk factors*

- **Hypertension** 12,8 %
- **Tobacco** 8,7 %
- **Diabetes** 5,8 %
- **Physical inactivity** 5,5 %
- **Overweight/obesity** 4,8 %
- **Cholesterol** 4,5 %
- **Unsafe sex** 4,0 %
- **Alcohol** 3,8 %
- **Malnutrition** 3,8 %
- **Use of solid fuels** 3,3 %

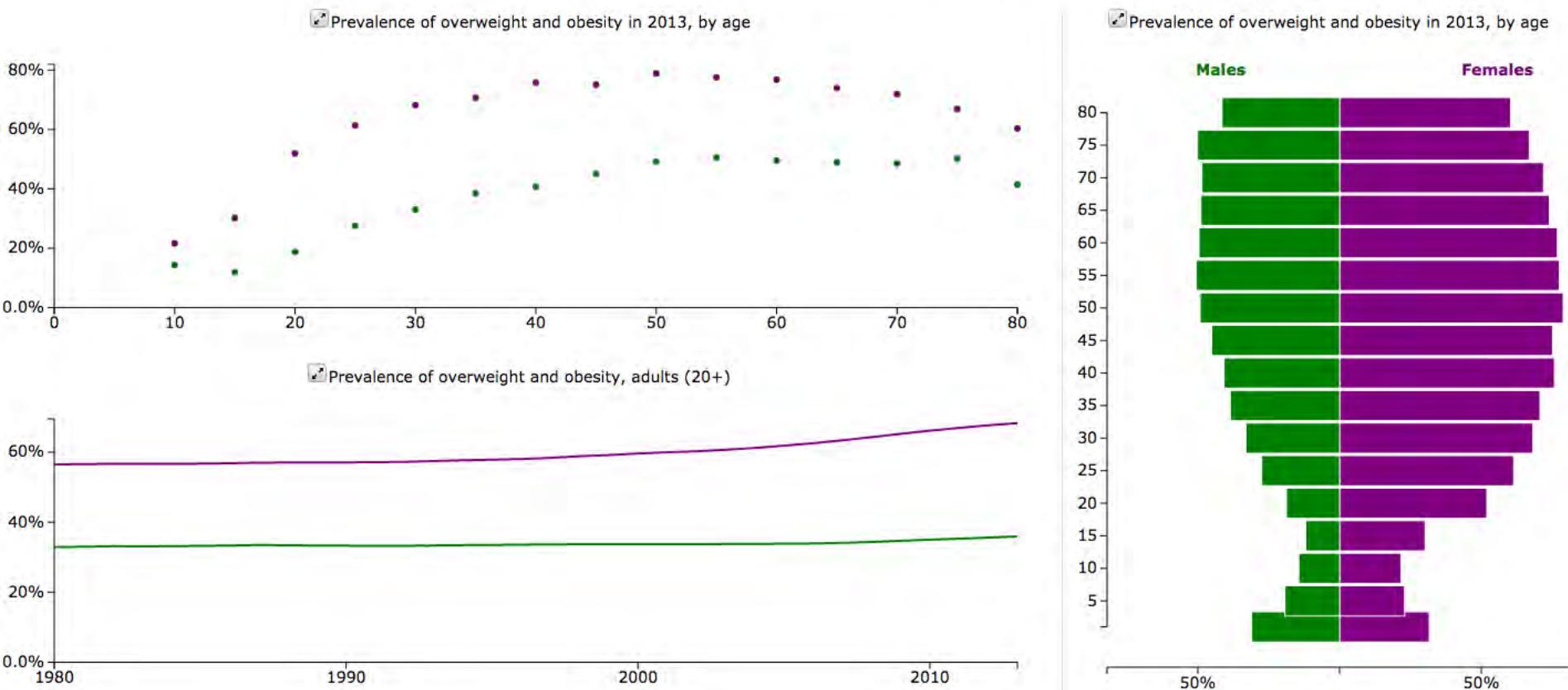
# *Prevalence of hypertension $\geq 25$ years (age-standardized)*



