Cycling, walking and health: the WHO perspective

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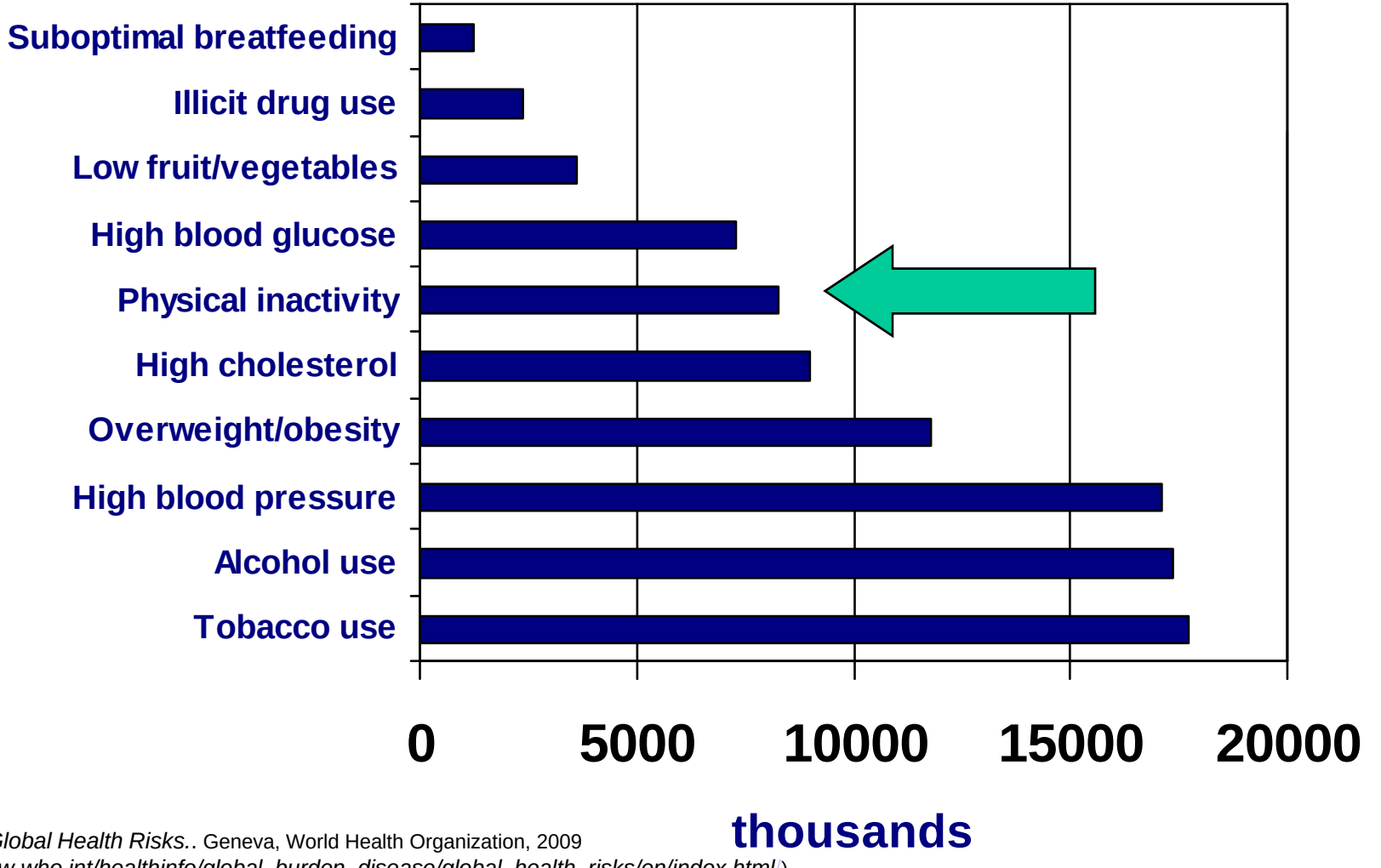
In this presentation:

- Physical activity and health
- Cycling, walking and health
- Promoting cycling and walking
  - Physical environment
  - Policy environment
  - Supportive tools

