

# Does worksite provided meals lead to healthier eating - a Finnish perspective

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# The presentation will focus on:

- Introduction
- Worksite provided meal in a Finnish context
- National Nutrition recommendations for worksite meals
- Describing meals eaten outside home in Finland -  
Focusing on meals at worksite canteens
- Who is eating meals at worksite canteens in Finland?
- Does worksite provided meals lead to healthier eating?

# Eating outside the home - part of modern life

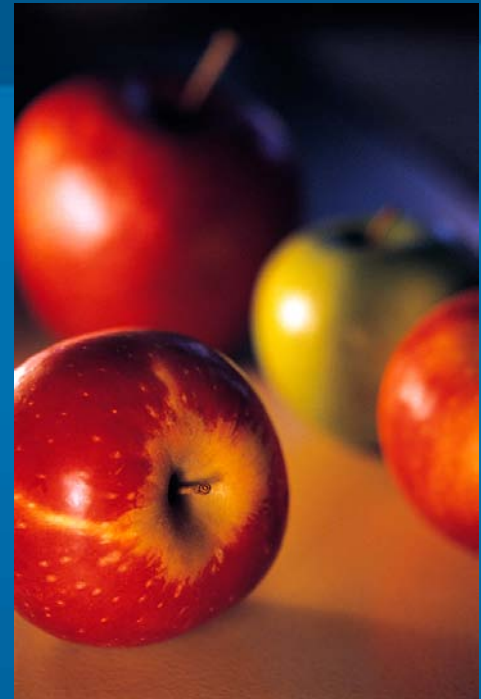
- Become more common since women are taking a more active part in labour force and less time is left for food preparation in the household
- Higher family incomes
- Smaller households
- Higher supply of affordable and convenient fast-food outlets
- More common among higher educated

# Eating outside the home - contribute to unhealthy diet?

- Foods with higher energy density, (French et al 2001), larger portion size
- More saturated fat and NaCl, less Ca, fibre and Fe (Lin et al 1999, USA)
- Higher energy intake (Orfanos et al 2007, 10 countries in Europe)

# Promoting healthy eating outside home - the role of worksite and worksite canteens

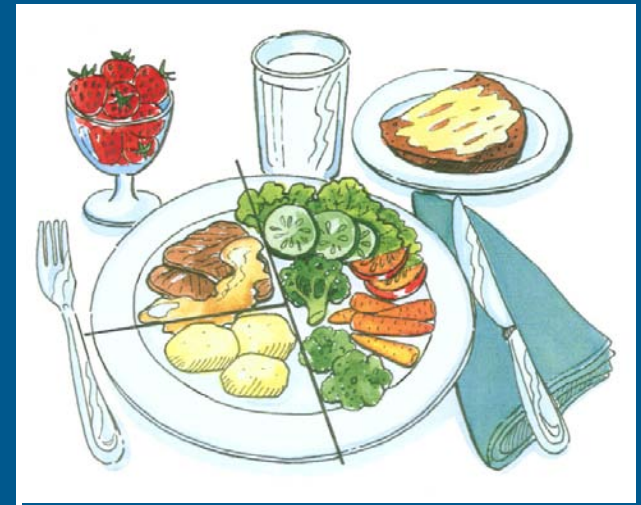
- Reaches the greatest proportion of the adult population
- Has good potential to promote healthy dietary habits during the working day
- Foods and meals recommended in dietary guidelines can be provided by worksite canteens



# The Finnish context

- 40% of adults eat two hot meals daily
- Cooked/prepared lunch usually the main meal (60% eat daily cooked lunch)
- Women have been taking an active part in labour force since 1945
- Most women are employed full time
- Free school lunches (cooked/prepared meal) since 1943
- Long tradition of worksite provided meals

# Worksite canteen in Finnish context



- A space located at or near the workplace
- Canteen and meal can partially be subsidised by the employer
- The complete meal following the plate model is included in the price
  - main meal, salad, bread, milk
- Long traditions of catering guidelines
  - Catering guidelines were developed in the 1970s and were included in trade union agreements in both the public and private sector
  - National nutrition recommendations for staff canteens have been published in 1987, and in 1994

# National nutrition recommendations for staff canteens (1994)

- Include 1/3 of daily energy need (600-1000 kcal)
- Fat < 30 E%
- Protein ≤15 E%
- Fe 1,4 mg/MJ = 6 mg/100kcal
- Vitamin C, 8 mg/MJ = 33 mg/1000 kcal
- Vitamin A, 105 µg/MJ = 440 µg/1000 kcal

