



New Nordic Diet - principles, development and health potential

New Nordic food conference 202

6. November 2012

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University of Copenhagen





The Diogenes project



Multicentre trial in 8 European cities

Copenhagen (Astrup A, Larsen TM)  

Maastricht (van Baak M, Saris W)  

Berlin (Pfeiffer A)  ★

Cambridge (Jebb S)  ★

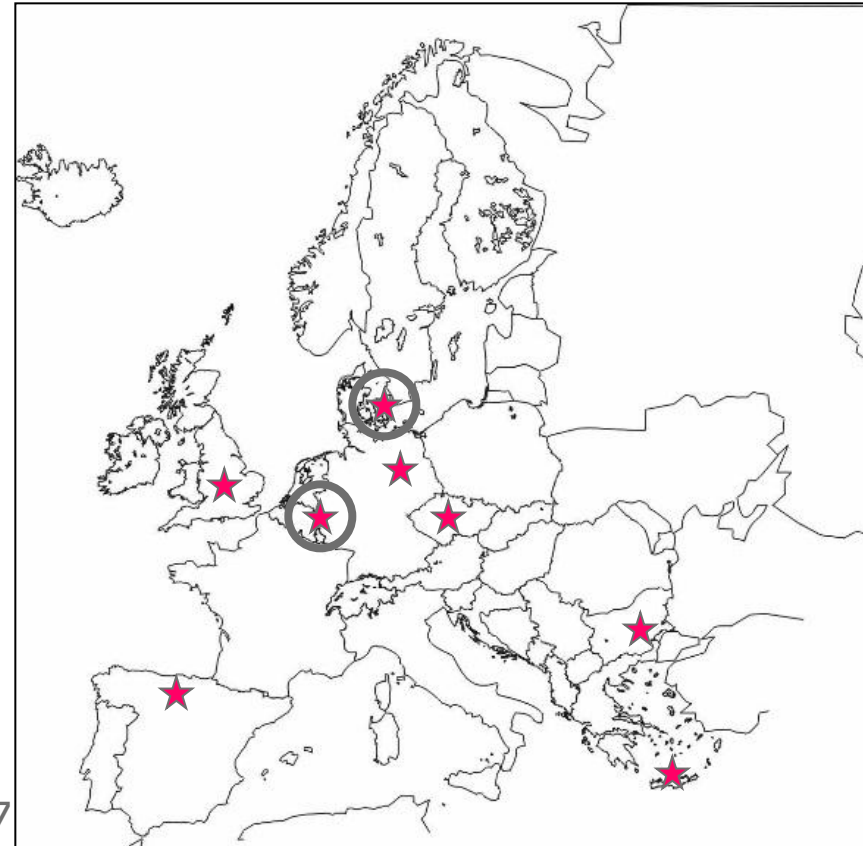
Prague (Kunesova M)  ★

Pamplona (Martinez JA)  ★

Sofia (Hanjieva S)  ★

Heraklion (Kafatos A)  ★

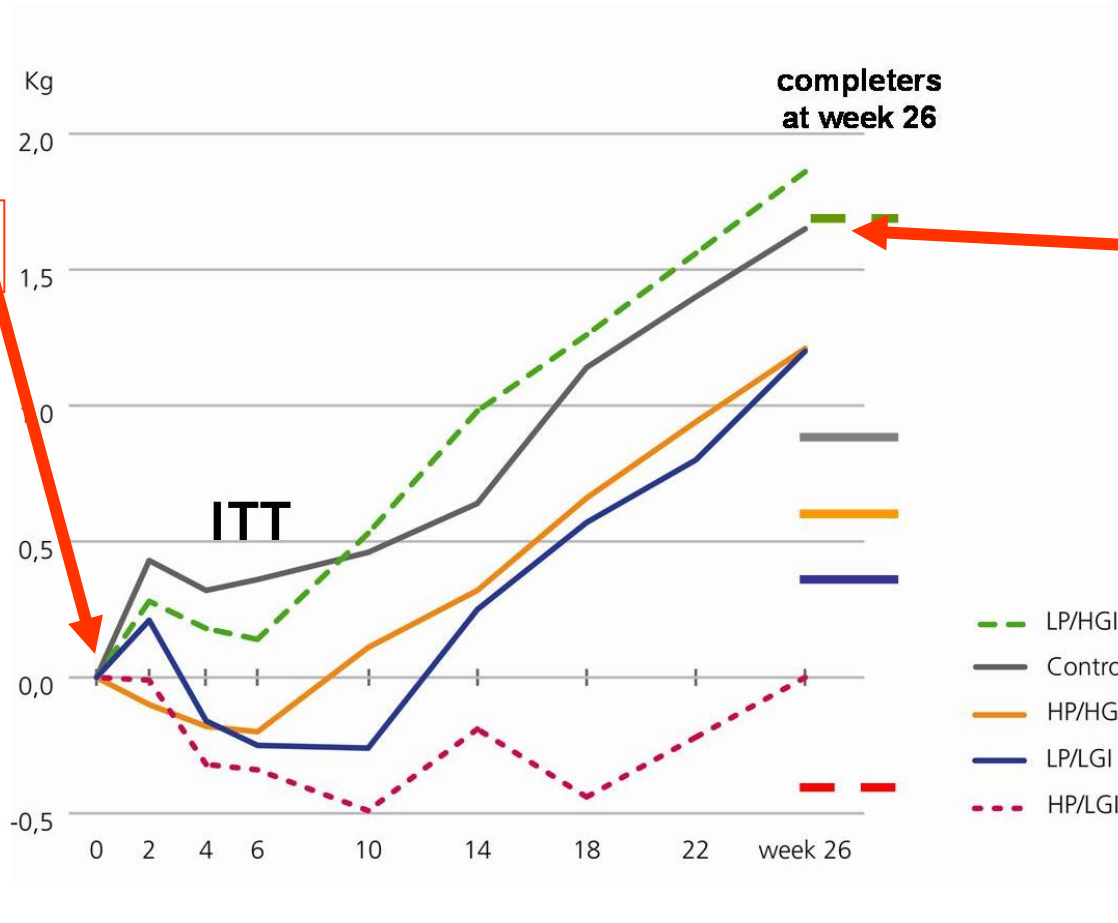
The study is registered with
www.ClinicalTrials.gov number NCT00390637



Higher protein (23 E%) + Low GI diet ad lib prevent weight re-gain in obese subjects



