

# **Obesity & Socio-economic groups in Europe: Evidence & implications for action**

The Expert Group on Social Determinants and Health Inequalities

European Commission, DG Health & Consumer Protection,

Public Health & Risk Assessment, Unit C4 - Health Determinants

27 November 2007

Aileen Robertson

Public Health Nutritionist

Suhr's University College

Denmark

**SUHR'S**

# Main collaborators

Tim Lobstein

IOTF & Science and Technology Policy Research

University of Sussex

Brighton

Cecile Knai

European Centre on Health of Societies in Transition

London School of Hygiene and Tropical Medicine

Keppel Street, London,

# Aim

*to bring together information on the relationship between obesity and trends in obesity in relation to socio-economic groups in the European Population;*

*to review evaluations of policy measures and interventions to tackle obesity which take into account variations in prevalence by socio-economic group;*

*to make recommendations relevant to policies at European and national levels.*

# Methods & evidence reviewed

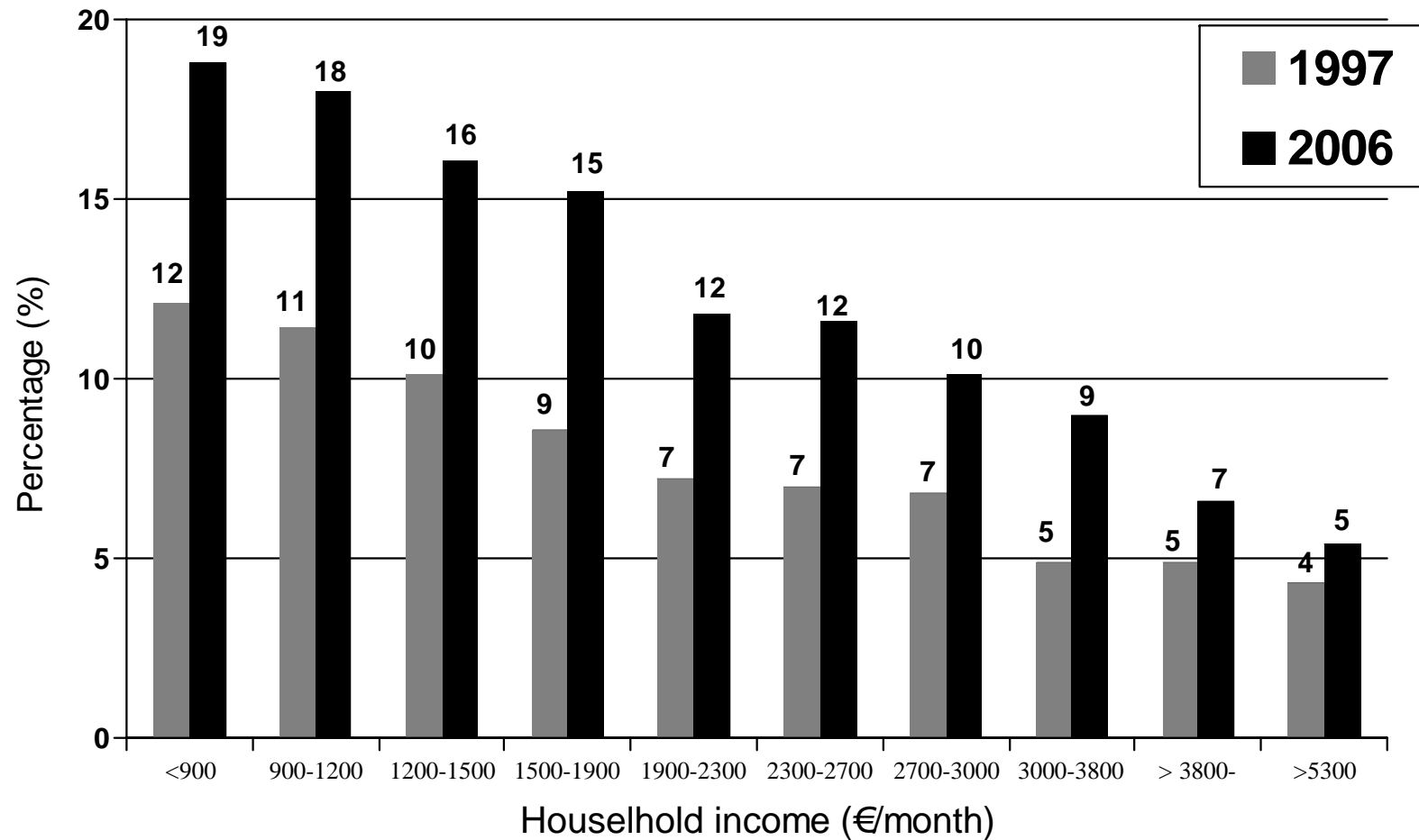
- Several databases (including Pubmed, CAB Abstracts, the Cochrane Library, Web of Knowledge) were used to identify relevant published literature.
- The Medline database 1997-2007 using search terms ‘obesity’, ‘prevention’ or ‘intervention’ and ‘inequality’ or ‘socio-economic’
- Systematic reviews of controlled interventions and other interventions;
- National evidence-based guidelines for reducing obesity;
- Primarily papers of European origin;
- Governmental reports & documents, unpublished reports & other publications;
- The database search was complemented by an extensive search for grey literature.

