

A close-up photograph of a person's hands garnishing a dish in a white take-away container. The dish consists of a breaded item, possibly a fish fillet, topped with a dark sauce and garnished with fresh green herbs. To the left of the main item are several bright red strawberries. To the right, there is a small portion of yellow food, likely a potato wedge or french fry. The background is blurred, showing other people and tables in what appears to be a canteen or food service area.

New possibilities in influencing eating patterns through healthier canteen take away

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Canteen take away (CTA)

- 50 -100 workplaces
- Benefit for employees
- And their families
- 1-5 days a week
- Can choose among different menus
- Order before hand
- Pay and take home
- Ready to heat meals



Research and development project

- Worksite health promotion **at home!**
- Improve work-life balance
- Improve an existing concept
- Study the health effects and benefits



Gitte Laub Hansen



Better food at work 2009



Aim - Study

- Study the impact of a canteen take away program on the dietary habits of employees
- Six week diet intervention in a Danish white collar worksite

Methods

- Four 24 h diet recalls
- Nutritional quality of their diet were evaluated by the calculation programme (GIES)
- Intake from days with-out CTA were compared intakes on days with CTA
- Statistical Software STATA (version 10, 2007, StataCorp LP, College Station, Texas)



Participants

Mean \pm SD	Women (n=14)	Men (n=13)
Age (years)	40,0 \pm 7,2	39,9 \pm 5,8
Height (cm)	167,0 \pm 5,8	181,0 \pm 4,9
Weight (kg)	64,9 \pm 5,7	83,2 \pm 6,4
BMI (kg/m ²)	23,4 \pm 2,1	25,5 \pm 2,1
Education	8 university degree	7 university degree
Number of children	9 living with spouse and children (only few without children)	10 living with spouse and children (only few without children)
User of CTA	Not regular users	Both regular users and non users

Intake		Mean \pm SD g/day	Difference g/day (%)	p value
Total energy (kJ)	w CTA usual diet	8542 \pm 3272 9680 \pm 2646	-1138 (-13)	0,0305*
Total fat	with CTA usual diet	71 \pm 33 85 \pm 32	-14 (-20)	0,0211**
Saturated fats	with CTA usual diet	28 \pm 17 35 \pm 15	-7 (-25)	0,0088**
Carbohydrates	with CTA usual diet	252 \pm 92 279 \pm 67	-27 (-11)	0,0388**
Added sugars	with CTA usual diet	38 \pm 42 37 \pm 23	1 (3)	0,6480**
Dietary fiber	with CTA usual diet	24 \pm 8 26 \pm 6	-2 (-8)	0,2945*
ESV	with CTA usual diet	769 \pm 277 691 \pm 241	222 (23)	0,0057**

Preliminary data analyzed with * Parametric test ** Non-parametric test

Results according to sex

- **Women** (n=14) had significant lower intakes of energy, saturated fat and significant higher intakes of F&V on days where CTA were consumed, compared to intake on days without CTA
- **Men** (n=13) had insignificant but higher intakes of F&V days with CTA

Results according to length of education

- Differences among employees with the **longest education** (n=17) were significant for total energy, protein, total and saturated fat, and carbohydrates
- Differences among employees with the **shortest education** (n=10) were significant for F&V

Energy distribution (E%)

Mean	Days with CTA	Without CTA	Danish diet	Danish nutrition recommendation
Protein	16,4	15,5	15	15
Fat	31,6	33,6	35	30
Saturated fat	12,1	13,9	14	10
Carbohydrates	52,0	50,9	52	55

Discussion

- This study supports the hypothesis that CTA can improve the diet of the employees in a white collar worksite - but
- The participant were self selected and were “paid” to participate
- It was not a true intervention – before and after CTA, the participants acted as their own “controls”
- Meals are not independent events
- Is it possible to reproduce in a blue collar work site?