# Eating outside home in Finland

- 811 million meals served outside home (including schools, children's daycare, etc) year 2008  
= ca 2,3 million meals per day (population 5,2 million)
- Average = ca 155 meals /person/year

(Source : Nielsen 2008)

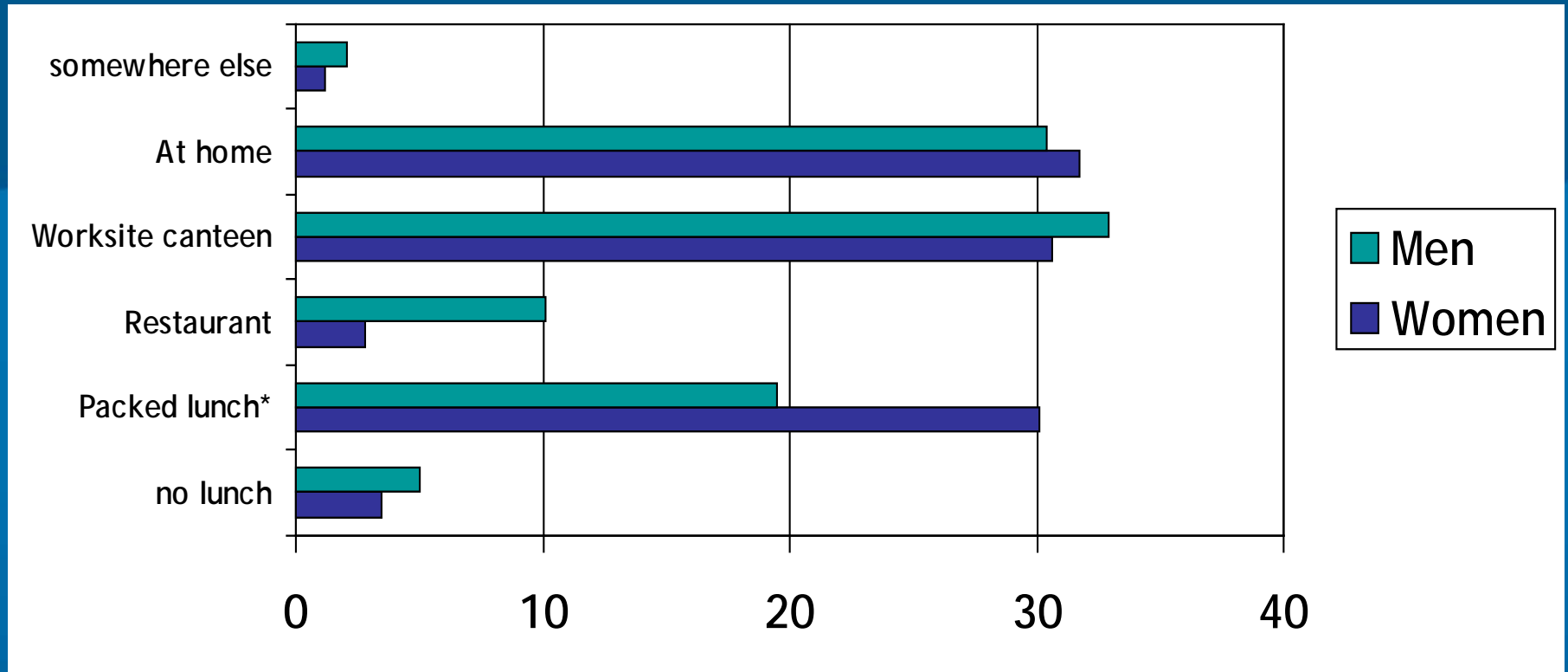
# Catering kitchen locations and shares of meals outside home, year 2008

Location	Meals served %
Schools and vocational institutes, daycare	31
Cafeterias, restaurants, hotels	39
Old peoples homes and children's homes	11
Hospitals	9
Worksite canteens*	8