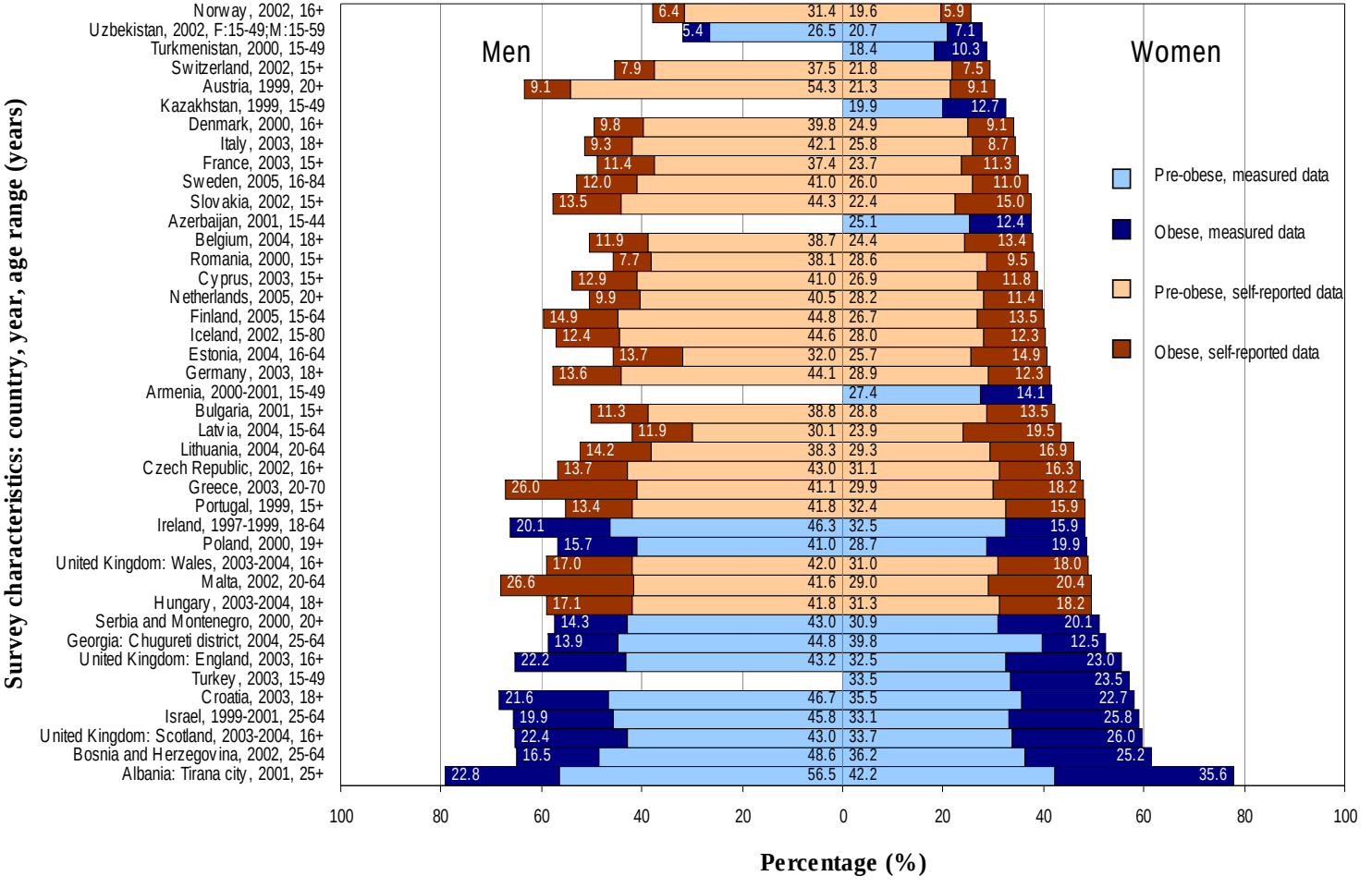
Physical inactivity is a leading risk factor for health in Europe, associated to nearly 1 million deaths/year