Enabling factors and barriers to more CTA

- High participation rates among women
- Lack of time is perceived as a barrier to eat more healthy
- Difficult for the companies to recruit the right employees
- Health promotion at work site is a trend
- Prefer home cooked meals
- Fear of loosing more cooking skills
- Underdeveloped market for ready to heat meals
- Many eat their main meal at work



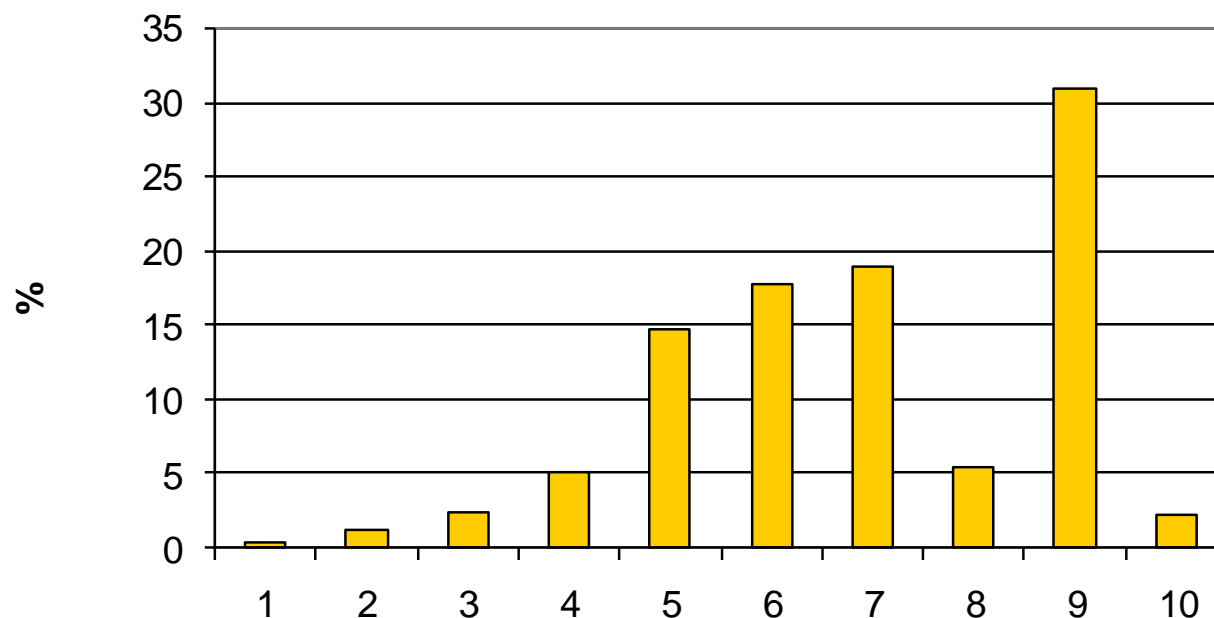
Employees incentives

- Reduce time for shopping
- Reduce time for cooking
- Healthy meals
- From a cook they trust



How much are you willing to pay for a healthy CTA-meal?

1. More than 11.5 €
2. 10 - 11.5 €
3. 8.5 - 10 €
4. 7.5 - 8.5 €
5. 6 - 7.5 €
6. 4.5 - 6 €
7. 3 - 4.5 €
8. Less than 3 €
9. Won't buy it
10. Don't know



WP3: Jonas Nordström, Institute of Food and Resource Economics, University of Copenhagen, preliminary and unpublished results from willingness to pay survey February 2008

Worksite incentives

- Increase productivity
- Recruit the right personnel
- Social branding
- Benefits for employees
- Worksite health promotion



Calculated economic benefits from CTA

Reduction in sick leave:

Given: CTA once a week reduces the mean number of days away from work by
0.25 day/year = 1.85 hours/year
Average wage rate: 34€/hour

Saved: 63 €/year/employee

Productivity/flexibility gains:

Given: CTA once a week increases the mean productivity 5 minutes every week
= 3.75 hours/year (CTA 45 week/year), Average wage rate: 34€/hour

Gain: 127.5 €/year/employee

ROI: . 4€/ portion CTA

WP3:Jørgen Dejgaard Jensen, Institute of Food and Resource Economics, University of Copenhagen,
preliminary and unpublished results from working paper February 2008