12 kg



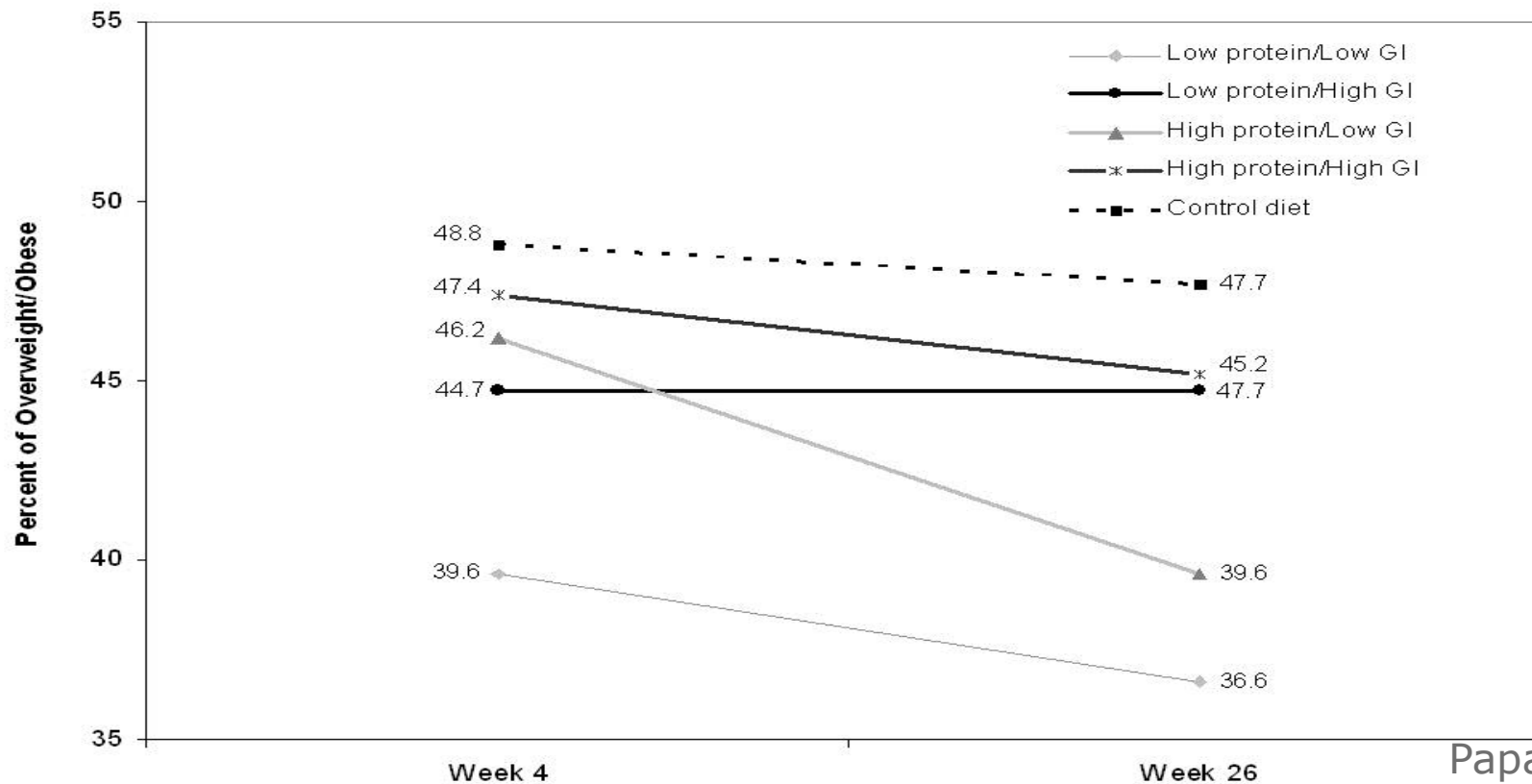
Current dietary advice



Results from the Diogenes



Spontaneous drop in prevalence of overweight/obesity in household children



Papadaki A. et al
Pediatrics. 2010

Result in Children

- The HP groups had higher protein intake (20.7 ± 0.7 versus 17.9 ± 0.7 %, $P=0.004$) than the LP groups at mo 6.
- GI was reduced 3.5 points with LGI versus HGI ($P<0.001$).
- HP resulted in 2.6 cm [95% CI 0.6;4.8] ($P=0.007$) lower waist circumference than LP
- and a 0.25 mmol/L ($P=0.003$) lower LDL cholesterol, compared to LP.
- LGI vs. HGI reduced CRP ($P=0.007$).
- In the supermarket centers, where intervention foods were provided to the participants, protein compliance was higher, and effects more marked ($P<0.001$).



The NEW ENGLAND JOURNAL of MEDICINE

CORRESPONDENCE

**Weight Loss with a Low-Carbohydrate, Mediterranean,
or Low-Fat Diet**

"Moreover, the dropout rate was 15% in the Mediterranean group, 22% in the low-carbohydrate group, and only 10% in the low-fat group ($P = 0.04$). In a study involving Danish subjects, my colleagues and I also observed that there was a significantly higher dropout rate among participants on a Mediterranean diet (28%) than among those on a (real) low-fat diet (16%), after both 6 months and 18 months. Retention is an end point that deserves comment"

Source: Arne Astrup, M.D., *The New England Journal of Medicine* 258;20, 13. november 2008



The OPUS Center

OPUS = Optimal well-being, development and health for Danish children through a healthy New Nordic Diet

5 year project, from January 1st 2009

100 mio. DKK (~ 13 mio Euro) from the Nordea Foundation +
25 mio DKK from universities and Øresund Food Network