Disability adjusted life years lost due to risk factors in EURO, 2004



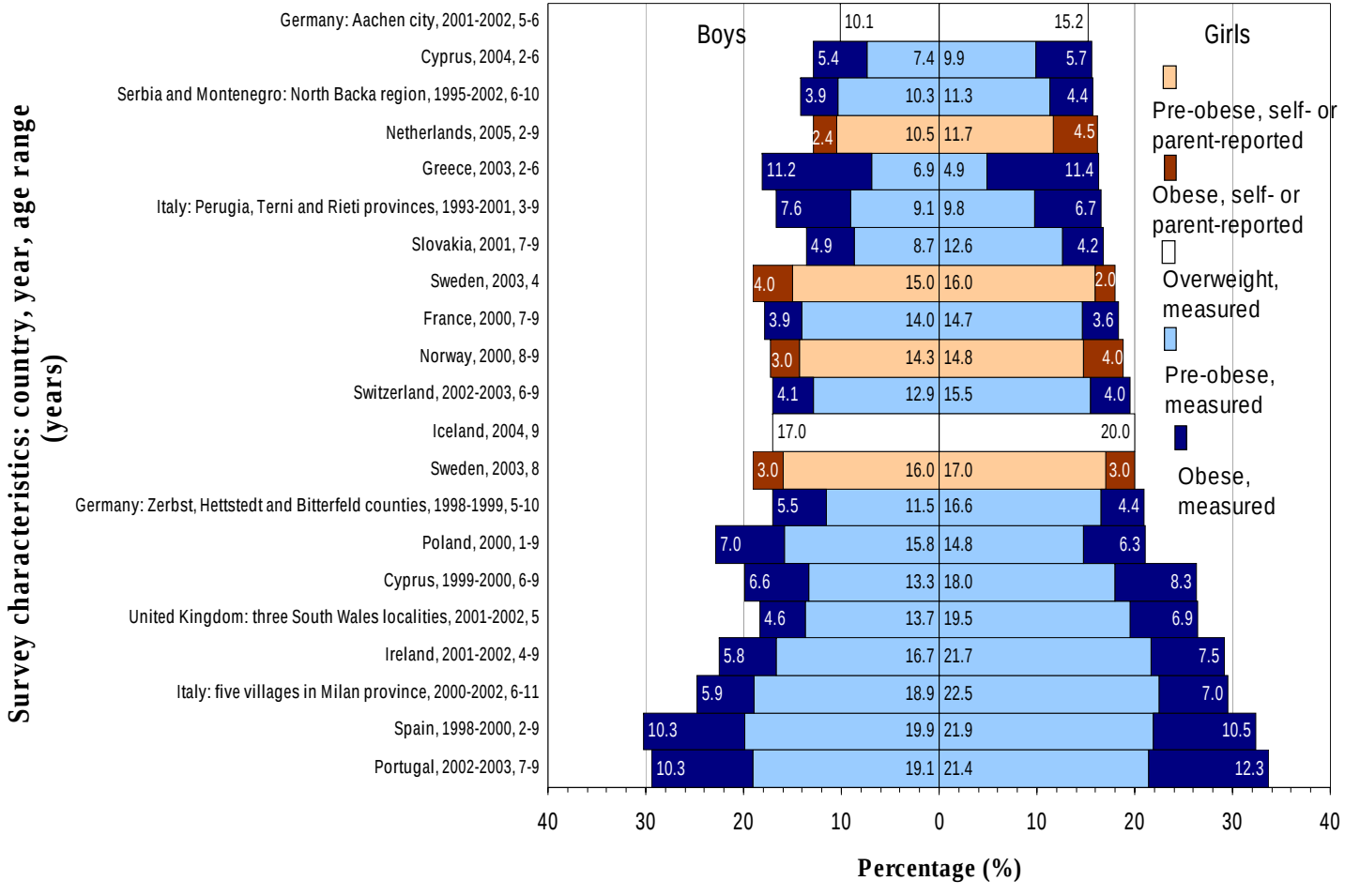
Source: Global Health Risks.. Geneva, World Health Organization, 2009 (*http://www.who.int/healthinfo/global_burden_disease/global_health_risks/en/index.html*).

Overweight among adults in the WHO European Region



Source: WHO Regional Office for Europe, 2006.

Overweight among schoolage children in the WHO European Region



Source: WHO Regional Office for Europe, 2006

What do we know about physical activity and health

- ⇩ ⇩ Coronary heart disease
- ⇩ ⇩ High blood pressure
- ⇩ ⇩ Stroke
- ⇩ ⇩ Diabetes II
- ⇩ ⇩ Metabolic syndrome
- ⇩ ⇩ Colon cancer
- ⇩ ⇩ Breast cancer

⇧ ⇧ Strong evidence
⇧ Modest evidence

- ⇧ ⇧ Life expectancy
- ⇧ ⇧ Body composition / healthy BMI
- ⇧ ⇧ Fitness
- ⇧ ⇧ Functional health in old age
- ⇧ ⇧Good biomarker profile incl. for osteoporosis
- ⇧ Sleep quality
- ⇧ Health related quality of life

