



# Childhood Obesity – the need to action the action plan

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February 25th 2014

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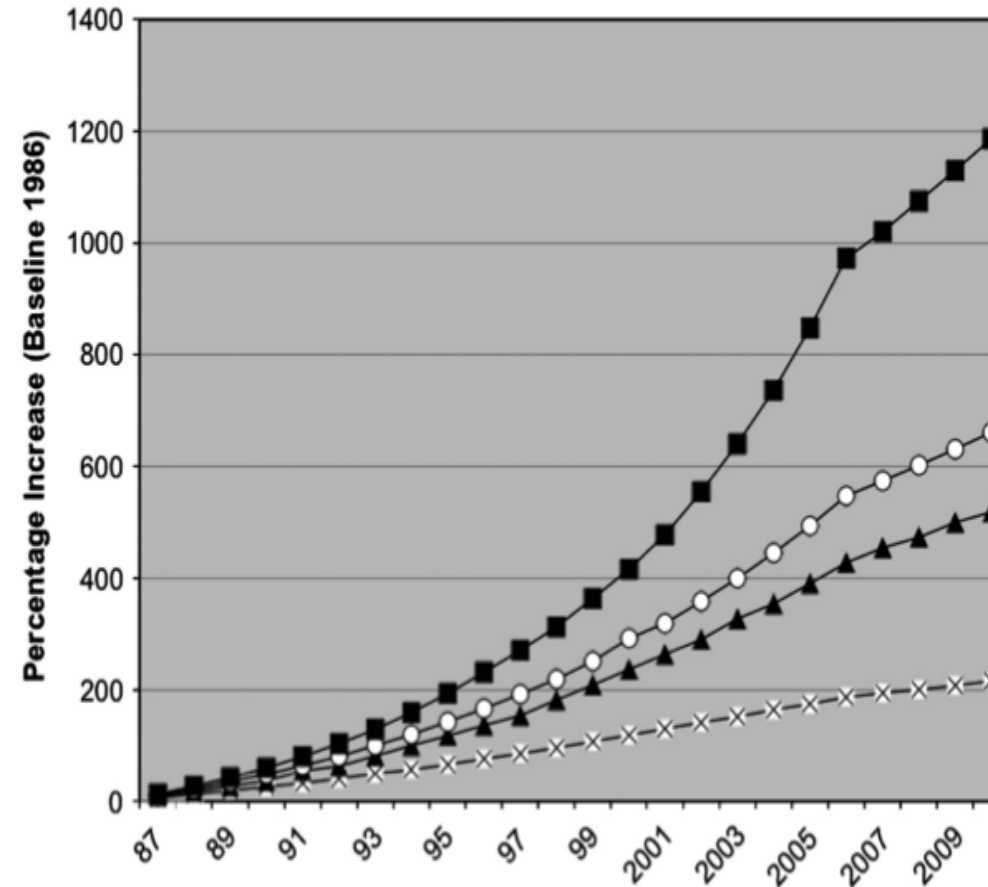


# Life Expectancy in last 60 years

<b>Born</b>	<b>1950</b>	<b>2010</b>
<b>Poorest</b>	36yrs	55yrs
<b>Developing</b>	41 yrs	67yrs
<b>Developed</b>	66yrs	77yrs