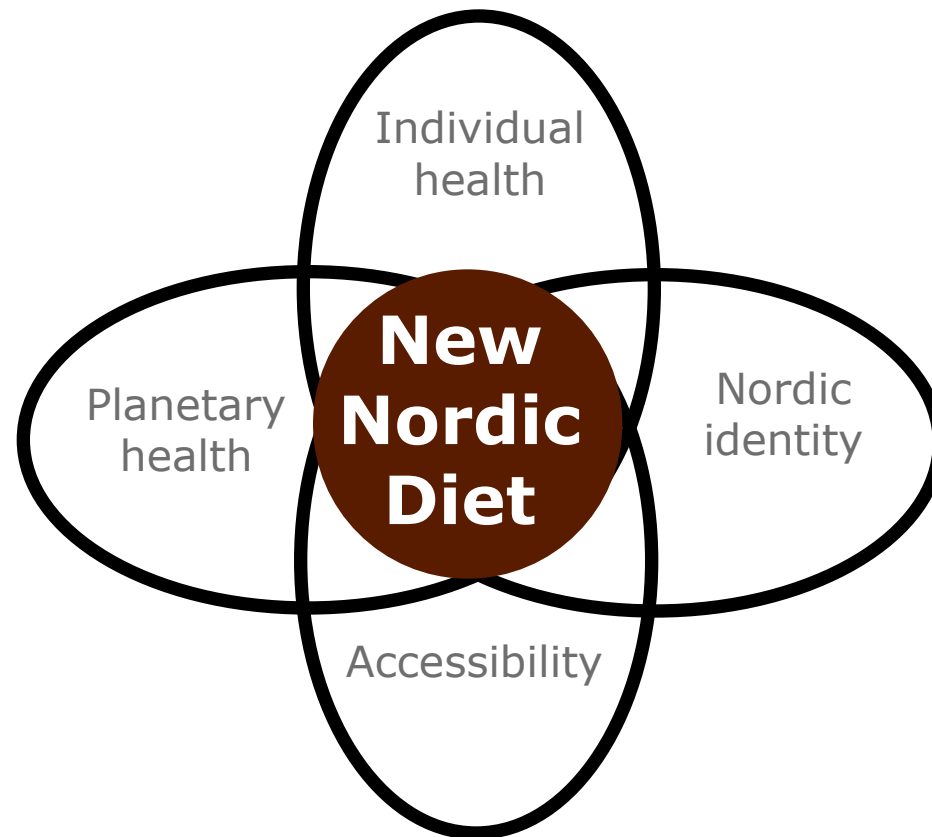
Professor Arne Astrup is OPUS Centre Director