Canteens incentives

- Demand
- Threats
- Efficient
- Optimised products offered
- Improve image



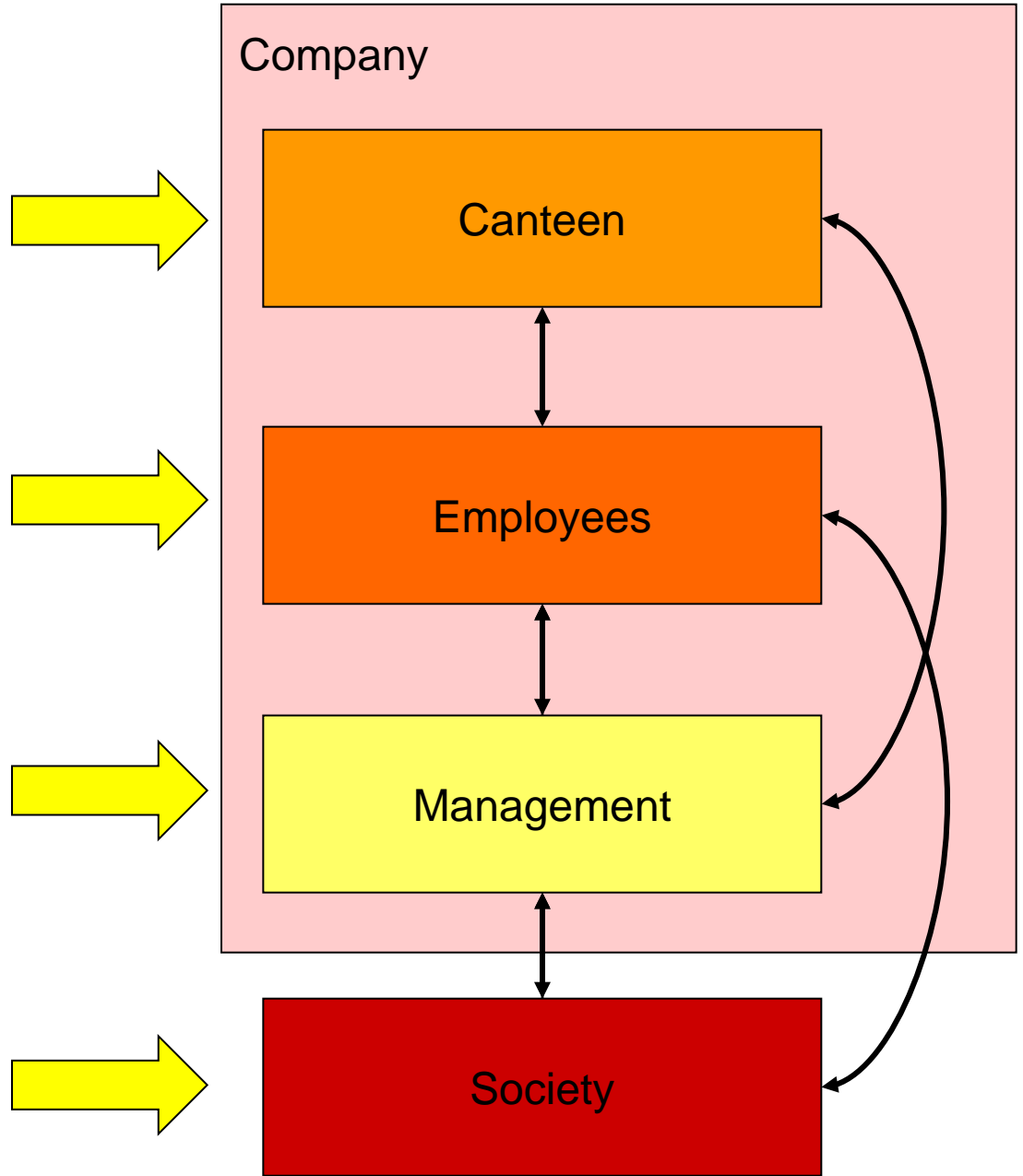
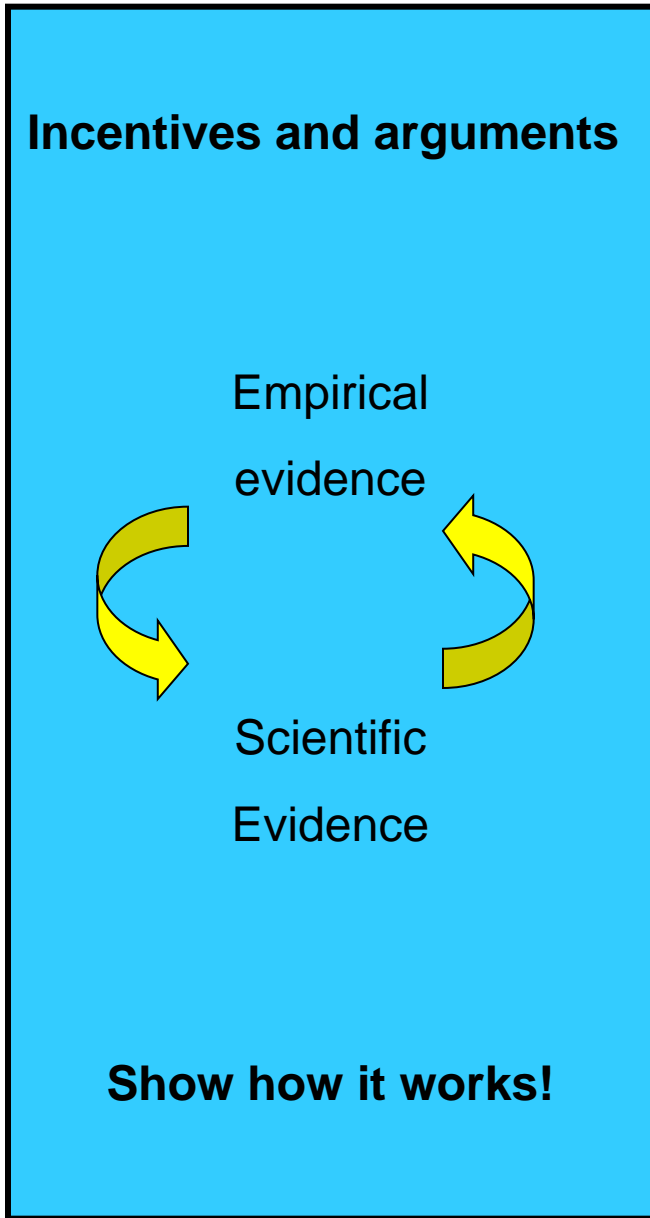
Incentives for society and policy development



- More healthy and flexible workforce
- More satisfaction with life and work
- Stable labour market
- Decreased public costs for sick leave and, health and welfare

Health effects (on cancer and CHD) of one weekly CTA meal with 200 g of F&V compared to 3 different references
 WP3: Institute of Food and Resource Economics, University of Copenhagen

	Mean intake at supper	Mean intake from home cooked meals	Fast food meals
F&V in reference supper (g/portion)	108	150	50
Mean net effect on F&V intake (g/day)	13	7	21
Mean F&V intake – without CTA (g/day)	429	471	371
Mean F&V intake – with CTA (g/day)	442	478	392
Increase in share of people over 600 g/day	1.8%	1.1%	2.4%
Δ DALY's per 100.000 inhabitant	7.9	4.9	10.4
Δ DALY's in Denmark	263 - 559		



Conclusion

- ✓ Increase the amount of F&V in meals and the overall nutritional quality of the diet
- ✓ Improve social acceptability of CTA
- ✓ Improve willingness to pay
- ✓ Develop the market for CTA
- ✓ Make it easy to use for the customers and easy to produce for the caterers
- ✓ Frontload the incentives
- ✓ Ensure a supportive environment

Thank you !

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