# Main findings - epidemiology

- An unweighted crude estimate across 13 MS suggests **26% of obesity in men & 44% in women, is attributable to inequalities in SES**
- Eurothine study (2007) (19 countries) - estimated **26% & 50%**
- Martinez et al (1997) - estimated **13% & 45%**



## Evolution of SE gradient in adult obesity in **France** from 1997 to 2006



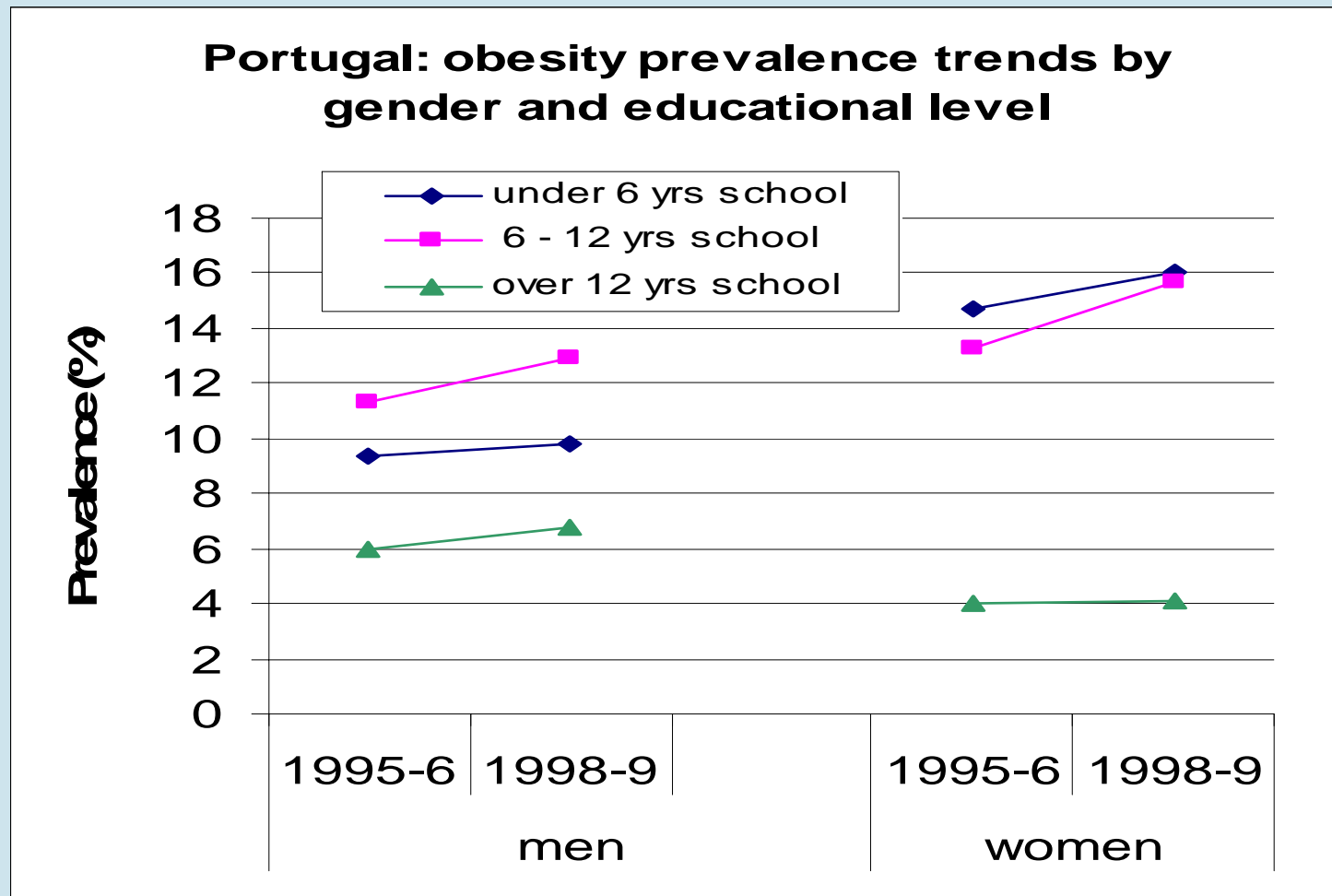
ADAPTED BY N. DARMON FROM THE FOLLOWING REPORTS:

NATIONAL DATA 1997: Charles MA, Basdevant A & Eschwege E (2002): Prévalence de l'obésité de l'adulte en France. La situation en 2000. A partir des résultats des études OBEPI. *Ann Endocrinol* 63, 154-158.

NATIONAL DATA 2006 : INSERM, TNS Sofres & Roche (2006): Obépi: enquête épidémiologique nationale sur le surpoids et l'obésité.

<http://www. roche. fr/portal/eipf/france/roche/fr/institutionnel/lesurpoidsenfrance .>