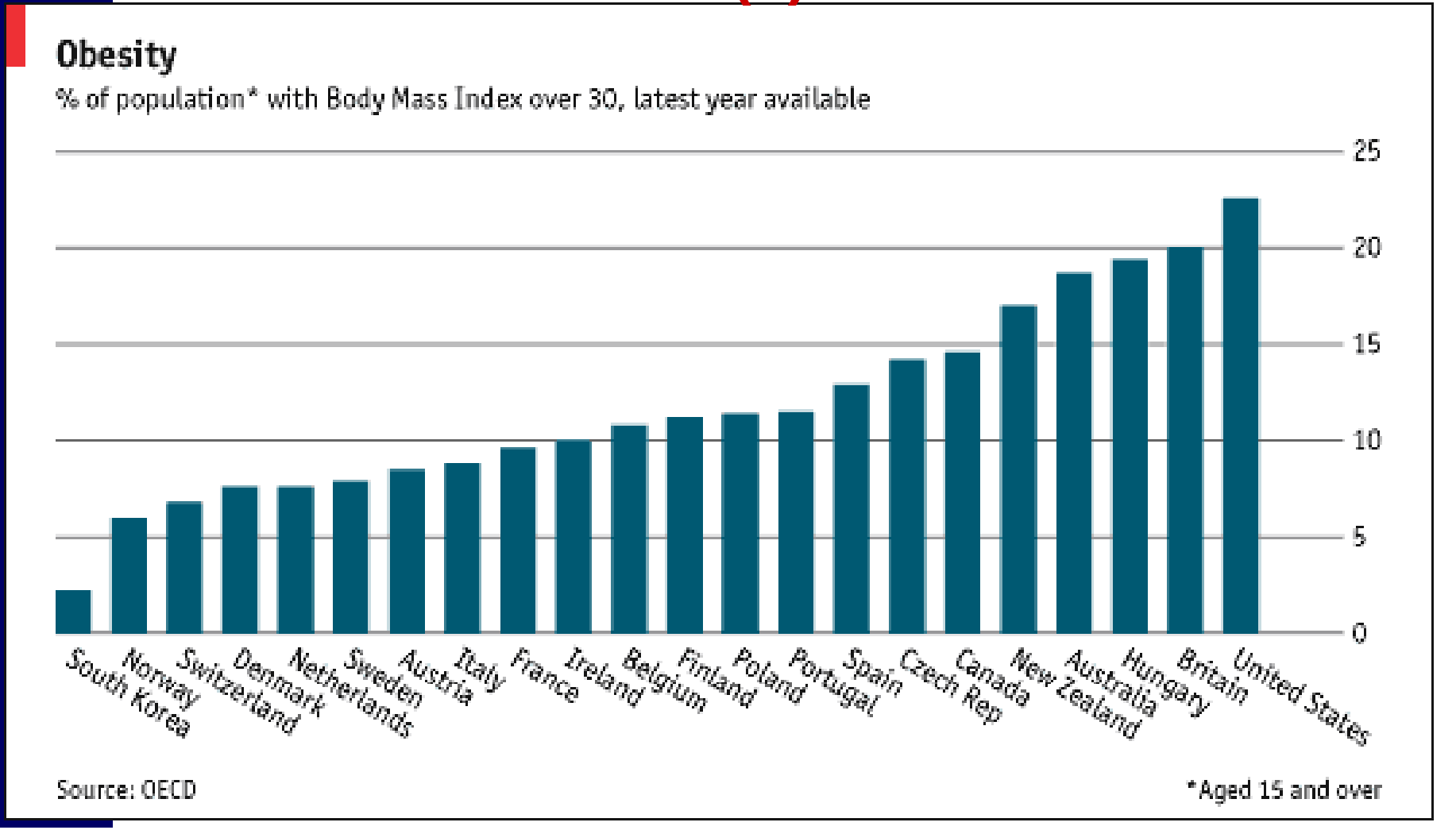
Source:
Physical Activity Guidelines Advisory Committee Report, US Department for Health and Human Services, 2008

