

The CHAMPS – study Denmark

The Childhood Health, Activity, and Motor Performance School study Denmark

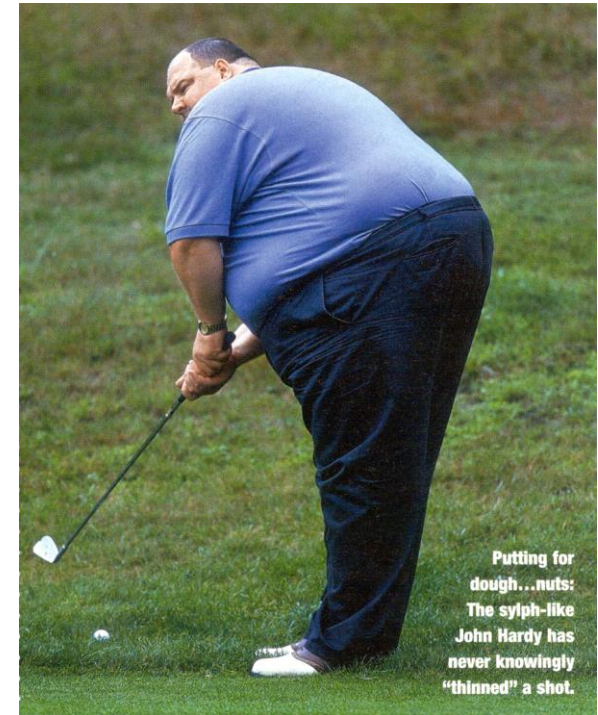
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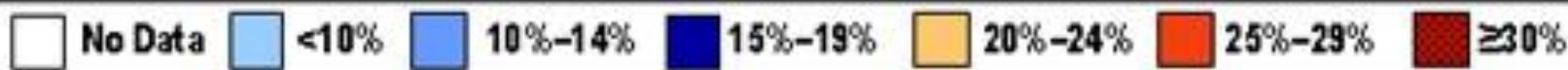
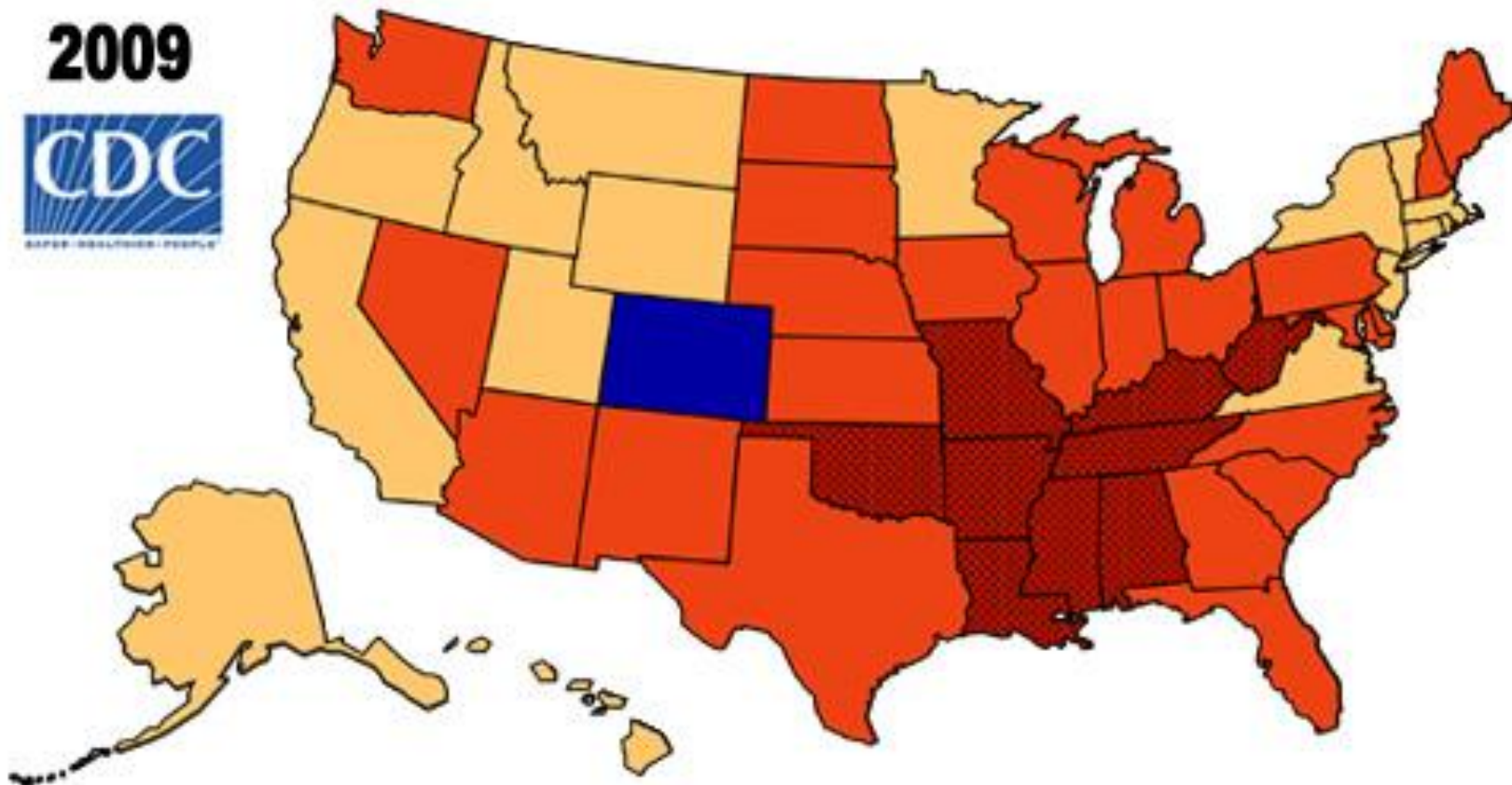