# Portugal – steep gradient in women

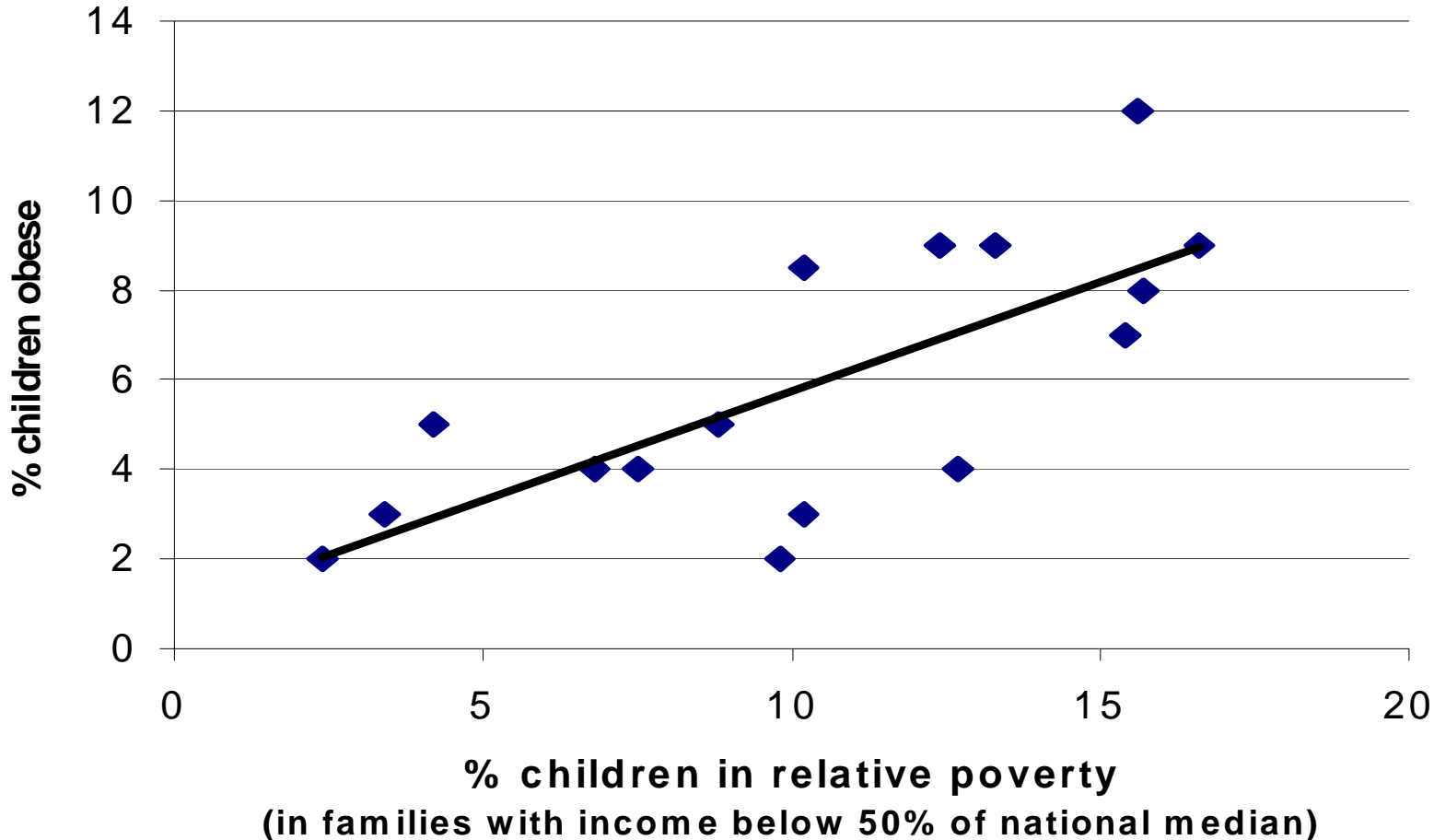




# Main findings - epidemiology

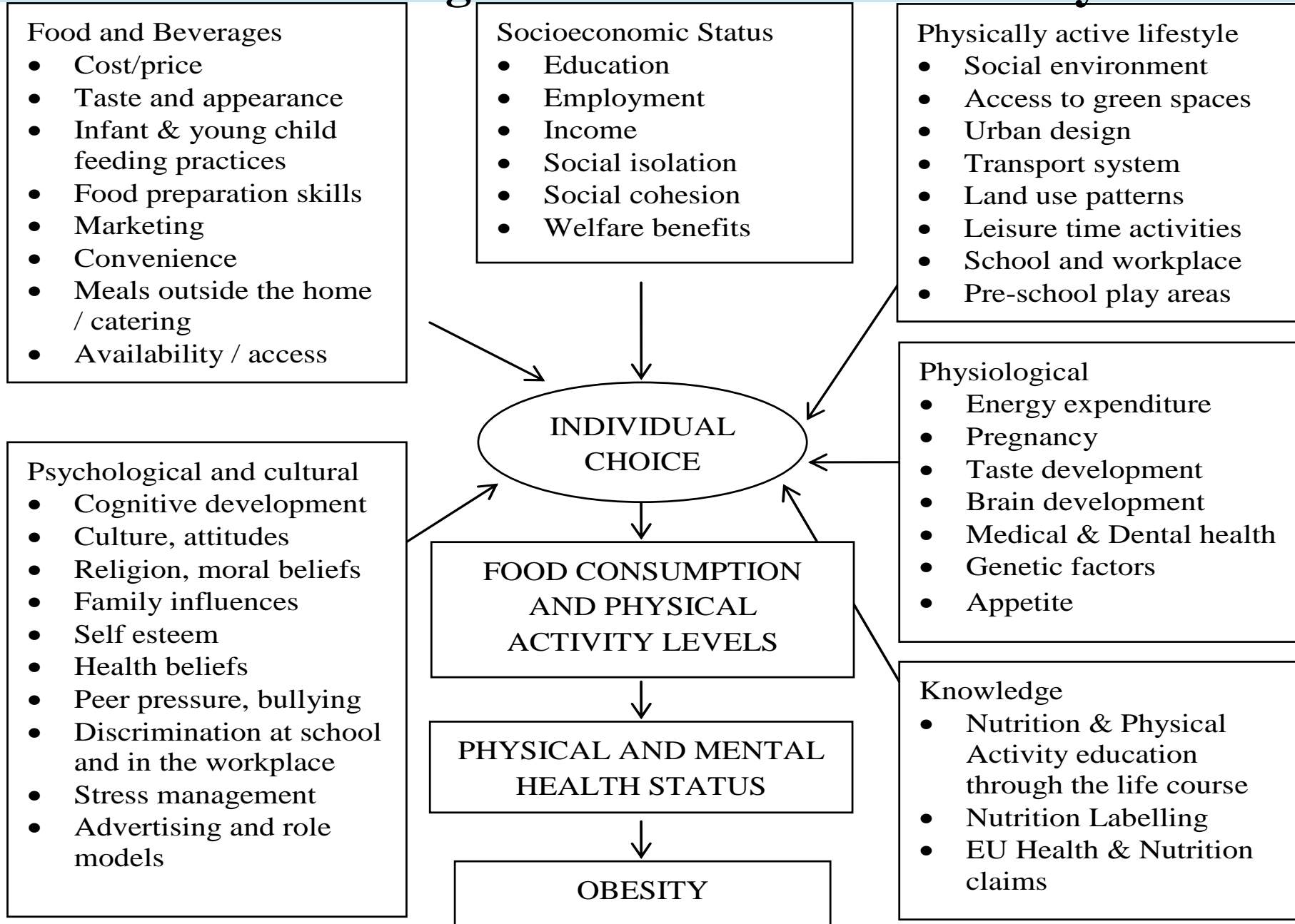
- **Obesity & overweight in children** associated with **SES of parents, especially mothers**
- Cross-country comparisons show prevalence of **childhood overweight linked to MS's degree of income inequality or relative poverty.**

# Child obesity and relative poverty



Source WHO and IOTF (r=0.74, p<0.001)

