Healthy dietary habits - how to promote positive changes?

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- 10-15% of all years of lifes lost in Europe are due to unhealthy diet

- About 30% of all death due to cardiovascular disease could be prevented through healthier diet

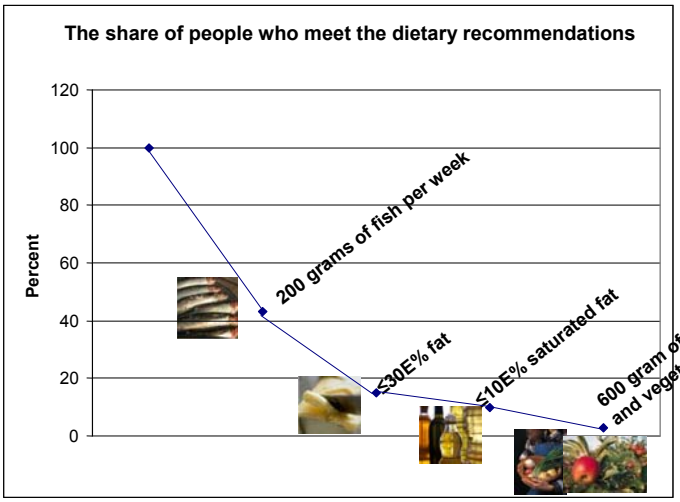
The effect of dietary changes in controlled clinical trials

Saturated fat: Oslo Diet-Heart study: 25% reduction in trombosis

Fish: Dart study:
29% reduction i mortality

Mediterranean Diet: Lyon Diet Heart Study:
70% reduction i mortality

Dietary habits in the Danish population



Individualbased dietary counselling
to
promote healthier dietary habits

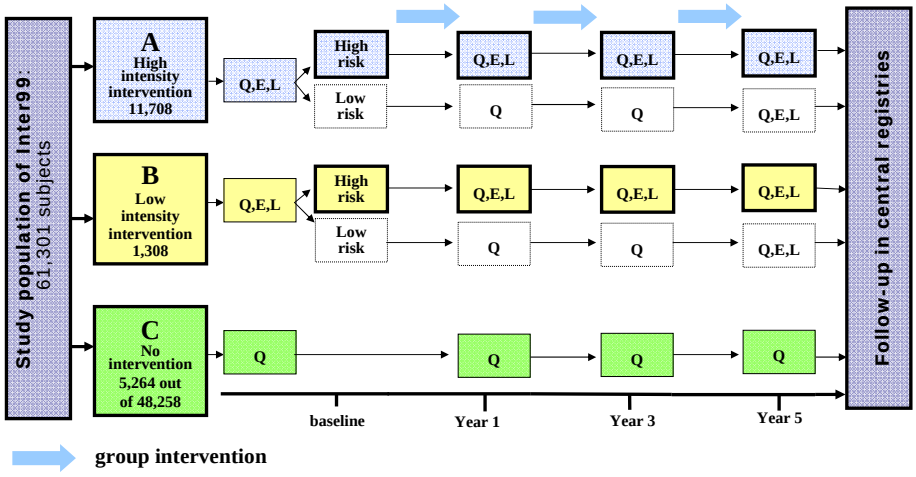
The Inter99 study

A large randomised life-style intervention study for prevention of ischaemic heart disease in the general population