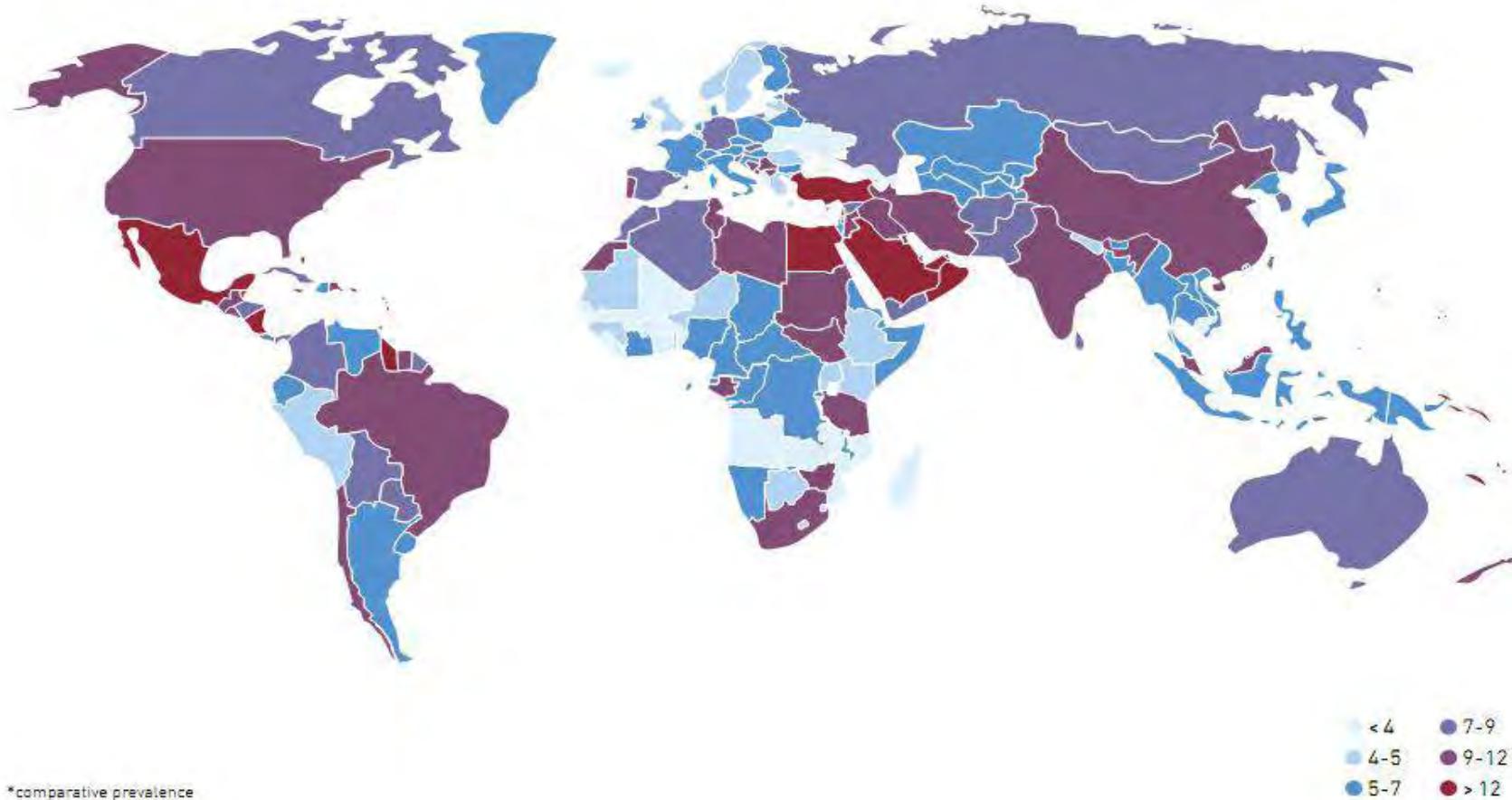
Overweight and obesity prevalence over time