# Main findings – Determinants of obesity

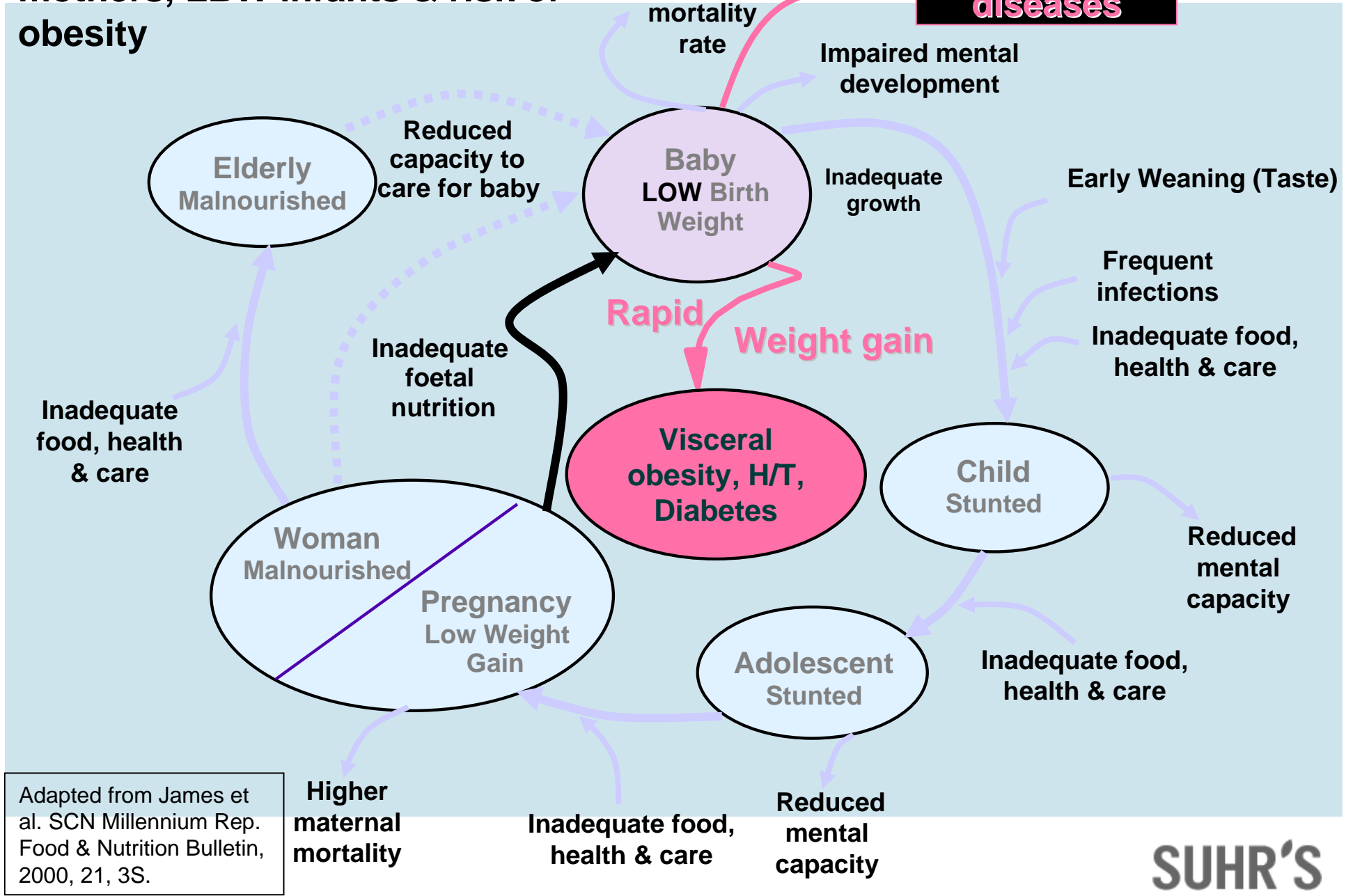


## Main findings - determinants of obesity

- **Women more vulnerable than men in lower SEGs** – discrimination; employment; income; family gatekeeper; less physical activity; pregnancy; lower self-esteem
- **Women in lower SEGs** more likely to have under- or over-weight infants & less likely to follow recommended breastfeeding & infant feeding practices

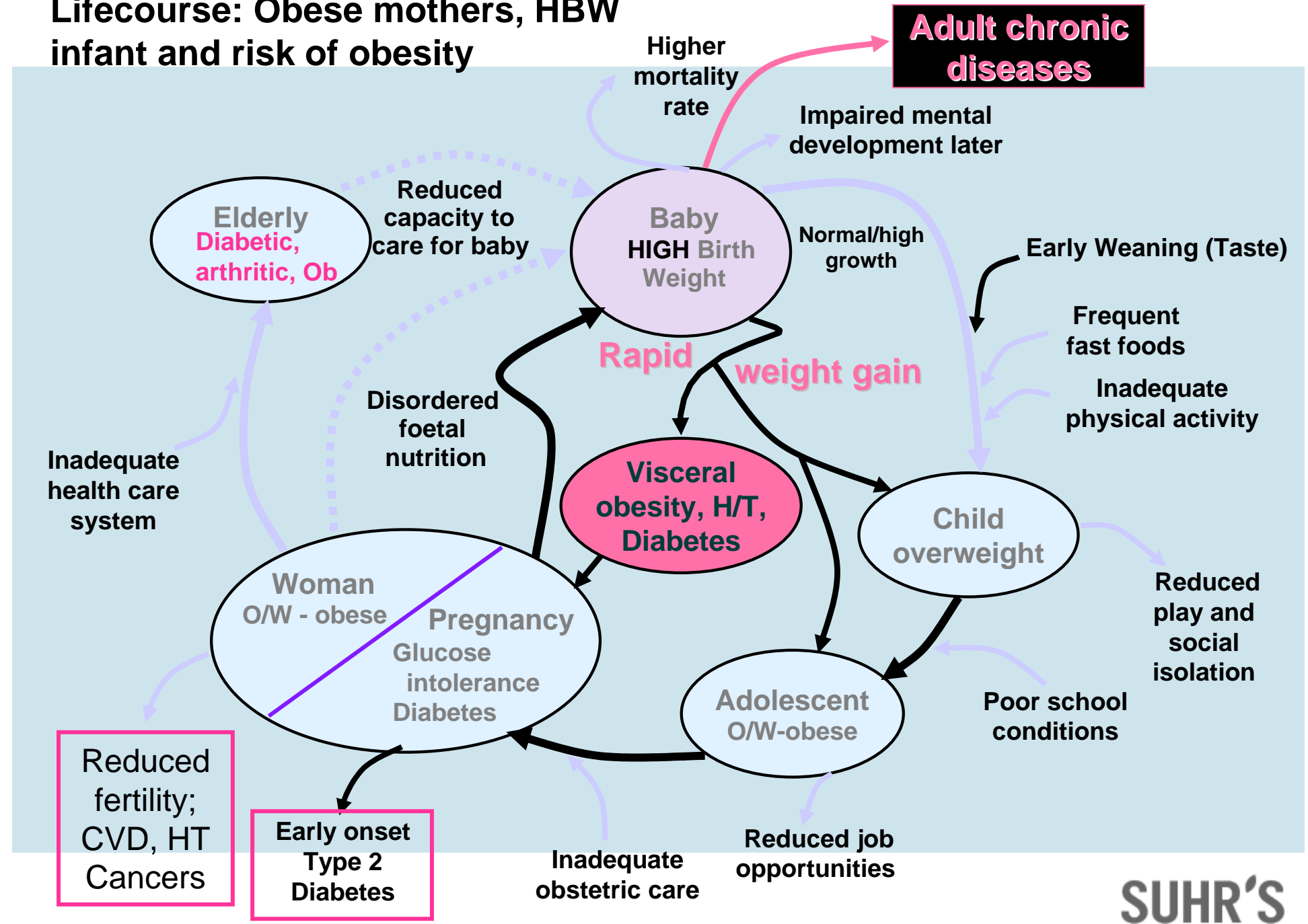
# Lifecourse: undernourished mothers, LBW infants & risk of obesity