Some things gone wrong...

'Stone age' genes at work today



2009



Presentation

1. How did it start?
1. Sport Schools, what is it? Who participates
1. Some results from the research
1. "Take home messages"

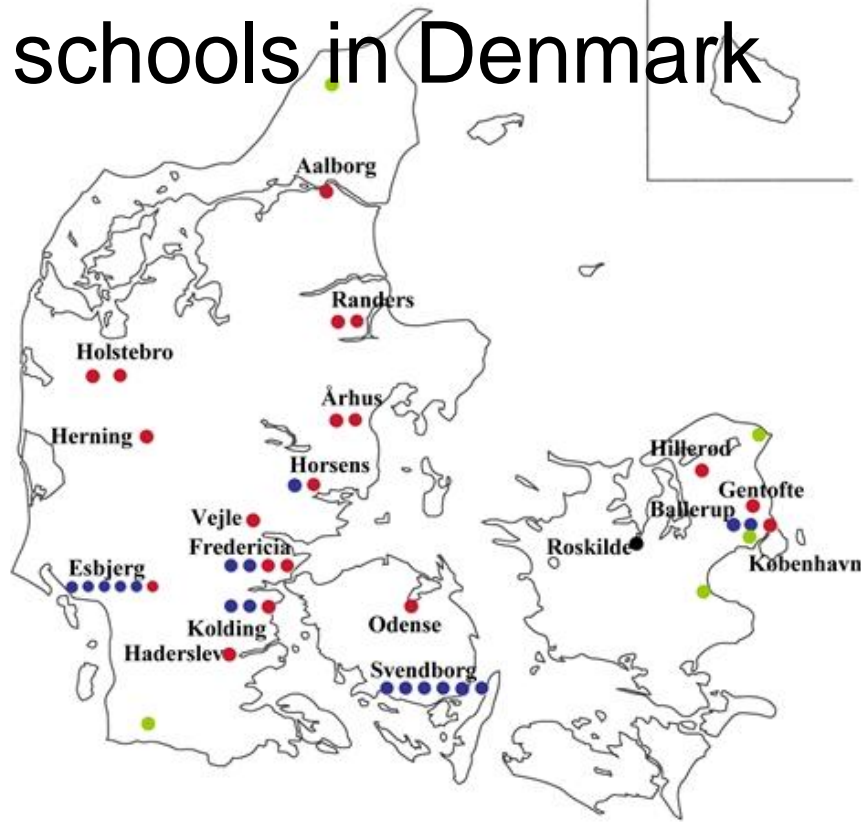


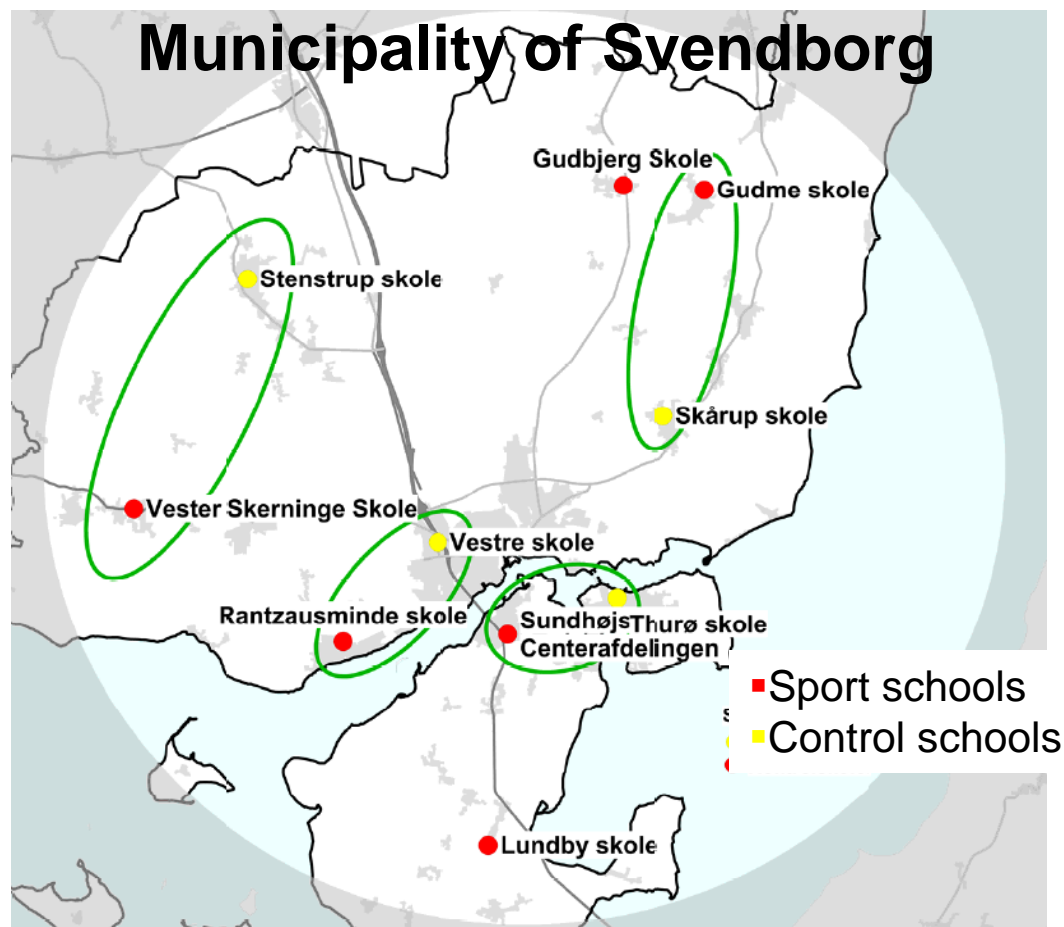
Sport schools in Denmark

- Team Denmark:
 - To help and enable elite sport
 - To help elite sportsmen and women
 - During the time when they compete
 - Making the transition to “normal” life afterward
 - Talent detection



Team Denmark counties with Sport schools in Denmark





Sport Schools in Svendborg

- Not just schools with more PE or sport
- But schools where
 - The PE-teachers developed the sport/PE curriculum
 - Best evidence for age related training



Sport schools in Svendborg

- Six sport schools
 - Not just schools with extra PE
 - Extra education for the PE-teachers
 - 270 minutes per week or 6 lessons per week
- Start August 2008 kindergarten – fourth grade
- Four "control schools"
 - Business as usual, two PE-lessons per week
- Total 1200 children



Sport school necessities

Parents and children

Schools and
teachers

Town
administration

Politicians



The start of the research?

- Fall 2007 meetings with Sport Study Sydfyn
 - Svendborg becomes TEAM-Denmark municipality
 - Several sport schools, including kindergartens
 - Research project planed
- August 2008
 - The schools and the research starts



Main Aim

To assess the present and future health effects of the increased physical education in sport schools.



Fasting
bloodsamples
dexa scanning

Effect parameters and flow

Fasting
bloodsamples
dexa scanning

Bloodpressure

Bloodpressure

Bloodpressure

Motor skills
VO2max
Anthropometry
Hyper mobility
Tanner

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Motor skills