www.fcfs.dk

Toft et al: Prev Med. 2008 Oct;47(4):378-83

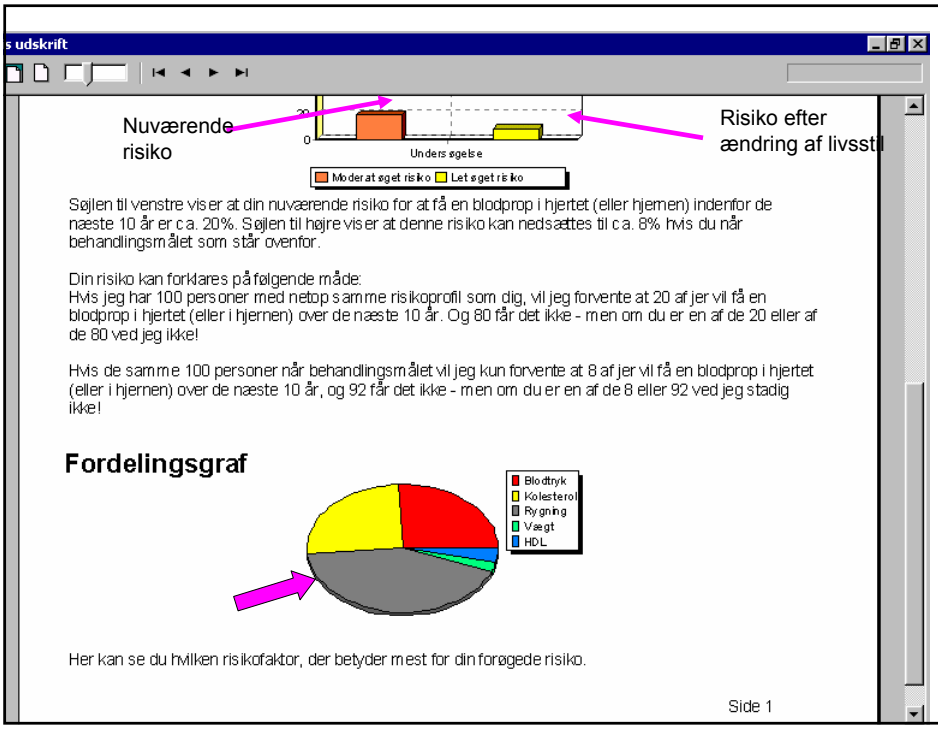
Flow chart Inter99



Individual lifestyle counselling

”Motivational Interviewing”

“Health Belief Model”, “Social Cognitive Theory”, “Transtheoretical Model”



Diet- and exercise counselling groups

- 15-20 participants
- 6 meetings
- 4-6 months
- Education
- Personal goals
- Family members

Methods and analyses

Dietary goals

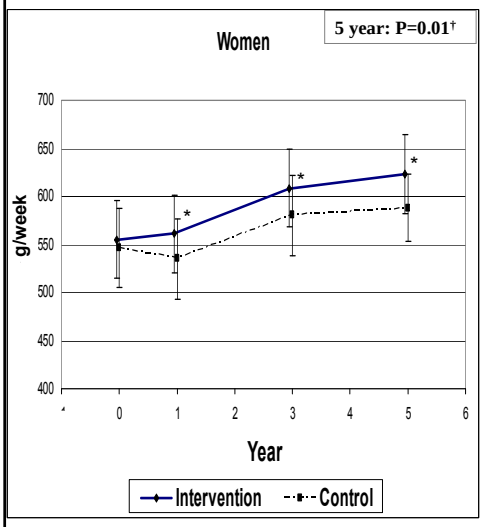
Measurement

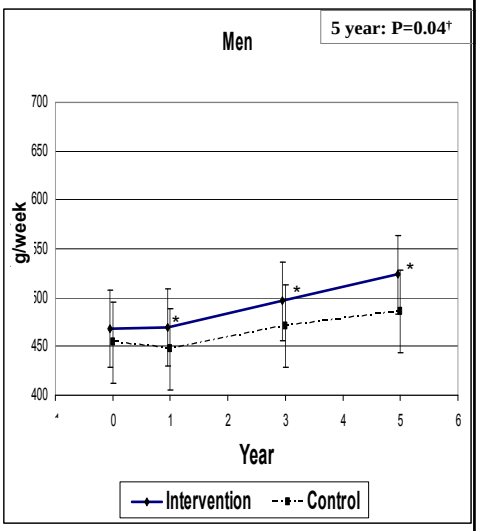
48-item food frequency questionnaire

Analyses

Multi-level, longitudinal regression analyses with random effects

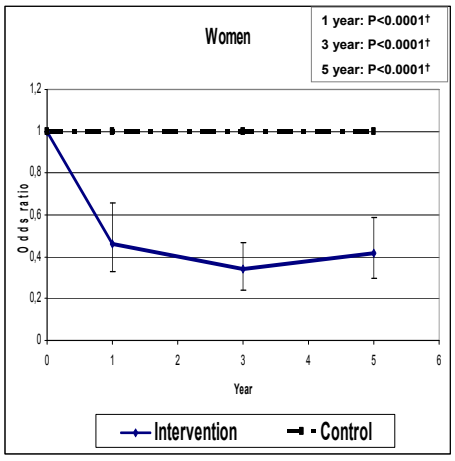
Development in the intake of salads and cooked vegetables

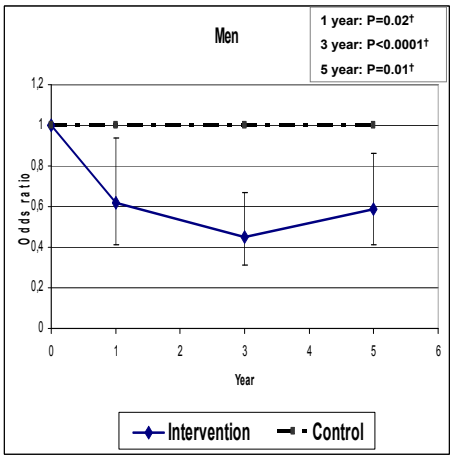




Results are adjusted for age, sex, smoking, physical activity, alcohol, education, employment, living with partner, perceived risk associated with dietary habits and self-rated health. *Difference in intake between intervention and control group, P<0.05; †: P value for difference in the *development* in intake