## Overweight and obesity patterns ( $BMI \geq 25$ ) in South Africa

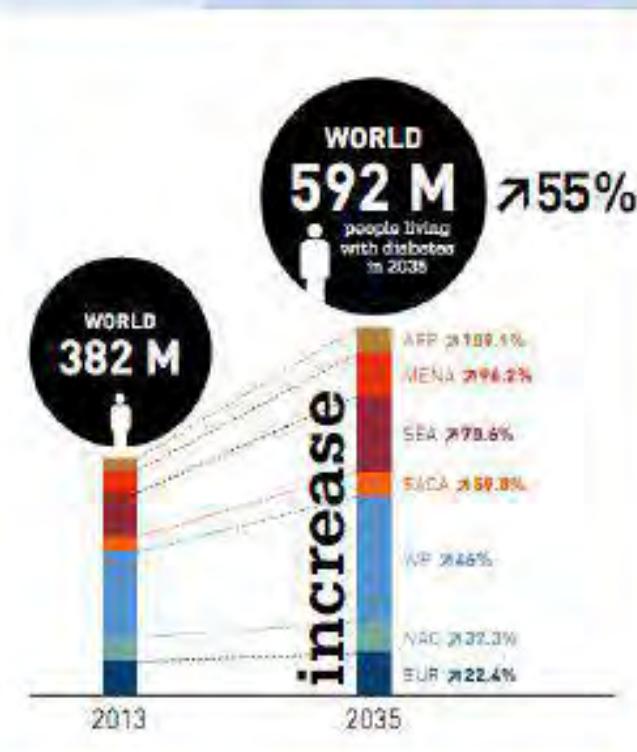


**Map 2.1 Prevalence\* (%) of diabetes in adults (20-79 years), 2013**



\*comparative prevalence

Diabetes is a **huge and growing problem...**



**382 million** people have diabetes

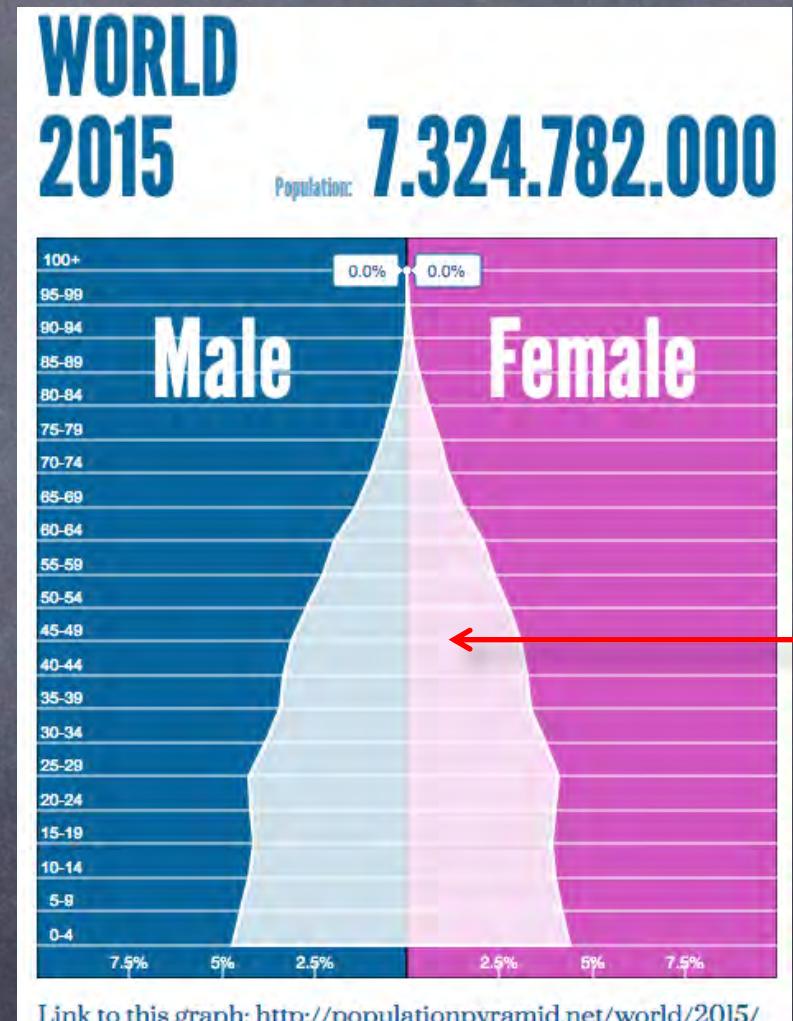
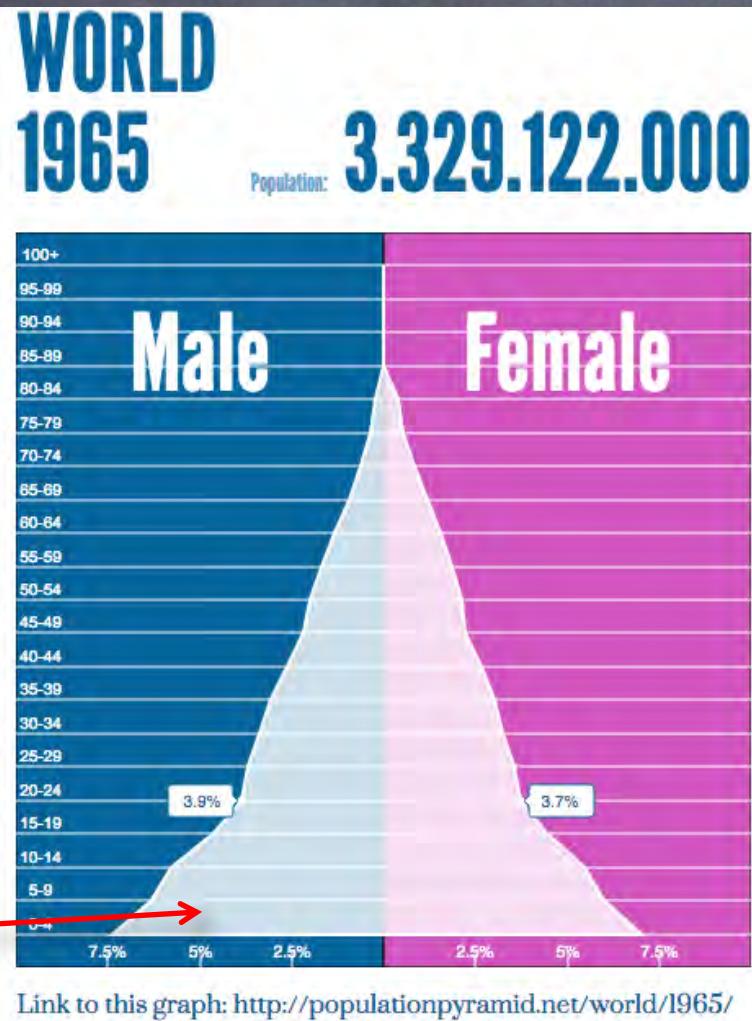
By **2035**, this number will rise to **592 million**

# *Why this pandemic of NCD?*

- ✓ decrease in child and maternal mortality
- ✓ decrease in aids incidence and mortality
- ✓ demographic transition

→ **higher life expectancy**

# Population pyramid in 1965 & 2015



# *Why this pandemic of NCD?*

## **Urbanisation :**

- ✓ life style changes (food, alcohol, tobacco)
- ✓ advertising (lack of legislation)
  
- ✓ pollution, unhealthy houses
- ✓ stress
- ✓ lack of physical activity

# **NCD:**

*a lack of preparedness to the problem*

- lack of education/training of health professionals
- lack of awareness
- lack of availability of /access to low cost quality medicines and diagnostic tools
- population unused to long term treatments
- low resources

Flows

Trends

Comparisons

## Flows of Global Health Financing