**UN Population Division**

# Obesity in last 30 years



*Sturm and Hattori, Int J Obes 2013*

BMI -50

BMI -40

BMI -30



BMI 52

# Obesity and chronic disease

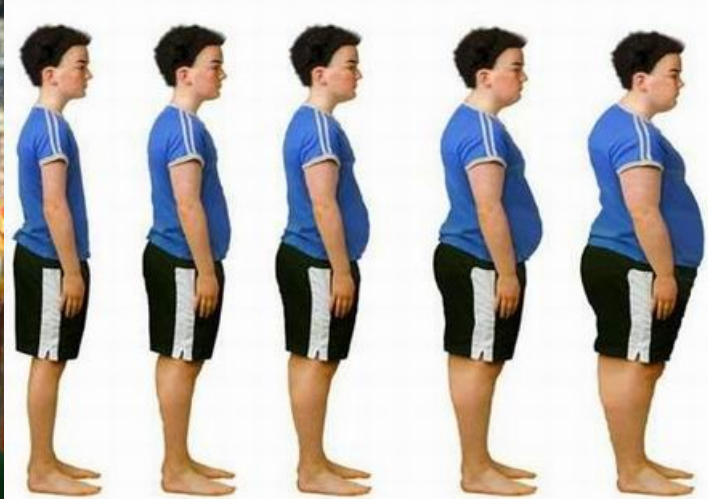
- Diabetes
- Cancer
- Dementia
- Cardiovascular Disease
- Asthma
- Arthritis
- Infections

Causes 1000 Deaths per million population per year  
– up to 80% preventable and huge burden of chronic disease care.

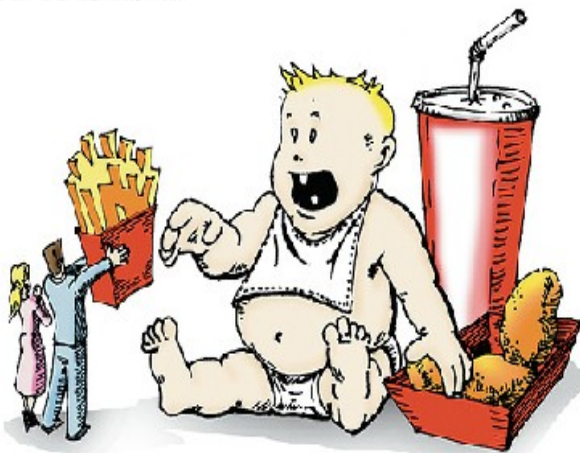
# It all starts in childhood



723048 [RF] © www.visualphotos.com



dreamstime.com



# We have information overload

- 19,450 research articles on obesity in 2013

# What we know now

- Childhood obesity is 3 times more common in the lowest socioeconomic group by age of 3 years
- Significant discrimination in healthcare and employment opportunities
- Experience with bariatric surgery in children increasing

## Original Investigation

### **Perioperative Outcomes of Adolescents Undergoing Bariatric Surgery**

The Teen-Longitudinal Assessment of Bariatric Surgery (Teen-LABS) Study

ORIGINAL ARTICLE

## A Randomized Trial of Sugar-Sweetened Beverages and Adolescent Body Weight

Cara B. Ebbeling, Ph.D., Henry A. Feldman, Ph.D., Virginia R. Chomitz, Ph.D.,  
Tracy A. Antonelli, M.P.H., Steven L. Gortmaker, Ph.D.,  
Stavroula K. Osganian, M.D., Sc.D., and David S. Ludwig, M.D., Ph.D.

ORIGINAL ARTICLE

## A Trial of Sugar-free or Sugar-Sweetened Beverages and Body Weight in Children

Janne C. de Ruyter, M.Sc., Margreet R. Olthof, Ph.D., Jacob C. Seidell, Ph.D.,  
and Martijn B. Katan, Ph.D.

Diabetologia (2013) 56:1520–1530

DOI 10.1007/s00125-013-2899-8

ARTICLE

## Consumption of sweet beverages and type 2 diabetes incidence in European adults: results from EPIC-InterAct

The InterAct consortium





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# What we know now

- Sedentary time is the 4<sup>th</sup> highest ranked preventable cause of death

“Lack of activity destroys the good condition of every human being, while movement and methodical physical exercise save it and preserve it.”