**Adult chronic diseases**

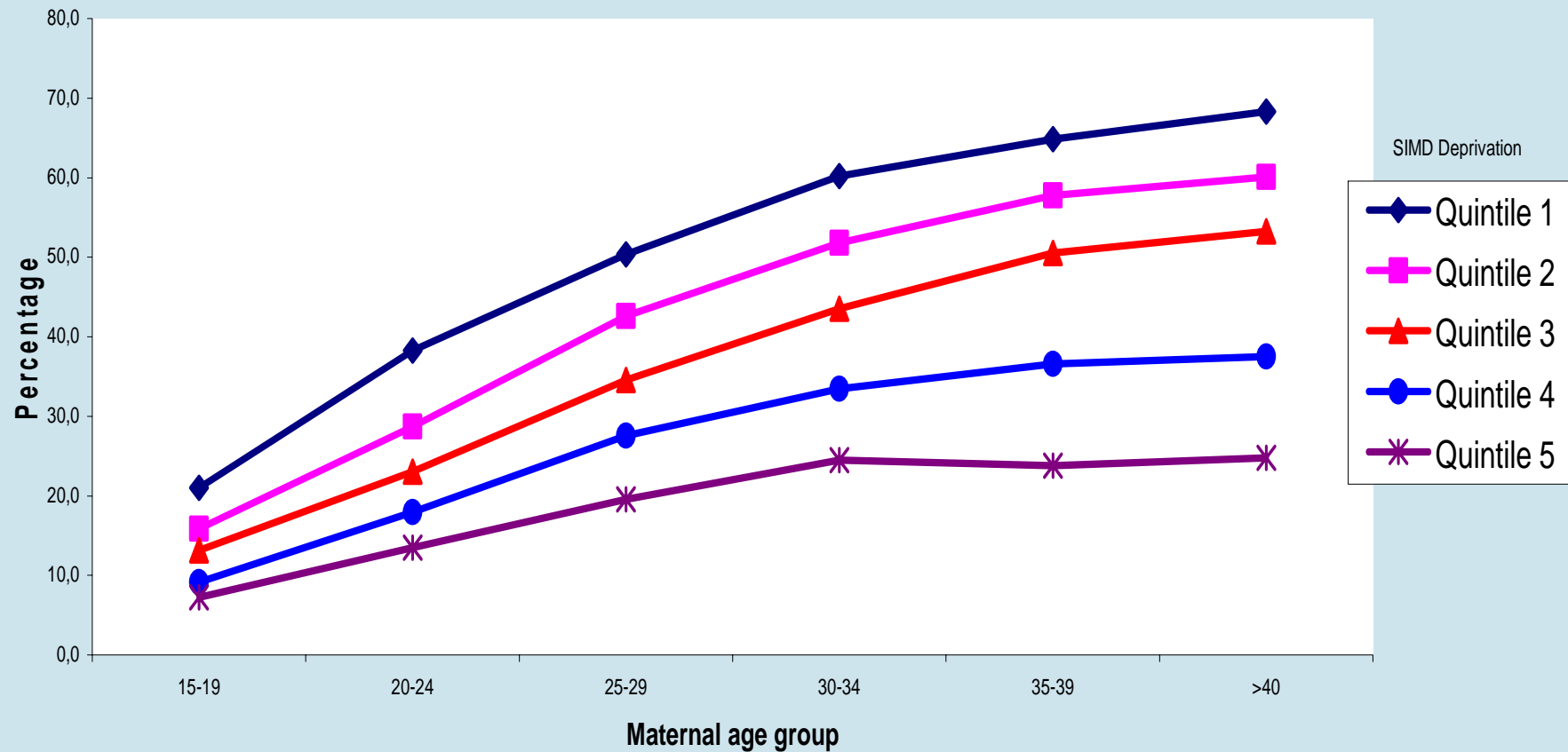


Adapted from James et al. SCN Millennium Rep. Food & Nutrition Bulletin, 2000, 21, 3S.