\*61 million meals/year served at worksite canteens= 260 000 meals per day

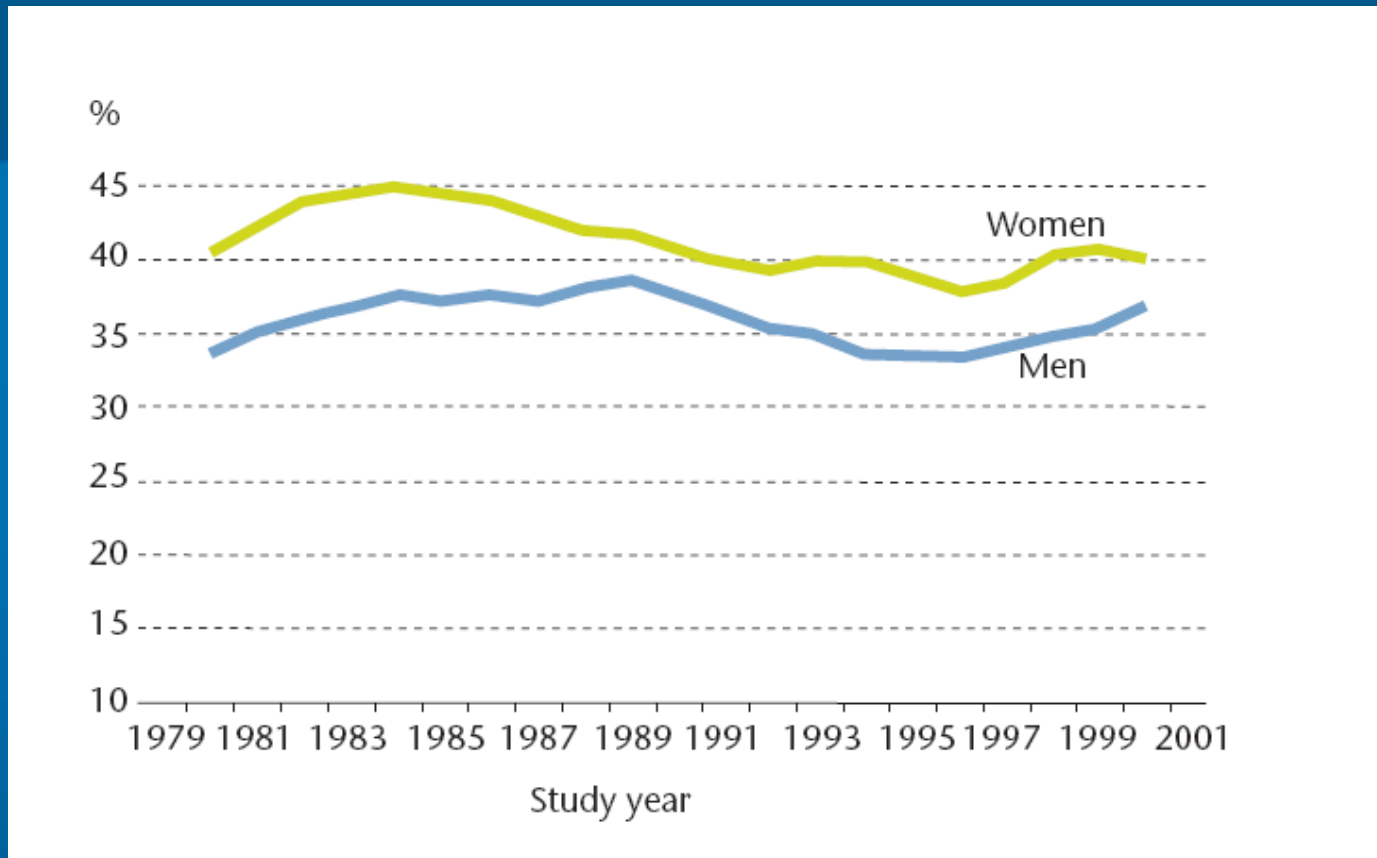
(Source : Nielsen 2008)

# Selection of lunch site on working days for 15-64-year-old men and women



\*Any kind of food that is carried to work from home or a shop and is eaten at work (but not in the worksite canteen)

# Having lunch at worksite canteen (%) in Finland, 1979-2001, three-year moving average, adjusted for age



Source Raulio et al 2005.