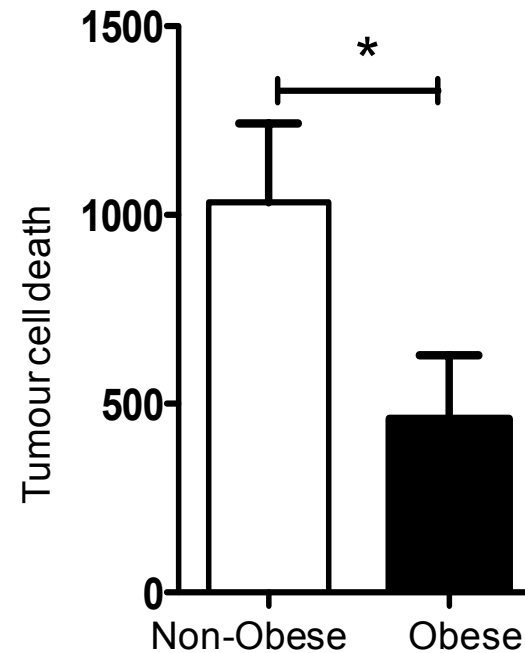
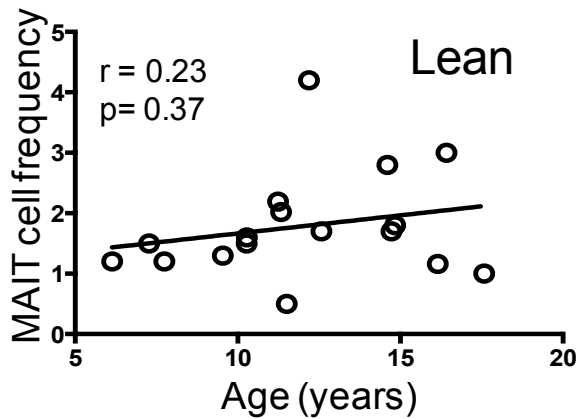
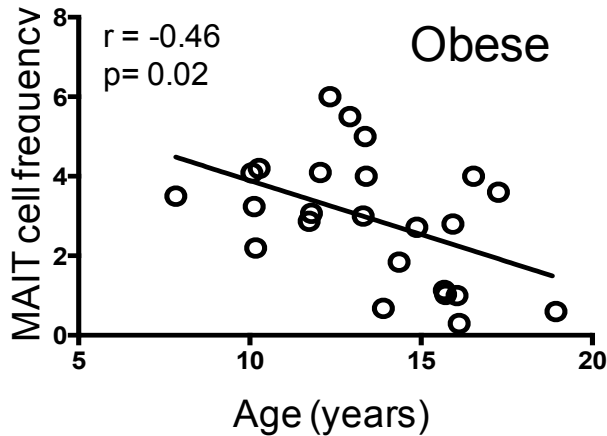
Plato, Athens, 428 BCE.

Died aged 80

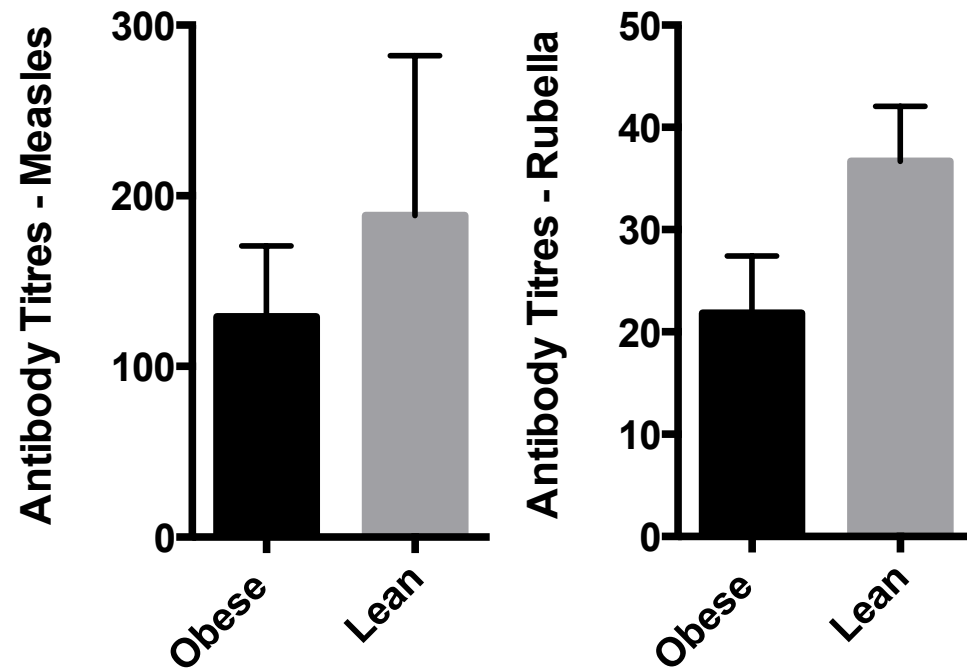
# What we now know:

