

Understanding consumer behaviour to enable healthy & sustainable food choices

Wageningen Food & Biobased Research

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Consumer Science & Health



To generate insights into

- Consumers' food choice and intake by using current methods and developing new ones
- Underlying physiological and psychological mechanisms
- Effective strategies to change consumer behaviour

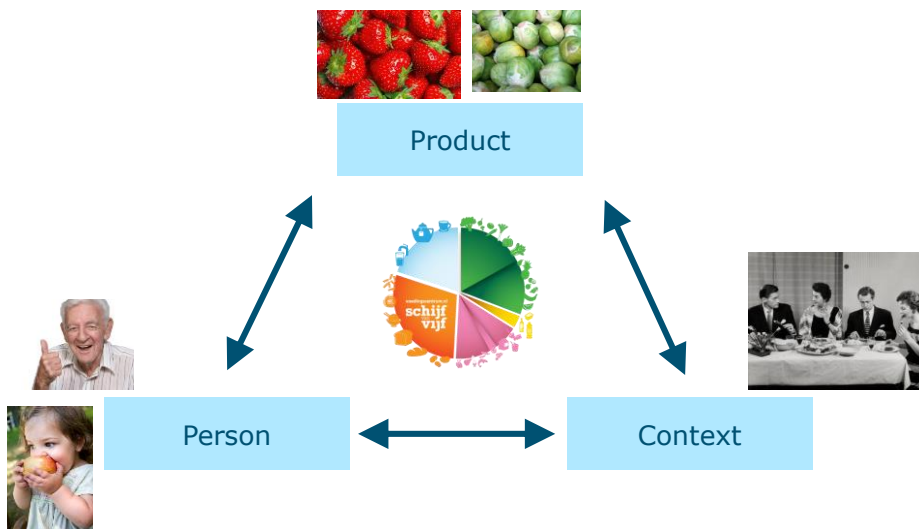
To enable healthy & sustainable food choices



Different approaches for studying consumer behaviour



Eating behaviour and food perception



Why focus on children?

- Eating habits are learned at young age
- ... and track into childhood + adulthood
- Important to start early with healthy eating habits
- Young children are consumers of the future



In the ideal world... children would

- Love vegetables
- Eat sufficient fruit
- Have adequate fibre intake



<http://www.brisbanemarkets.com.au>

- Eat a proper breakfast every morning with their family
- Eat less meat and more sustainable protein
- Eat unhealthy foods in small amounts
- Eat well and pleasantly during cancer treatment



Project: Veggie Time



- Repeated exposure effective, but researcher-led + 1vegs

Does repeated exposure also work for *various* unfamiliar vegetables in *daily practice* of day care setting?

N=250



Do children learn to like novel vegetable tastes?

Does this increase their intake?



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Yes, for pumpkin & white radish



- Pumpkin: ~20 gram → 35 gram
- Radish: ~10 gram → 25 gram
- Zucchini stable ~20 gram



Neutral
taste

Relatively often
on home menu



Zeinstra et al. 2018, Appetite

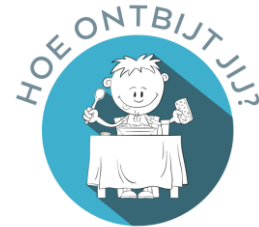
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Project: "How do you breakfast?"

Aim:

To identify the most effective strategy for improving children's breakfast attitudes, knowledge and behaviour in Dutch disadvantaged neighbourhoods in order to improve children's breakfast quality

- Children aged 8-10 years; N=280
- Three school lessons with same goal, but different strategy



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Different strategies

Benchmark: Group-based education

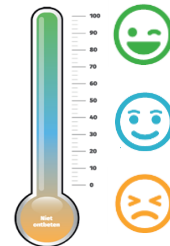


Role model: Use role models in short movies
(Klaas van Kruistum, Juvat, Jetske van der Elzen)



Feedback: Individual feedback + goal-setting

Combination: 1 lesson of each method



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Results



- Improvements in breakfast attitudes, self-efficacy, knowledge and breakfast quality
- Feedback condition improved most favourably
- Explanations:
 - ✓ Most personal & applicable to daily life
 - ✓ Repetition, active participation & concreteness
- Role model less effective → short time (~ 5min) + distraction from message (relax-position)
- Activities needed to maintain positive changes



Zeinstra et al., Submitted



Project partners & team:



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Why studying seniors?

- Seniors 25% of the Dutch population in 2040 (*RIVM 2010*)
- Maintaining a healthy diet in later years contributes to better health and quality of life



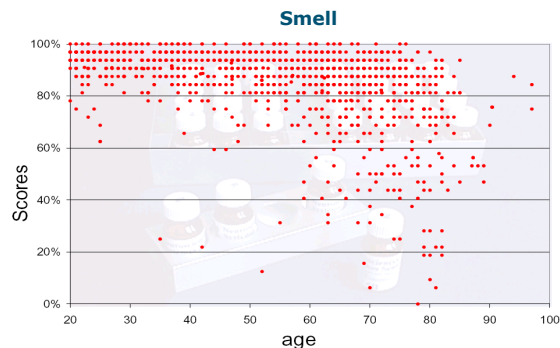
- But..
 - Nutritional requirements change
 - Appetite declines
 - Food perception changes

Need for strategies to promote adequate food intake



What do older adults need?