# Lifecourse: Obese mothers, HBW infant and risk of obesity



# Breastfeeding recorded at 6-8 wks by maternal age and SES



# Main findings - interventions

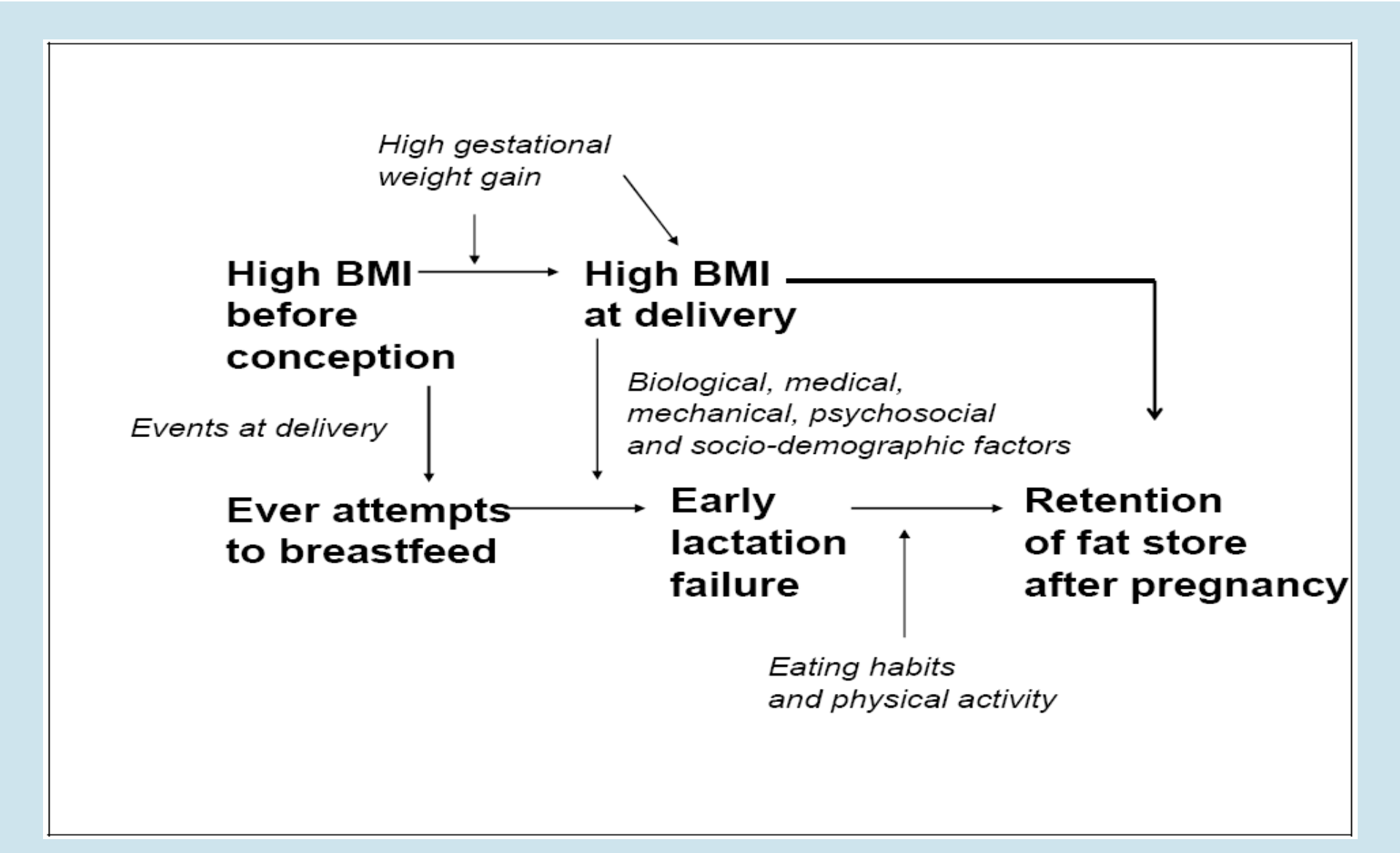
- **Few controlled interventions** targeted at lower SEGs or the effect of intervention on different SEGs
- Lower SEGs show **less response to health promotion** programmes & higher drop-out rates
- Interventions are of **short** duration & fail to take account of **ethnic & social diversity**



# Main findings - interventions

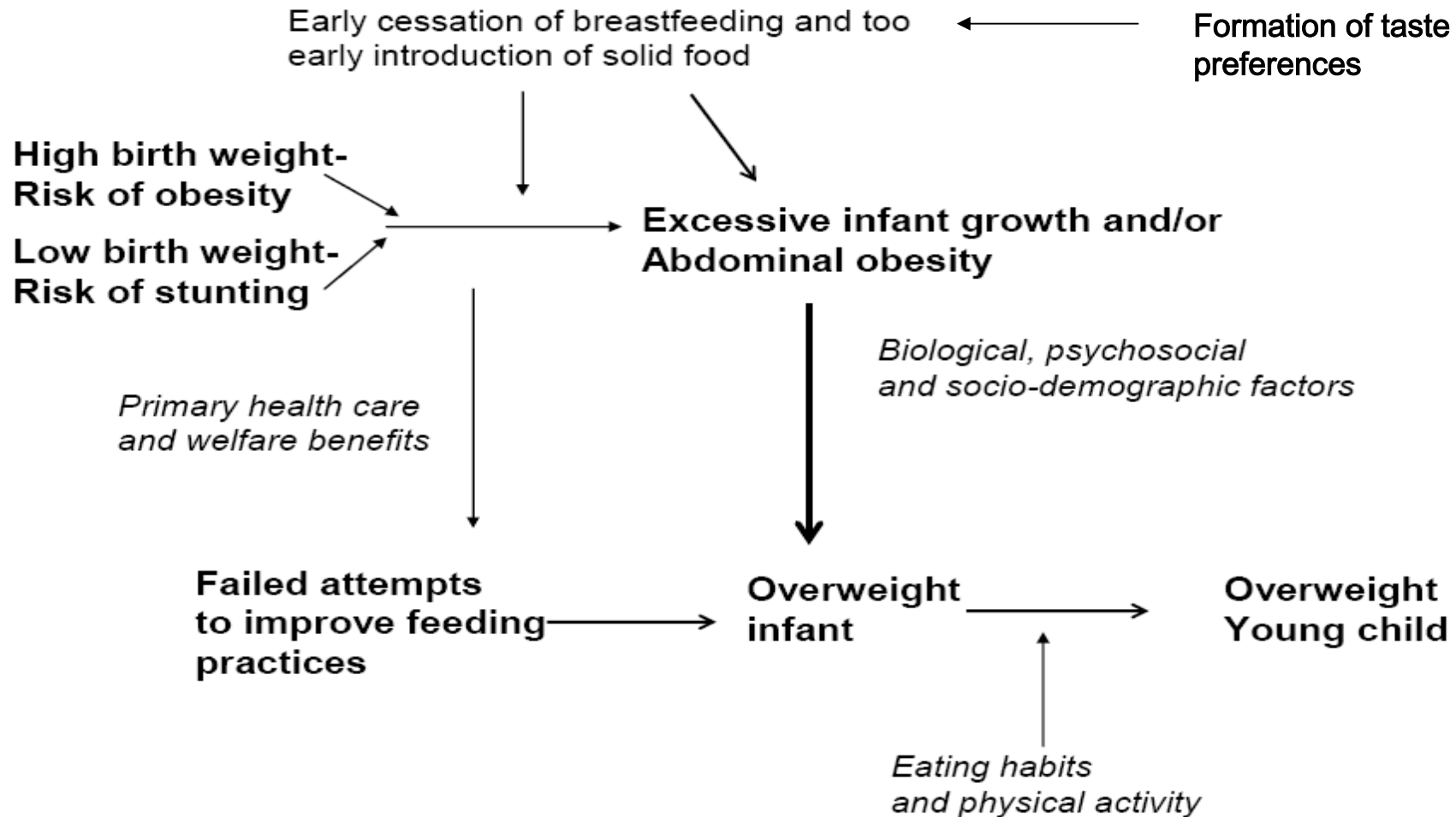
- **Information alone** is relatively **ineffective** & may increase inequalities
- Exception to this is targeted support & **information on breastfeeding**