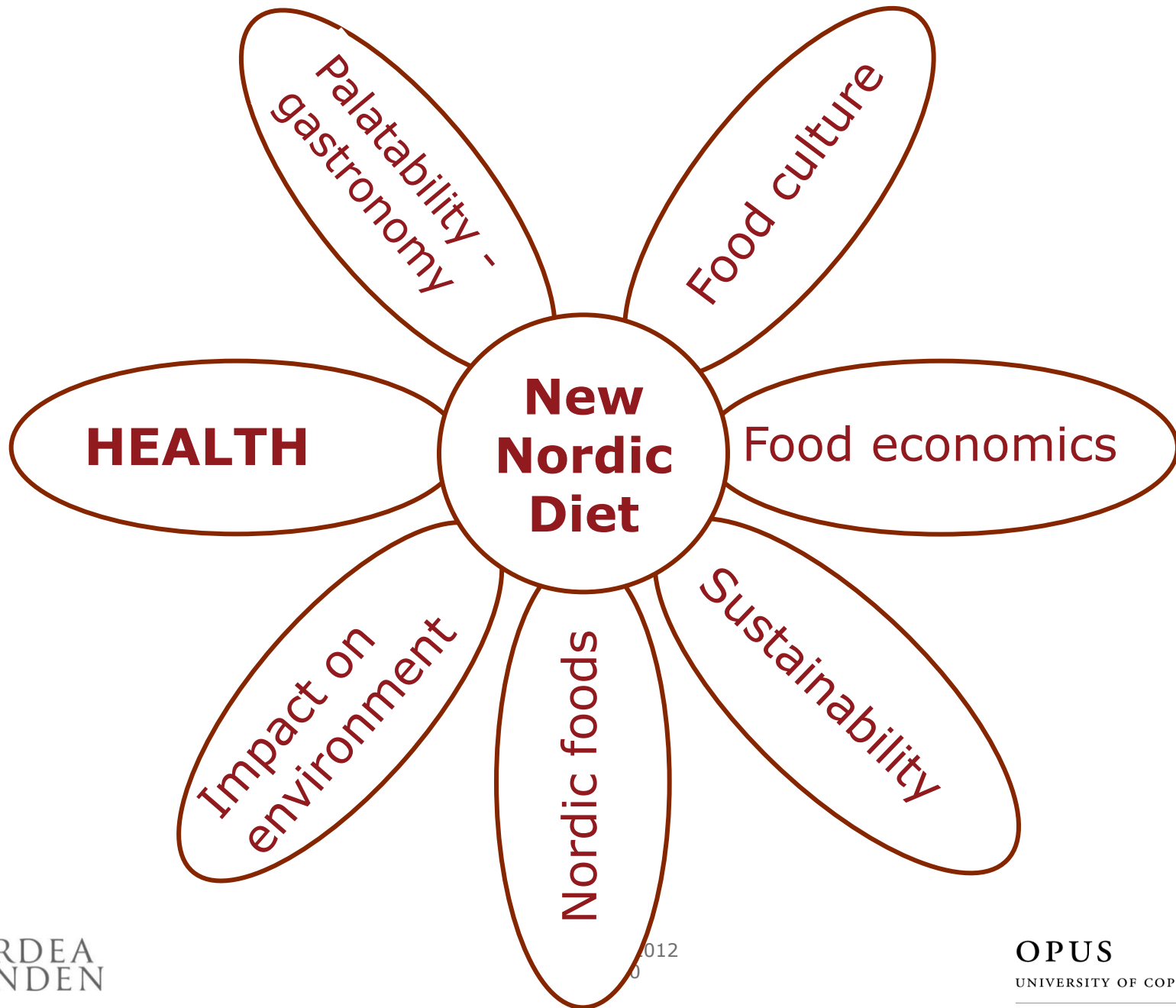
Collaboration between Arne Astrup and gastronomic entrepreneur Claus Meyer