- Older adults are a very heterogeneous population
- Health status, medicine use
- Variation in taste and smell performance



Two main strategies

Personalised Nutrition	Foods with (added) health benefit
<ul style="list-style-type: none"> Food / advice in line with individual needs and wants Contributing to individual health benefits Personalised form of communication 	<ul style="list-style-type: none"> Foods rich in nutrients or nutrient enriched Foods low in salt / energy Foods that fit within a regular diet Proper alternatives for common products

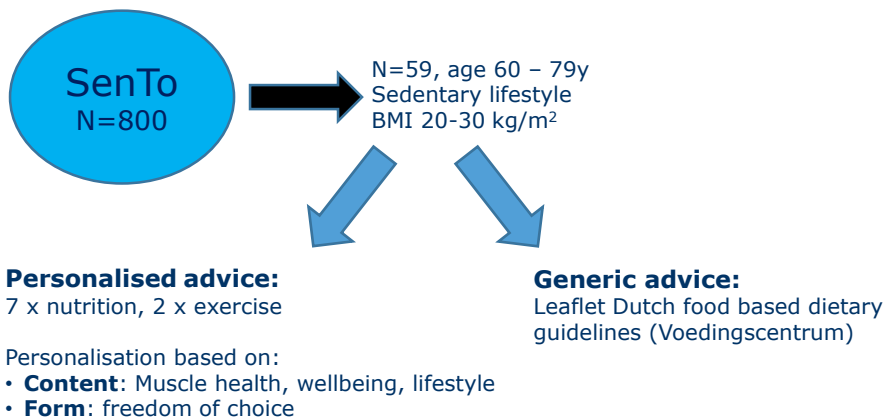


New technology



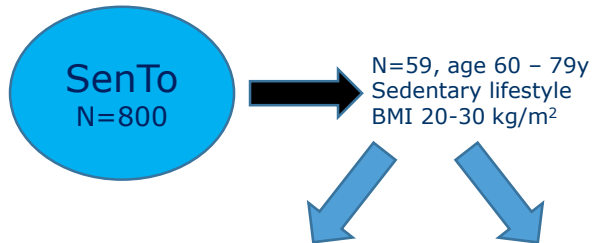
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Personalised advice for healthy muscles



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Personalised advice for healthy muscles



Results:

- Personalised advice improved compliance
- Both groups showed an improved muscle health
- Additional health benefits with personalised advice



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Older patients: Cater with Care



- Aim: Improve protein intake of older patients before and after hospital stay
- Development of protein-rich and protein enriched products
 - Fit within regular dietary pattern
 - Tasty!



Protein enriched: 6.8 g/slice
Regular: 3.8 g/slice

4 slices a day provides 12 g extra protein



Study: Liking of protein enriched bread

■ Three populations:

- Young adults
- Older adults with normal olfactory performance
- Older adults with reduced olfactory performance

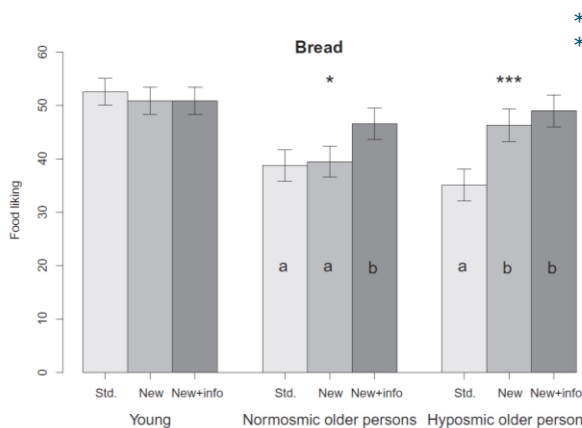
■ **Product:** standard vs protein enriched bread

■ **Extra condition:** With vs without information on added value



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Results on protein enriched bread

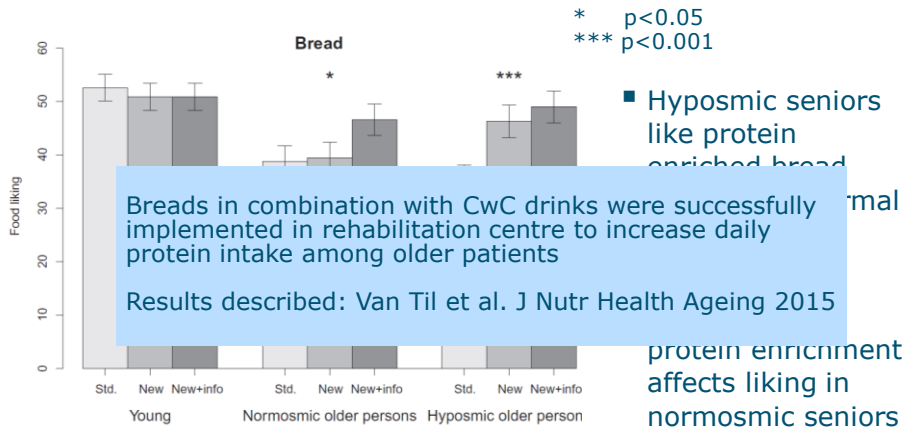


- Hyposmic seniors like protein enriched bread better than normal bread.
- Providing information on protein enrichment affects liking in normosmic seniors



Kremer et al. Food Qual Pref 2014 20

Results on protein enriched bread



Thank you for your
attention

Happy to collaborate
with you



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