Odds ratio for using saturated fats on bread and for cooking





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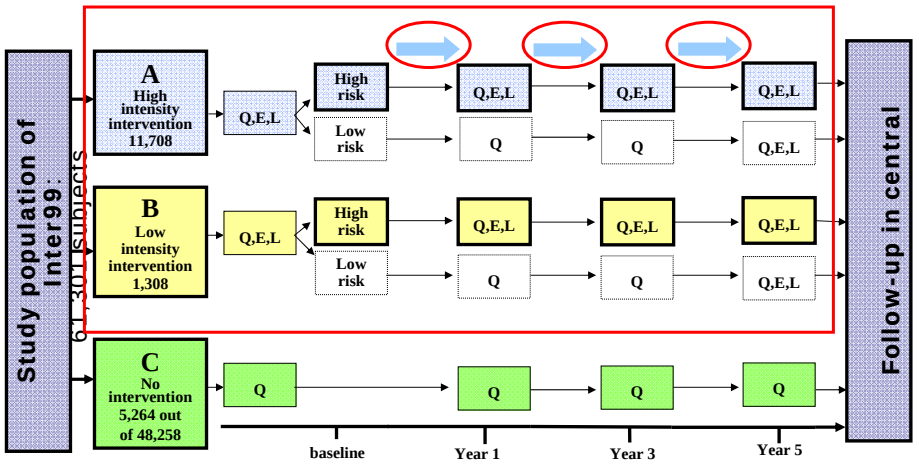
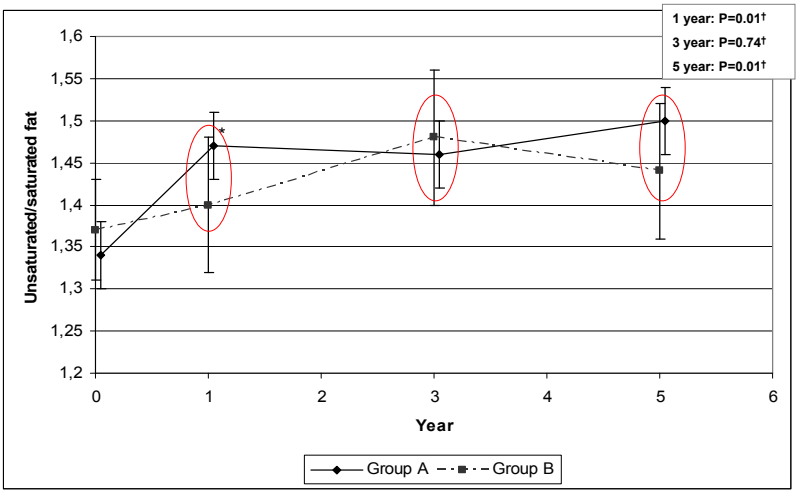
Flow chart Inter99



group intervention

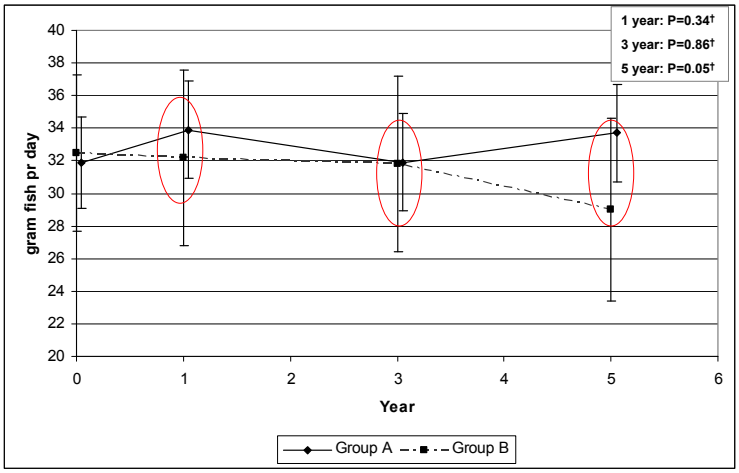
Q,E,L: questionnaires, health-examination, life-style consultation Q: questionnaire only

Development in unsaturated/saturated fat ratio



Results are adjusted for age, sex, smoking, physical activity, alcohol, education, employment, living with partner, perceived risk associated with dietary habits, self-rated health, total fat and energy intake.
*Difference in intake between intervention and control group, P<0.05; †: P value for difference in the development in intake between groups.