# Intervention options for low SES obese women of reproductive age



Source: adapted from Prof K.M. Rasmussen, Cornell

# Intervention options for infants of low SES women



# Main findings – policy review

- **Lack of awareness** of links between SES & obesity
- **Health Sector alone** is unlikely to reduce the social gradient in obesity
- Cross-sectoral **population-wide policies** are needed  
e.g. improved **availability & access** to food & physical activity; **welfare** & social benefits; **fiscal** policies (subsidies & taxes); controls on **marketing**

# Supportive new policy initiatives

- **EU Health Strategy** - HIAP; Inequalities; Lifecourse approach;
- **EU 2 White papers:** Nutrition; Sport
- **WHO 2<sup>nd</sup> Action Plan** for Food & Nutrition Policy
- **WHO Charter** on Obesity

# Main findings –gaps in our knowledge

- mechanisms of how food & **nutrition insecurity & obesity can co-exist** within SEGs
- % disposable income & absolute **amount spent on food** by SEG
- % income (& absolute amount) spent on food compared with **cost of a healthy food basket** & levels of obesity
- **Measured** heights & weights by SEG in MS
- **Food & physical activity** indices by SEG in MS

## Main findings – gaps (cont.)

- **Welfare services** – more focus on diet & PA to support disadvantaged reproductive-age women
- More evidence on **effectiveness** of interventions in lower SEGs
- The **cost of interventions** to allow estimates of cost-effectiveness.

# Conclusions & Recommendations

Key theme is prevention of escalating rates of obesity in next generation by reducing health inequalities and the social gradient in obesity



# Conclusions & Recommendations

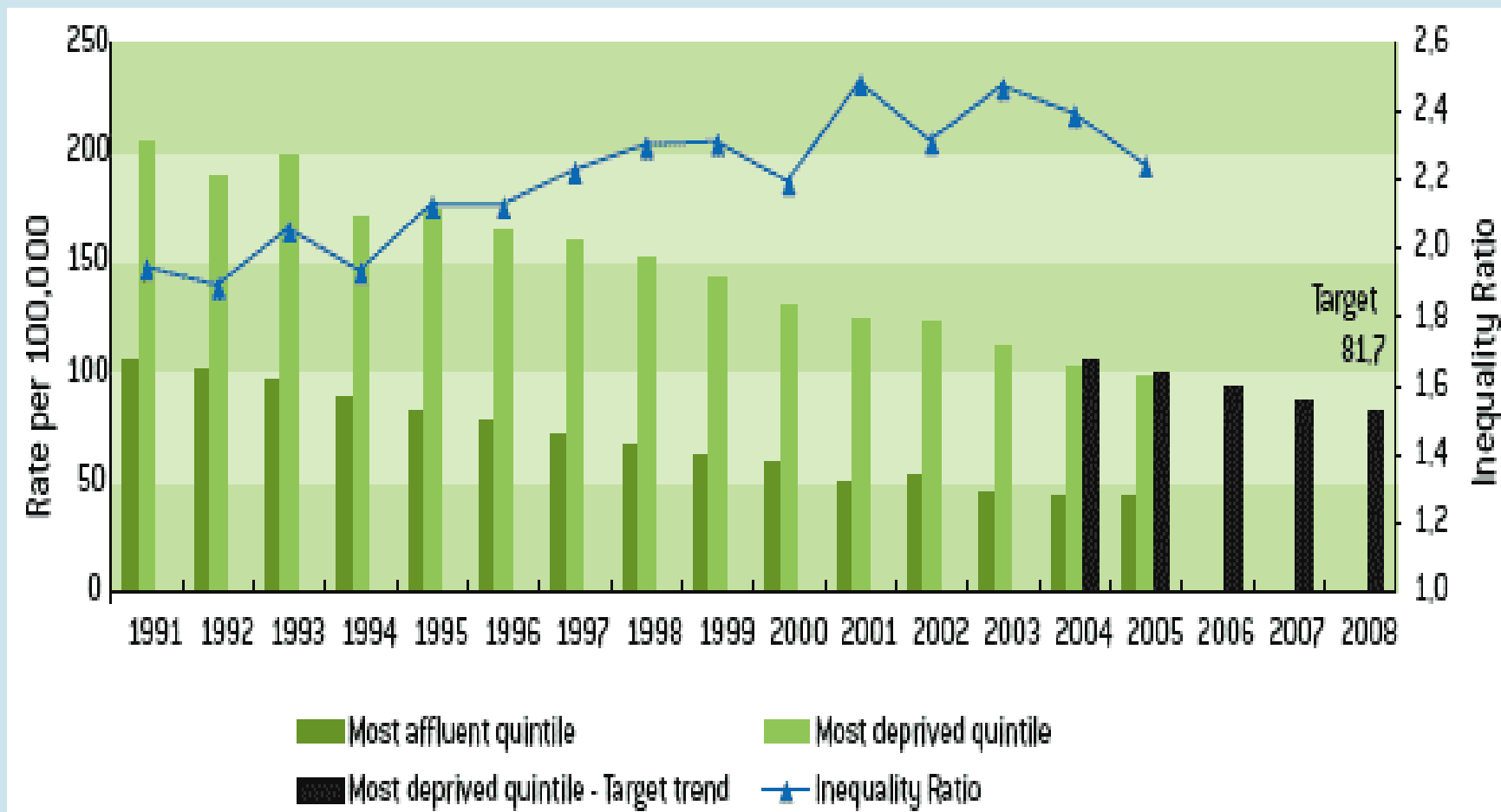
A **special initiative** generated by *DG SANCO* and *DG Employment, Social Affairs & Equal opportunities* using **OMC & NAPS** could facilitate the establishment of a reporting system and effective responses from MS & EU