- Obesity causes immune deficiency
- Defense against weight loss is stronger and more conserved than defence against cancer and infection
- The immune deficiency in turn drives weight gain – classic vicious cycle

# Changes in innate immune cells and altered function present in obese children.

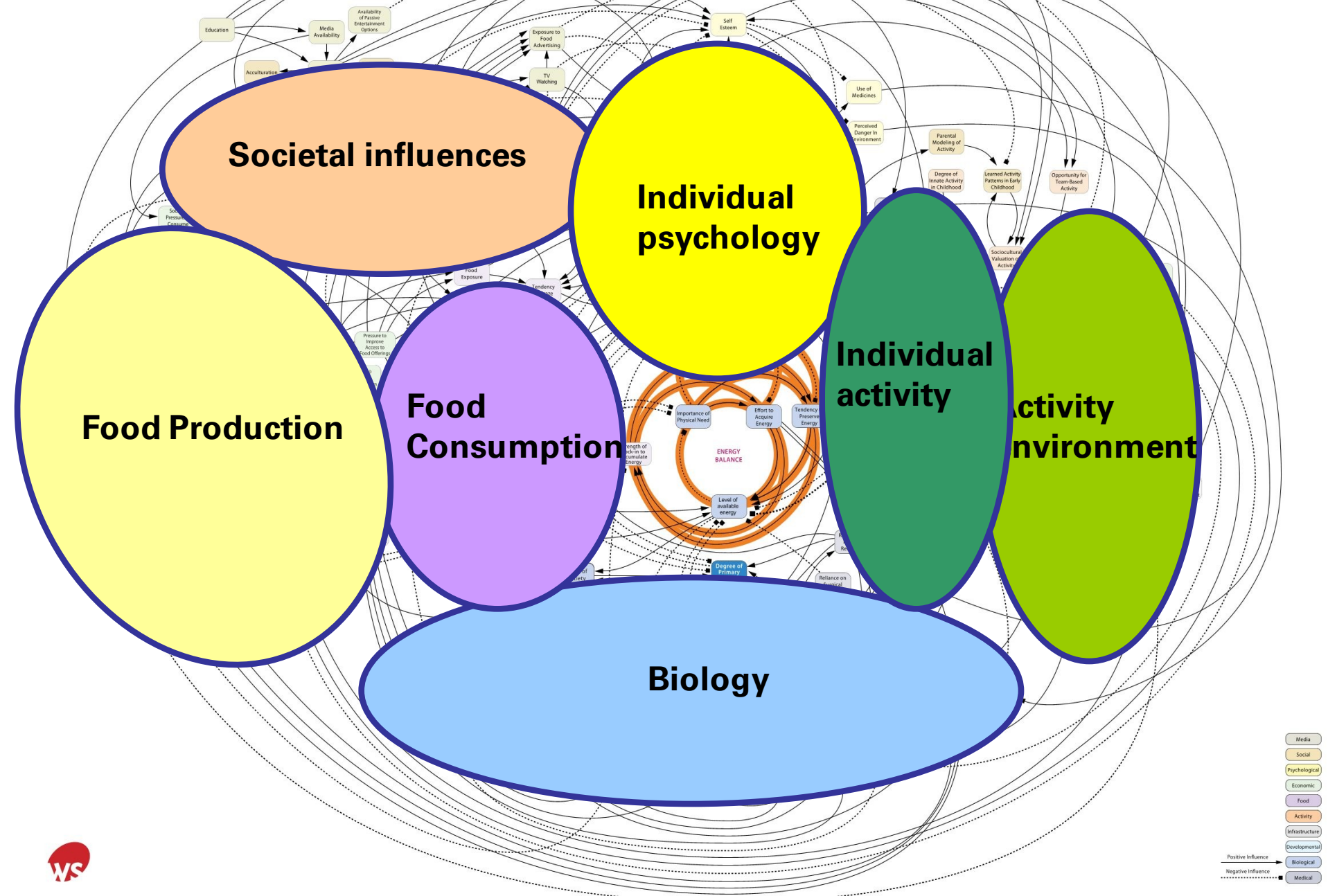


# What about response to vaccination?



- Impaired responses also for tetanus in obese children
- Risk that communicable disease may be increased by obesity

Full Generic Map



# The EU action plan:

- Area 1: Support a healthy start in life
- Area 2: Promote healthier environments
- Area 3: The healthy option, the easy option
- Area 4: Marketing and advertising to children
- Area 5: Inform and empower families
- Area 6: Encourage physical activity
- Area 7: Monitor and evaluate
- **Area 8: Increase research**

# Increased Research

- This should prioritise mechanistic links between obesity – (causes every disease and makes every disease worse)