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Sept.
2008

March
2009

Sept
2009

March
2010

Sept.
2010

March
2011

accelerometry for 1
week

accelerometry for 1
week

Questionnaire on :
Health, lifestyle, SES

SMS track: registration of injuries and participation i leisure time sports

Intervention for 3 schoolyears



Sport participation

- Leisuretime sport participation per week
 - Sport schools: 1.4 times per week
 - Control schools: 1.7 times per week
- School sport per week
 - Sport schools: 3 times per week
 - Control schools: 1 time per week
- Total sportparticipation per week
 - Sport schools: 4.4 times per week
 - Control schools: 2.7 time per week



Effect of sport and sport schools on obesity

- Sport schools:
 - Half the risk of getting obese compared to the “normal schools”
- Leisure time sport:
 - Also reduces the number of obese children



Effect of sport and sport schools on insulin resistance and risk of type II diabetes

- Sport schools:
 - Two thirds less children develop insulin resistance
- Leisure time sport:
 - Reduces s-insulin and s-glucose significantly



Economy

- Price
 - Extra lessons cost;
 - Svendborg with full participation (5000 children) € 2 million per year
 - For Denmark € 200 million per year
- Savings in the long run
 - Cost of type II diabetes in Denmark; € 2 billion per year
 - Potential saving € 1 billion per year
- Political question: What are we waiting for?!!!



Take home message

- In childhood it is possible to
 - Reduce the number of overweight and obese children
 - Half the risk of insulin resistance and type II diabetes
- It requires
 - Schools that "want to do it"!!!
 - Parents and children that support the idea
 - Administration and politician that are willing to find the start money