Cycling and effects on total mortality

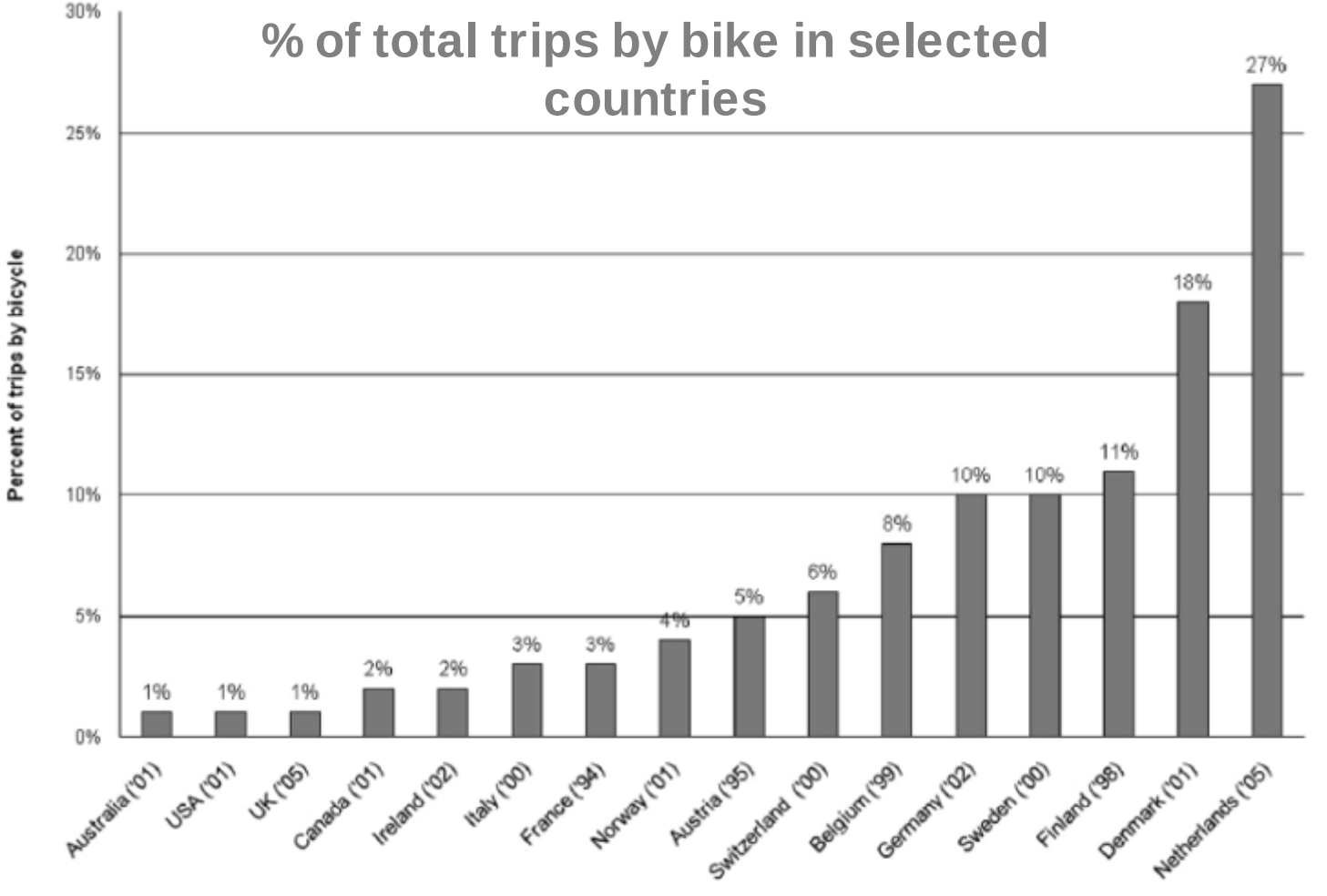
	FINDINGS	Reduction in risk for all cause mortality
Andersen et al (2000) Copenhagen Hearth Study	Danish adults reporting cycling to and from work: RR = 0.72 (95 % CI: 0.6, 0.9) for all cause mortality	38 %
Matthews et al (2007) Shangay Women's Health Study	Chinese women reporting regular cycling for transportation: RR=0.79 (0.61-1.01) (0.1-3:4METs) and 0.66 (0.40-1.07) (>3.5METs) for all-cause mortal.	27-52%

⇒ **indication that positive effects of active commuting more important than possible negative effects of air pollution**

There is an inverse (ecological) association between active transportation and obesity rates (1)



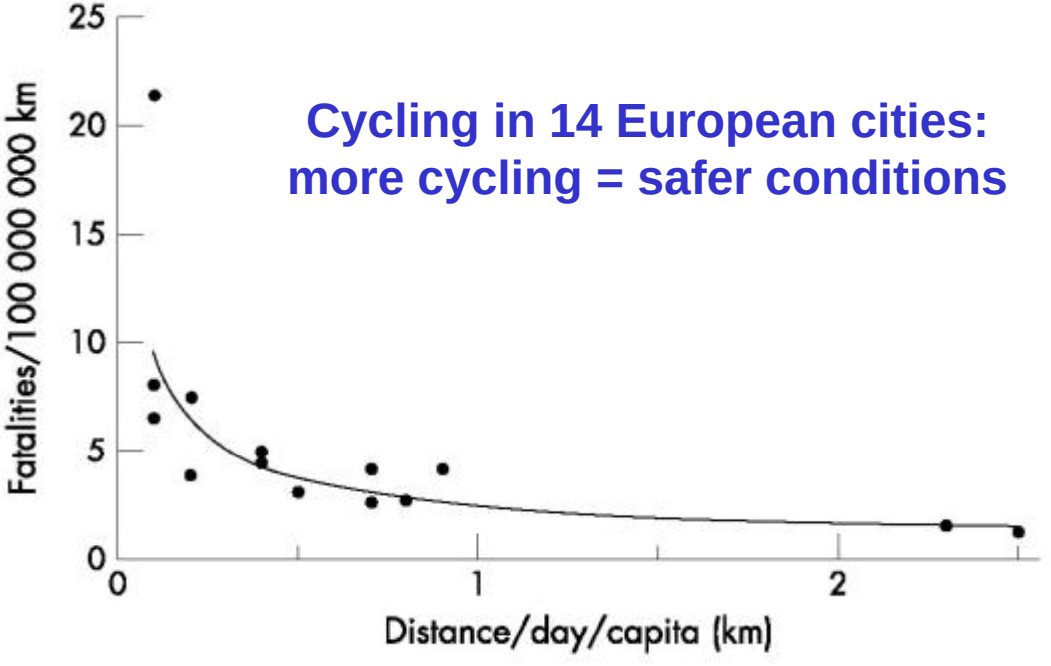
There is an inverse (ecological) association between active transportation and obesity rates (2)



From: Pucher & Buehler. Transport Reviews, 2008. Data from various sources.