Development in fish intake



Results are adjusted for age, sex, smoking, physical activity, alcohol, education, employment, living with partner, perceived risk associated with dietary habits and self-rated health. †: P value for difference in the development in intake between groups.

Conclusion

Multi-factorial lifestyle intervention promoted significant healthy long-term dietary changes in a large general population.

Group-based counselling promoted maintenance

The overall evidence

- Good evidence that individual counselling can promote moderate positve changes in the dietary intake of individuals with a high risk of disease.
- The long term effect is unclear.

The effect of multi-factorial lifestyle intervention on CVD mortality

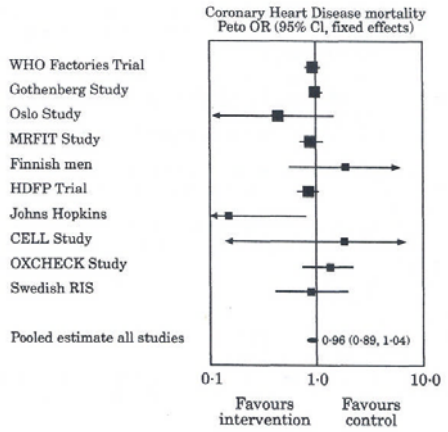
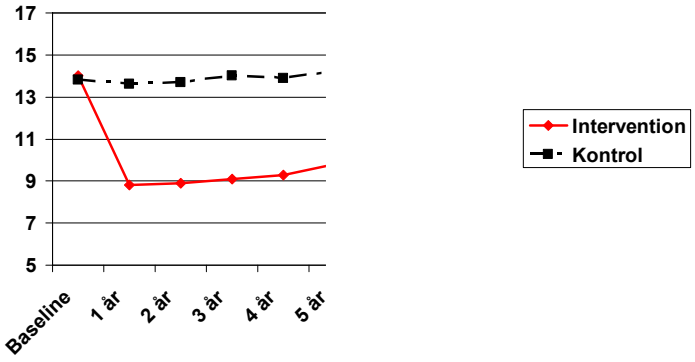


Figure 3 **Meta-analysis of trials of multiple risk factor interventions: coronary heart disease mortality. Abbreviations, see Fig. 2 legend.**

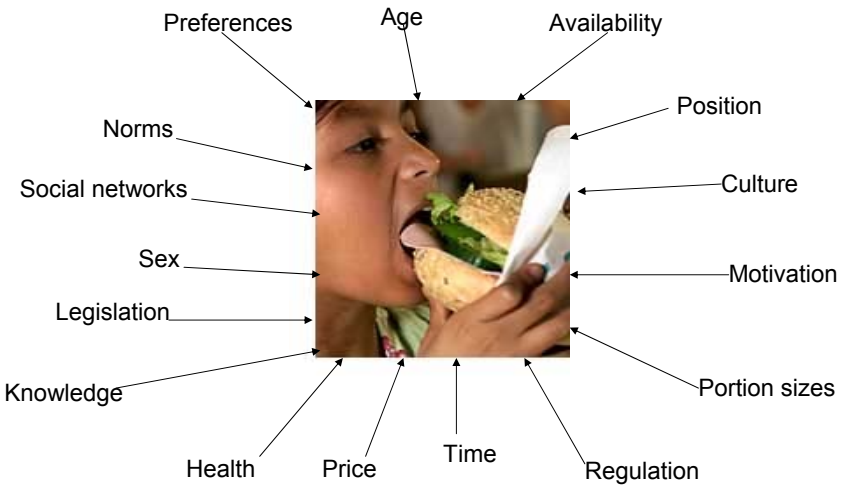
S Ebrahim (systematisk cochrane review)

Lifestyle changes (effect of individual intervention)