The OPUS challenge





New Nordic Diet

Basic principles and ingredients (1)

1. Danish fruits; apples, pears, plums, quince, cherries etc.
2. More berries; black currants, raspberries, strawberries, blueberries etc.
3. Danish vegetables; leafy vegetables, beets, pumpkins etc.
4. More cabbage all year; pointed cabbage, kale etc.
5. Root vegetables; parsnip, celery, carrots etc.
6. Leguminous fruits; more protein from plants; peas, beans etc.
7. Fresh herbs
8. Potatoes
9. Plants and mushrooms from the wild landscapes; ground elder, stinging nettle etc.



New Nordic Diet

Basic principles and ingredients (2)

10. Wholegrain; especially more oat, rye and barley.
11. Nuts
12. Fish and shellfish; overlooked species
13. Seaweed
14. Meat of a higher quality, but less intake; free ranged animals
15. Game; deer, duck, pheasant etc.
16. Ecology; min. 75 % - cereals, vegetables, milk products etc.
17. Avoid additives



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doi:10.1017/S136898001100351X

Guidelines for the New Nordic Diet

Charlotte Mithril^{1,*}, Lars Ove Dragsted¹, Claus Meyer², Emil Blauert²
Mathias Krog Holt¹ and Arne Astrup¹

¹Department of Human Nutrition, Faculty of Life Sciences, University of Copenhagen, Rolighedsvej 30, DK-1958 Frederiksberg C, Denmark; ²Meyers Madhus, Copenhagen, Denmark

Submitted 28 March 2011; Accepted 8 December 2011

Abstract

Objective: Diet has a significant impact on health, and ensuring that the population eats a healthy diet remains a public health challenge. Research is needed in order to improve the palatability of a healthy diet and make it attractive to the

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doi:10.1017/S1368980012004521

Dietary composition and nutrient content of the New Nordic Diet

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Anja Biltoft-Jensen³ and Arne Astrup¹

¹Department of Human Nutrition, Faculty of Science, University of Copenhagen, Frederiksberg, Denmark; ²Meyers Madhus, Copenhagen, Denmark; ³Division of Nutrition, National Food Institute, Technical University of Denmark, Søborg, Denmark

Submitted 23 January 2012; Final revision received 1 August 2012; Accepted 23 August 2012

Abstract

Objective: To describe the dietary composition of the New Nordic Diet (NND) and to compare it with the Nordic Nutrition Recommendations (NNR)/Danish Food-based Dietary Guidelines (DFDG) and with the average Danish diet.