Cycling and road traffic crashes

- In general, cyclists and pedestrians at higher risk
- **BUT**: “safety in numbers” effect



Cycling in 14 European cities: more cycling = safer conditions

Jacobsen PL. Injury Prevention 2003;**9**:205-209

⇒ **Confirmed in Australian context (Robinson, Health PromJAus 2005)**

Cycling and air pollution

- No systematic review available for air pollution and physical activity- Evidence from singles studies:

  including, e.g*. :O'Donoghue et al. 2007; Rank et al., 2001; Chertok et al., 2004, van Wijnen et al., 1995; Kingham et al., 1998; Adams et al., 2001; Kingham et al., 1998*
- Recent studies (May 2010) on exposure to particulate matter indicate that this is influenced by the breath rate of cyclists and choice of route.
- Active commuters likely to benefit from "safety in numbers effect", **if** accompanied by suitable transport planning
- Such measures could at the same time lead to decreased air pollution, noise, emissions of greenhouse gases and congestion
- Overall, unlikely that promotion of active transport would be "unhealthy" and lead to additional costs

WHY ACTIVE TRANSPORT? Health promotion, sport and physical education alone are insufficient

- The scale of the problem is too big
- The environmental approaches needed are outside the control of the health and sport sectors
- New partnerships must be developed across different sectors
  - Transport, urban planning, housing, education, leisure time industry.

Active transport can help integrating physical activity in daily life

- Avoids dependence on facilities for sports
- Does not require making a time slot available for that

  "I have no time for physical activity"
- Equitable and easily accessible options
- Feasible
  - 10% of trips made in car in Europe cover distances of less than 1 km
  - more than 30% less than 3 km and 50% of less than 5 km
- Most people can do it
- Highly cost-effective
  - Minimal investment of household income
- Is enjoyable!!!!

Photo courtesy of BASPO

Cycling: a "win-win-win" option that helps different sectors achieving *their own* goals

Goals	Interest
Reduce emissions of: **–air pollutants;** **–greenhouse gases;** **–noise**	**Environment** **Health**
Reduce congestion	**Transport**
Reduce road traffic injuries	**Transport, Health**
Reduce investments in infrastructure for more cars	**Transport**
Improve accessibility and quality of urban life	**Transport, Health**
Complement improvements to vehicles and fuels	**Transport**
Increase physical activity	**Health**
Promote tourism	**Tourism and leisure industry**
Create new jobs	**Economy, welfare, labour**

Promoting cycling: the physical environment Summarizing the evidence

Suggests environments that are…

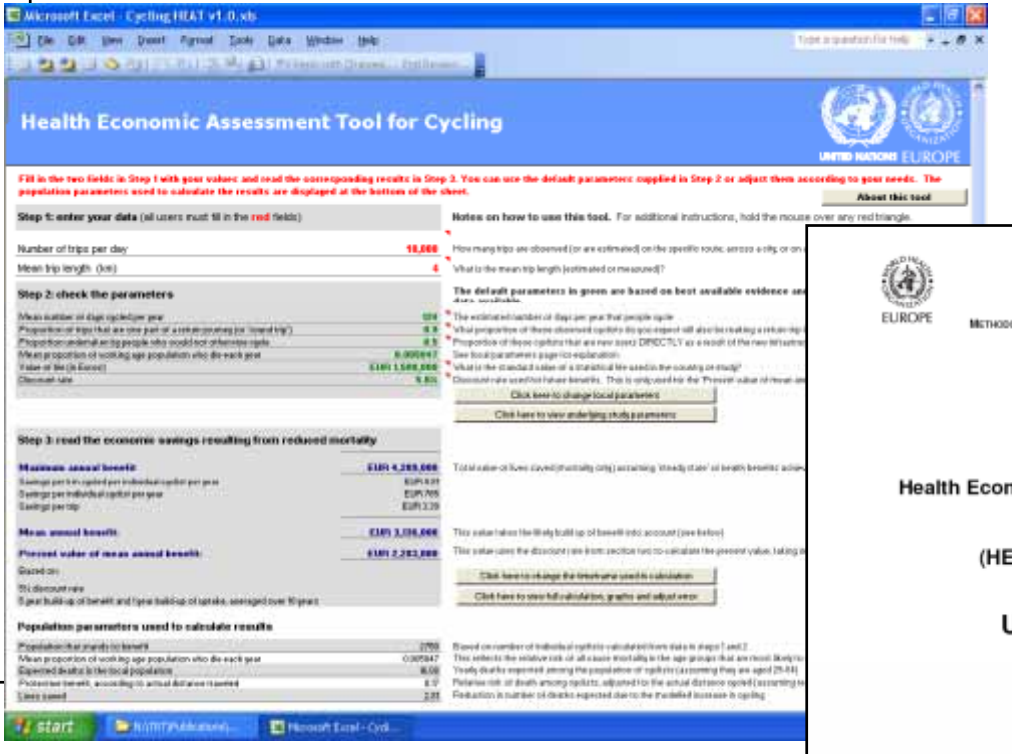
- functional (provision of place to walk/cycle)
- safe
- provide access to destinations/facilities/ places
- convenient
- aesthetical