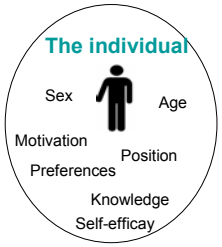
End of the intervention



Many factors affect dietary habits



Factors affecting dietary habits



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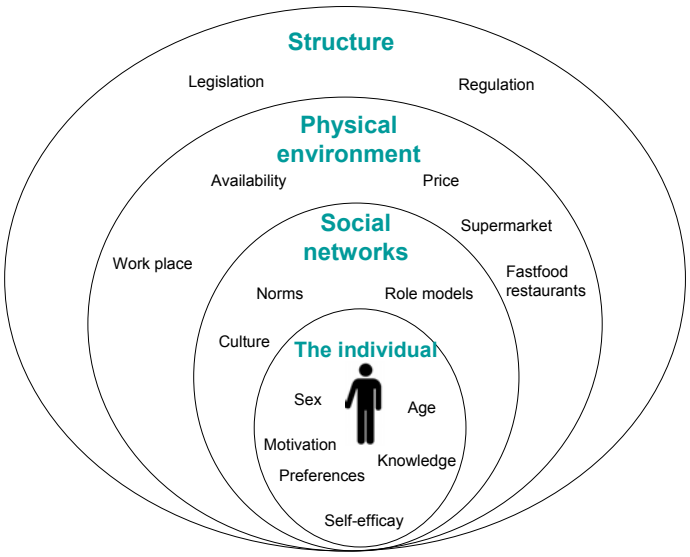
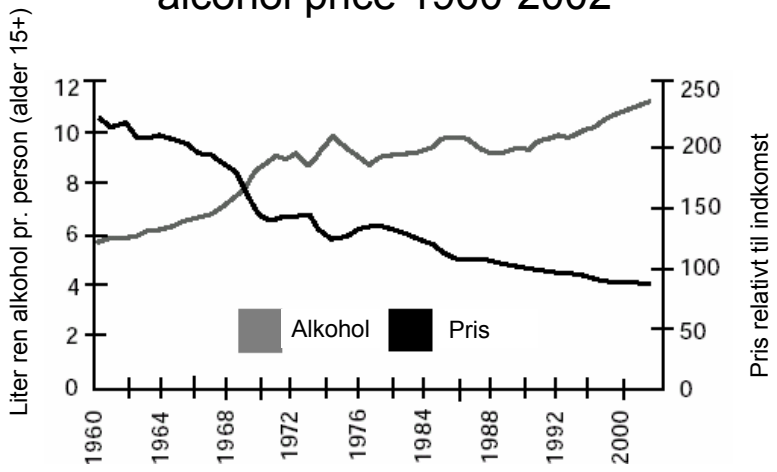


Availability - canteens

- ↑ Fruits og salads + ↓price:
  Sale increased with a factor 3
- Moving unhealthy snacks:
  13-15% reduction in sale
- ↓ Fat in the canteen food:
  ↓ Fat intake by 6-12 energy percent

Price regulation - alcohol

Alcohol intake in the UK in relation to the alcohol price 1960-2002



Price regulations - Milk

- 1983:
  - Price:
    - Whole milk: ↑25%
    - Semi-skimmed milk: ↑10%
    - Skimmed milk: ↑5%
- 1984:
  - Sale
    - Whole milk: ↓25%
    - Semi-skimmed milk: ↑27%
    - Skimmet milk: ↑18%

Ottawa charter 1986

Make the healthier choice the easier choice

2011:
Is the unhealthier choice the easier choice?

Portion sizes

- A strong predictor of energy intake

- **The sugar intake … a factor three**
  - Children and adoles… candy and 140 liter… per year
  - Sugary sodas: from … o 2 liters often
  - Candy bags: 50 g t…
  - Take three, pay for …

- Standard meal at a fast food restaurant
  - 1985: 625 kcal
  - 2005: 1450 kcal

Salt

- Salt intake in Denmark: 10-11/8-9 g in men/women
- WHO recommends <5 g
- ↓3 g salt: ↓14% stroke=1600 strokes per year saved
- 70% of the salt intake comes from processed foods
- Canteen meals: 3.4 g salt/meal or 14.6 g/10 MJ (Rasmussen et al, 2010)
- Ex. 1 pizza with meat/fish: 11.3 g salt

Is it a free choice to eat a healthy lunch?

Or to buy healthy foods?

”Default”

- **The computer world**
  - ***Defaults: settings that most people would choose anyway. Makes optimal use possible without a great effort from the user***
- **Sundhed**
  - ***Simplify the choices of the individuals, so that most people choose the product they would have chosen if they had the time to think.***

”Defaults” 2011

- **Big bottles, bags and boxes**
  - **We buy more**
- **Availability**
  - **Food, snacks and drinks at any time**
- **Advertisment**
  - **The more unhealthy – the more advertisment**
- **The location of foods in the supermarket**
  - **Affect our choices**
- **Result:**
  - **We have to fight against an unhealthy “default”**
  - **Most of our choices are not rational, conscious choices**

Conclusion

To promote healthier dietary habits:

A combined strategy:

- Make the healthy choice the easy and cheap choice
- Combined this with campaigns and individual counselling for high risk individual
- No strategy can do it alone

We need to change the ”default” of dietary habits