# Determinants of having lunch at worksite canteen

- Age - most common among age-group 35-54
- Educational level - more common among those with high educational level
- Place of residence - more common in Helsinki capital area
- Marital status - less common among married
- Parental status - less common if having children at home

# Lunch at worksite canteen by educational level

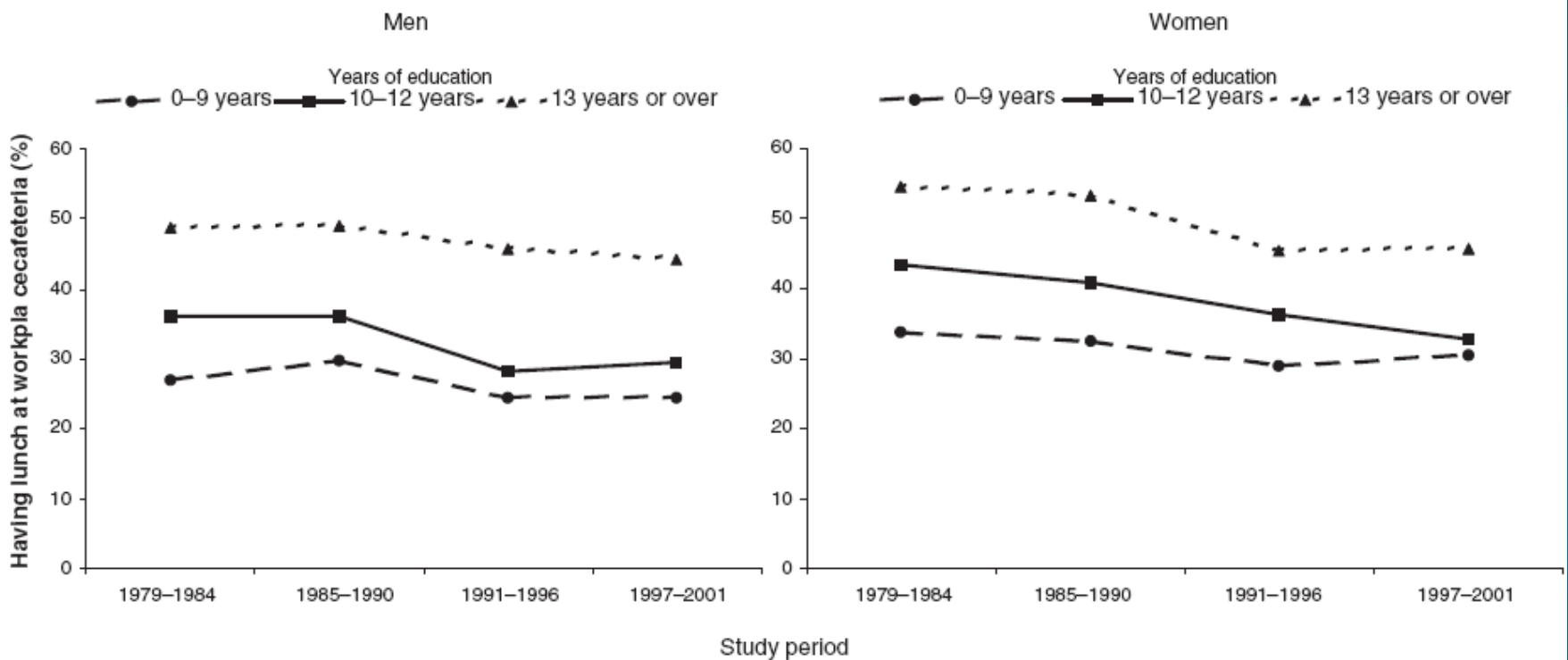


Figure 2 Having lunch at a workplace cafeteria among employed Finnish adults according to the years of education and study period, adjusted for age.

# Availability of worksite canteens

- Susanna Raulio will present results later...

# Does worksite provided meals lead to healthier eating

- Limited research
- Results from studies among small and selected substudies
  - Employees (40-60 years) from the city of Helsinki (Roos et al 2004)
  - Young Finnish adults (Lallukka et al 2001)
  - Young Finnish adult in Oulu region (Laitinen et al 2000)
- Studies with larger or nationally representative data
  - Health Behaviour and Health among the Finnish Adult Population (Raulio et al 2004, Raulio et al submitted)
  - FINDIET study (Raulio et al, Journal of food Service, in press)

# Eating lunch at work site canteen versus other and total diet –small studies

	Laitinen et al 2000	Lallukka et al 2001	Roos et al
Closer to recommended food habits	X		X
Vegetables +	X	X	X
Fish +	X		X
Chicken +	X		
Low fat milk +	X		

# Food consumption by lunch place, adjusted for age, education and place of residence (Health Behaviour and Health among the Finnish Adult Population)