- Unprecedented opportunity



# The child's view of obesity

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Age 5

‘Nobody in my class will play with me’

‘Personne dans ma classe va jouer avec moi’

‘Niemand in meiner Klasse wird mit mir spielen’



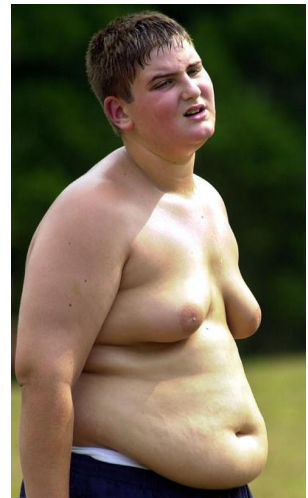
# The child's view of obesity

Age 14

‘They slag me cause I get red and sweaty’

‘Sie Schlacke mich, weil ich rot und verschwitzt’

‘Ils me vanner parce que je reçois rouge et en  
sueur’



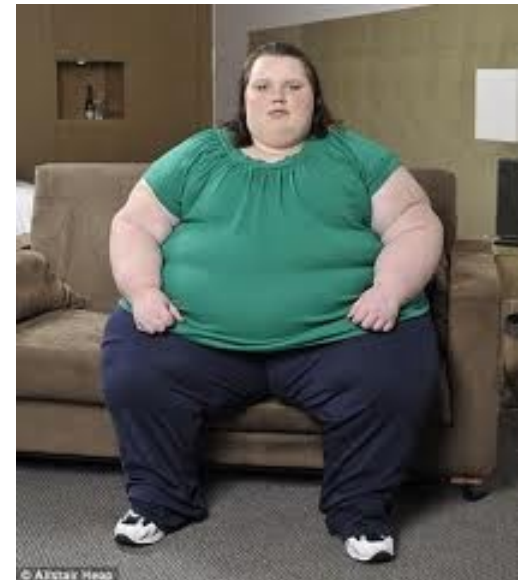
# The child's view of obesity

Age 15

‘I don't go outside anymore’

‘Ich weiß nicht mehr gehen außerhalb’

‘Je ne vais plus à l'extérieur’



# The need for action in childhood obesity

- Obesity is irreversible and a vicious cycle
- Health burden crosses all disease  
Mental, Dental, Physical
- Obese children are marginalised

Need similar attitude to children not smoking.....