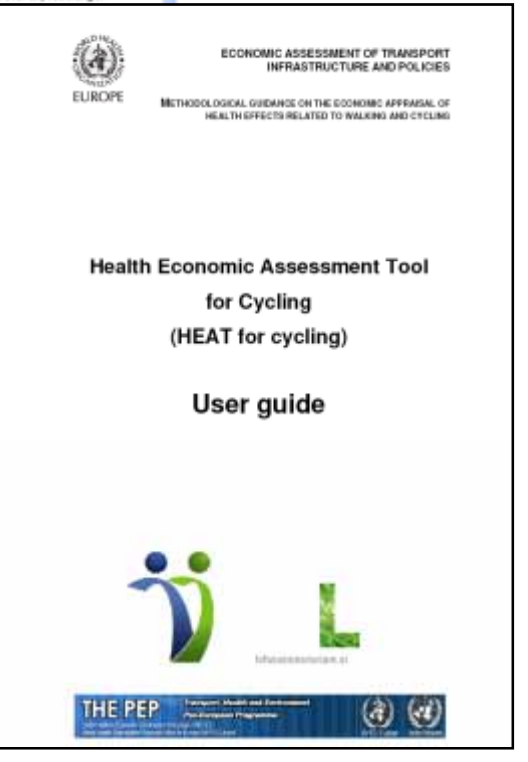
…are “supportive” or “walk” / “cycle” friendly neighbourhoods

For example…..

Promoting cycling: tools WHO/UNECE

guidance and tool for economic assessment of health benefits from cycling and walking





Download the guidance document, HEAT for cycling and user guide from

www.euro.who.int/transport/policy/20070503_1

Promoting cycling: tools
On-line catalogue of documents on PA promotion

http://data.euro.who.int/PhysicalActivity

Country	Title	Year	Issuing body
Austria	Masterplan cycling: strategy for the promotion of cycling traffic in Austria	2006	Lebensministerium
Czech Republic	National Cycling Strategy: Aims, Realities and Perspectives	2005	Centrum dopravniho vyzkumu pro potreby Ministerstva dopravy
Finland	Promoting pedestrian and bicycle traffic in Finland, the JALOIN programme 2001-2004	2005	Ministry of Transport and Communications
France	Proposal to encourage the development of the bicycle in France	2004	Mission parlementaire Velo
Germany	National Cycling Plan 2002-2012 Ride your bike!	2002	Federal Ministry of Transport, Building and Housing
Switzerland	National environment and health action plan	2001	Bundesamt fr Gesundheit BAG

Promoting cycling: the international policy environment

- **Transport, Health and Environment Pan-European Programme (THE PEP)**
- **Children, Environment and Health Action Programme for Europe**
- **Charter on Counteracting Obesity (2006)**

Promoting cycling: tools Networking

- HEPA Europe: the European network for promotion of health-enhancing physical Activity

  - Brings together more than 80 institutions (academia, ministries, NGOs) from 24 European countries
  - Promotes:
    - The development of innovative multi-sectoral strategies;
    - Innovative approaches and good practices for physical activity
    - Research and evaluation of effectiveness of interventions