	Men (n= 2125)	Women (n= 2615)	All (n= 4740)
	OR (CI 95 %)		
<b><i>Lunch place</i></b>	<b><i>Consumption of vegetables</i></b>		
Worksite canteen	1	1	1
Restaurant, bar	0,85 (0,62 - 1,17)	1,18 (0,77 - 1,79)	<b>0,76 (0,60 - 0,97)</b>
Other	<b>0,54 (0,41 - 0,70)</b>	<b>0,62 (0,51 - 0,74)</b>	<b>0,64 (0,55 - 0,74)</b>
Home	0,79 (0,60 - 1,03)	<b>0,69 (0,55 - 0,87)</b>	<b>0,72 (0,60 - 0,85)</b>
	<b><i>Consumption of fish dishes</i></b>		
Worksite canteen	1	1	1
Restaurant, bar	<b>0,68 (0,50 - 0,92)</b>	0,90 (0,54 - 1,48)	<b>0,66 (0,51 - 0,85)</b>
Other	<b>0,68 (0,54 - 0,86)</b>	<b>0,60 (0,49 - 0,74)</b>	<b>0,65 (0,56 - 0,75)</b>
Home	1,01 (0,78 - 1,31)	<b>0,66 (0,51 - 0,84)</b>	<b>0,81 (0,68 - 0,97)</b>
	<b><i>Consumption of boiled potatoes</i></b>		
Worksite canteen	1	1	1
Restaurant, bar	0,56 (0,31 - 1,01)	0,65 (0,29 - 1,45)	<b>0,57 (0,36 - 0,91)</b>
Other	0,94 (0,66 - 1,32)	<b>0,51 (0,37 - 0,72)</b>	<b>0,69 (0,54 - 0,87)</b>
Home	0,98 (0,68 - 1,41)	0,96 (0,67 - 1,37)	0,96 (0,75 - 1,24)

# Food intake (g/MJ) during lunch time -worksite canteen compared to packed lunches (adjusted for age, place of residence and education), FINDIET

- Men (n=108)

More

- Fresh vegetables
- Fat free milk
- Salad dressings

Less

- Ryebread
- Pastries, pizza
- Hard cheeses

- Women (n=153)

More

- Fresh vegetables
- Vegetable foods
- Boiled potatoes
- Fish dishes
- Meat dishes
- Fat free milk
- Sauces

Less

- Ryebread
- Pastries, pizza
- Fruit and berries
- Hard cheeses

Source: Raulio et al , Journal of Food Service, in press

# Nutrient intake (g/MJ) during lunch time -worksite canteen compared to packed lunches (adjusted for age, place of residence and education), FINDIET

- Men (n=108)

More

- Carotenoids
- Vitamin A
- Energy

- Women (n=153)

More

- Fat (E%)
- Energy

Less

- Fibre
- Protein
- Carbohydrates (E%)
- Sugar (E%)

# Conclusions (1)

- A large proportion of Finnish employees eat at worksite canteens ->
- Worksite and worksite canteens offer a good arena for promotion of healthy food habits
- Regional differences and socioeconomic differences in use of worksite canteen exist
- Limited research on the effect of eating lunch at worksite canteen on food and nutrient intake
- research suggests that those eating at worksite canteen are more likely to have a diet closer to dietary guidelines (especially for men)

# Conclusions (2)

- > To serve a cooked meal including vegetables during working time may be an efficient way to improve diet among adult employees.
- > More emphasis should be put on increasing the possibility for employees to have a healthy lunch at staff canteen.
- More scientific research with prospective or intervention design is needed
- More research is needed on the nutritional quality of foods served at worksite canteens and its effect on employees diet and health



# Finnish Heart Association: Heart symbols for meals - Recommendations per meal (2008)



- **Criteria based on national nutrition recommendations**
  - Energy 600 - 900 kcal (1/3 of daily needs)
  - Fat 30 – 35 E-%
  - Saturated fat <10 E-% (< 1/3 fat)
  - Salt <2 g/meal
  - Green salad or fresh vegetables with oil-based dressing,
  - Low-salt and high-fibre bread
  - Margarine
  - Non-fat milk or sour milk

# Packed meal " eväs" / "matpäck" in Finnish context



- Any kind of food that is carried to work from home or a shop and is eaten at work (but not in the worksite canteen)
- A typical packed meal includes bread + spread, cheese, cold cuts, fruits yoghurt, leftovers, ready to eat meals, salad