# Conclusions & Recommendations

- Monitoring & Target setting to evaluate interventions & policies e.g. weight of reproductive age women by SES; birth weight (both under- & overwt) by SES

# Setting targets – an example

## CHD Mortality (under 75 years)



Target is to reduce the under 75 coronary heart disease mortality rate (per 100,000) in the most deprived areas by 27.1% from 112.0 in 2003 to 81.7 in 2008. An average annual reduction of -6.1% is required to meet this target. During the first 2 yr the rate has decreased by 12.7% (from 112.0 in 2003 to 97.8 in 2005). If this continues the 2008 target will be met. Mortality rates in the most affluent areas also fell, but not as much as in the most deprived areas. The inequality ratio therefore decreased and so the inequality gap narrowed.

# Conclusions & Recommendations

- Given that maternal obesity is a key determinant of the next generations health - & social gradient in obesity appears to be increasing
- EU guidelines for nutrition, PA, and weight gain during pregnancy are needed

# Conclusions & Recommendations

- Investigate the **co-existence of obesity & food/nutrition insecurity** in children in lower SEGs
- Comprehensive pre-school & school policies because of increase in **intelligence & IQ** in children who are properly nourished
- Child health – better returns on **investing while children are young**

# Conclusions & recommendations

- **Intersectoral coordination mechanisms needed:**

*EU White paper “The Commission will set up a High Level Group focused on nutrition & physical activity related health issues. The objective of the Group would be to ensure that the exchange of policy ideas & practices between Member States takes place, with an overview of all government policies.”*

# Conclusion & Recommendation

Population-wide  
action  
combined  
with  
life-course  
approach

<u>Age</u>	<u>Stage</u>	<u>Issue</u>
	Preconception In utero	Maternal nutrition programmes foetus
0—6 months	Post-natal	Breast-vs bottle-feeding to programme later health
6—24 months	Weaning	Growth acceleration hypothesis
2—5 years	Pre-school	Adiposity rebound hypothesis
5—11 years	1st school	Development of physical skills Development of food preferences
11—16 years	2nd school	Development of independent behaviours
16—20 years	Leaving home	Exposure to alternative cultures/behaviour/lifestyle patterns (e.g. work patterns, living with friends etc.)
16+ years	Smoking cessation	Health awareness prompting development of new behaviours
16—40 years	Pregnancy	Maternal nutrition
16—40 years	Parenting	Development of new behaviours associated with child-rearing
45—55 years	Menopause	Biological changes Growing importance of physical health prompted by diagnosis or disease in self or others
60+ years	Ageing	Lifestyle change prompted by changes in time availability, budget, work-life balance. Occurrence of ill health.

# Foresight report

[http://www.foresight.gov.uk/Obesity/obesity\\_final/17.pdf](http://www.foresight.gov.uk/Obesity/obesity_final/17.pdf)

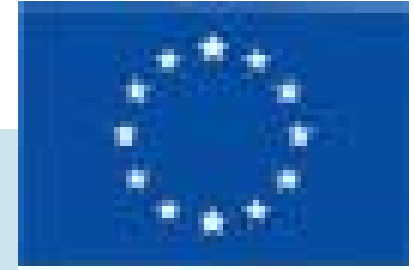
“The greater prevalence of obesity among **poorer social groups** implies that efforts to counter **health inequalities** must take account of obesity; conversely, action on obesity must take account of **socioeconomic factors**. Obesity is not exclusively a matter of **social class and inequality**. The suggestion that it is primarily a feature of lower-income groups would be to disguise the society-wide character of the epidemic. However, efforts to combat obesity in **lower-income groups** will have positive consequences for both **health and inequality**”





SIXTH FRAMEWORK PROGRAMME

[www.europrevob.eu](http://www.europrevob.eu)



## **EURO-PREVOB**

### Prevention of Obesity in Europe

- Improve understanding of broad determinants of inequalities in obesity;
- Identify initiatives that can impact positively on determinants;
- Develop & pilot tools to assess impact of policies on determinants;
- Develop, disseminate guidelines & recommendations for best practice



**EURO-PREVOB**

**SUHR'S**

# Thankyou

Aileen Robertson

SUHRS UNIVERSITY COLLEGE

DENMARK

[air@suhrs.dk](mailto:air@suhrs.dk)

**SUHR'S**

**This paper was produced for a meeting organized by Health & Consumer Protection DG and represents the views of its author on the subject. These views have not been adopted or in any way approved by the Commission and should not be relied upon as a statement of the Commission's or Health & Consumer Protection DG's views. The European Commission does not guarantee the accuracy of the data included in this paper, nor does it accept responsibility for any use made thereof.**