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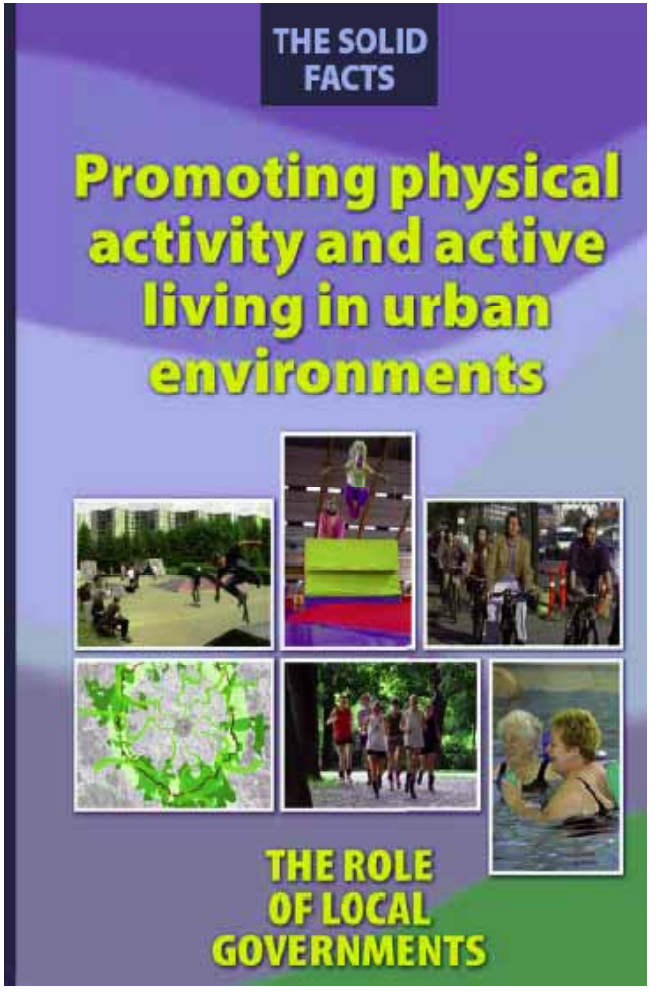
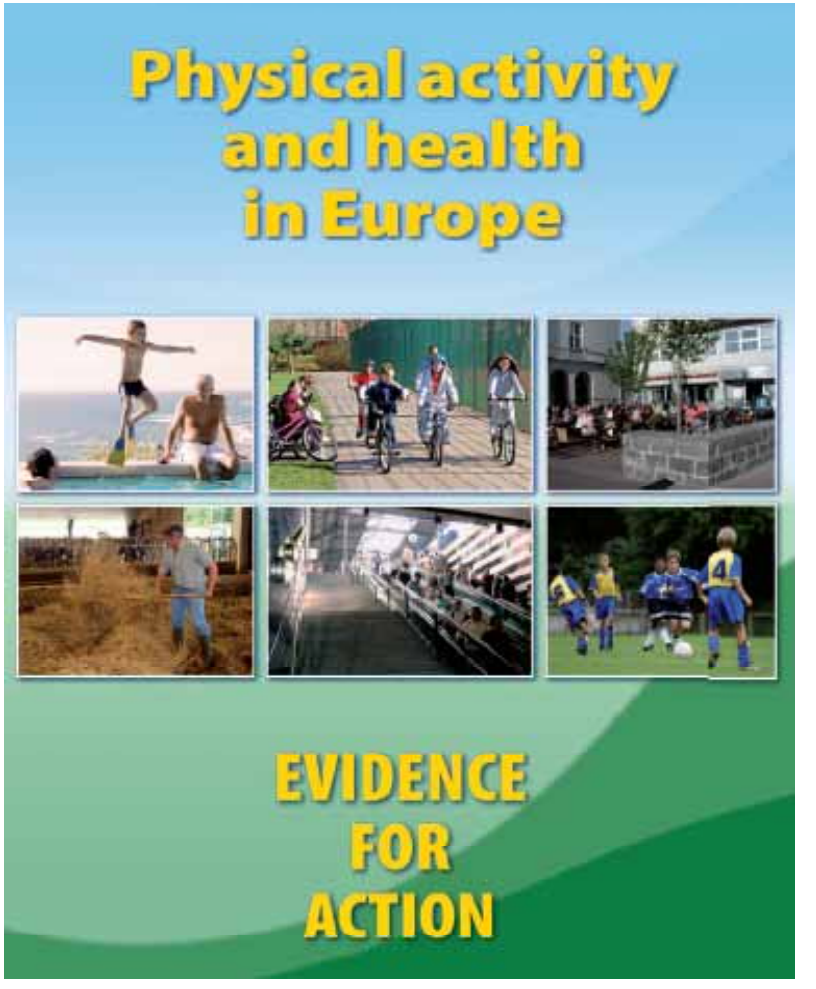
THANKS!





Find more information at:

- ***HEPA Europe (European network for promotion of health-enhancing physical activity)***
  www.euro.who.int/hepa
- ***Transport, Health and Environment Pan European Programme (THE PEP)***
  www.thepep.org
- ***Nutrition/obesity***
  www.euro.who.int/obesity
  www.euro.who.int/nutrition