Design: Dietary components with clear health-promoting properties included in

Starters



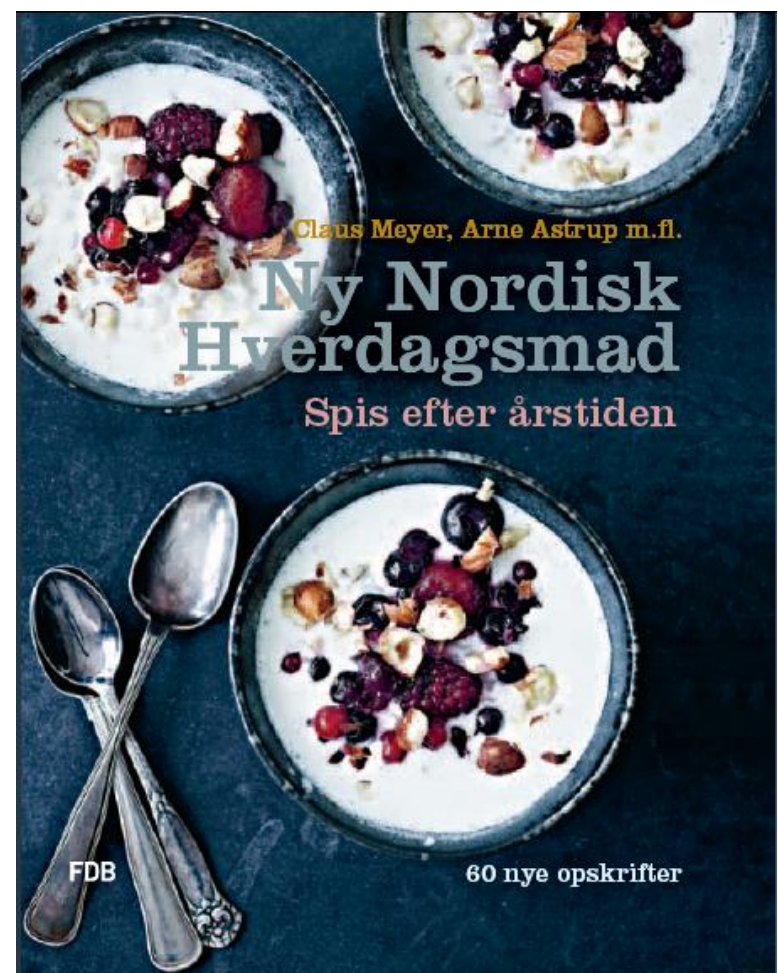
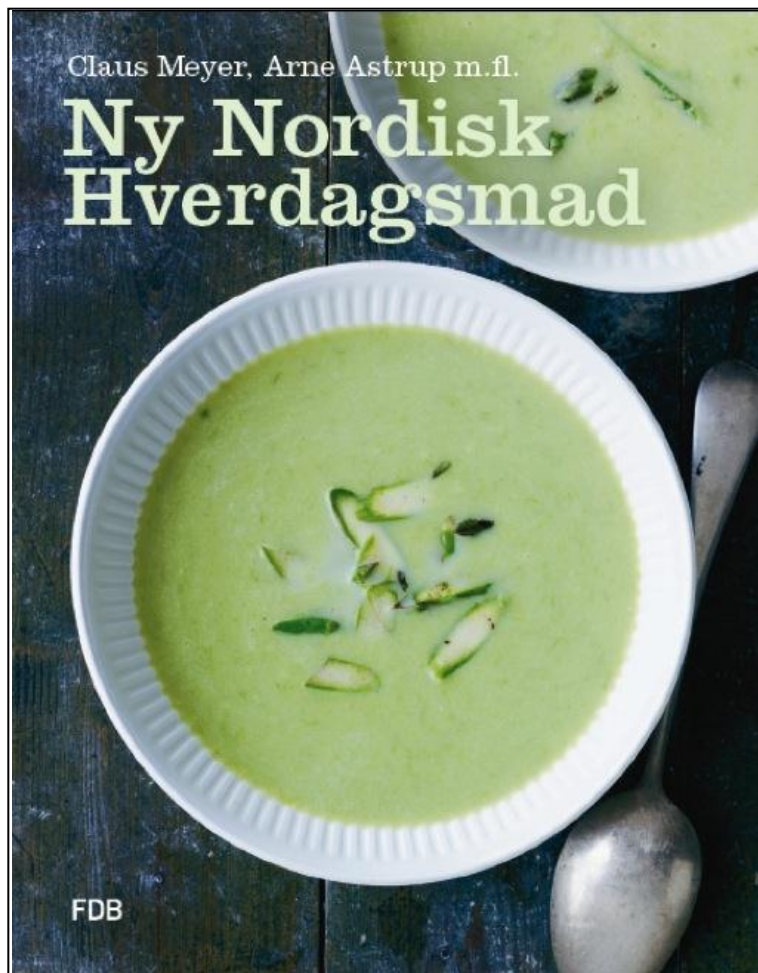
Main courses



Desserts



Some examples...



Some of the questions OPUS aims to answer

Do Nordic ingredients hold unrecognized health potential?

How can palatability be used to fight lifestyle disease?

Can we develop a new Nordic diet concept – the New Nordic Diet – as the 21st century's answer to the Mediterranean diet?

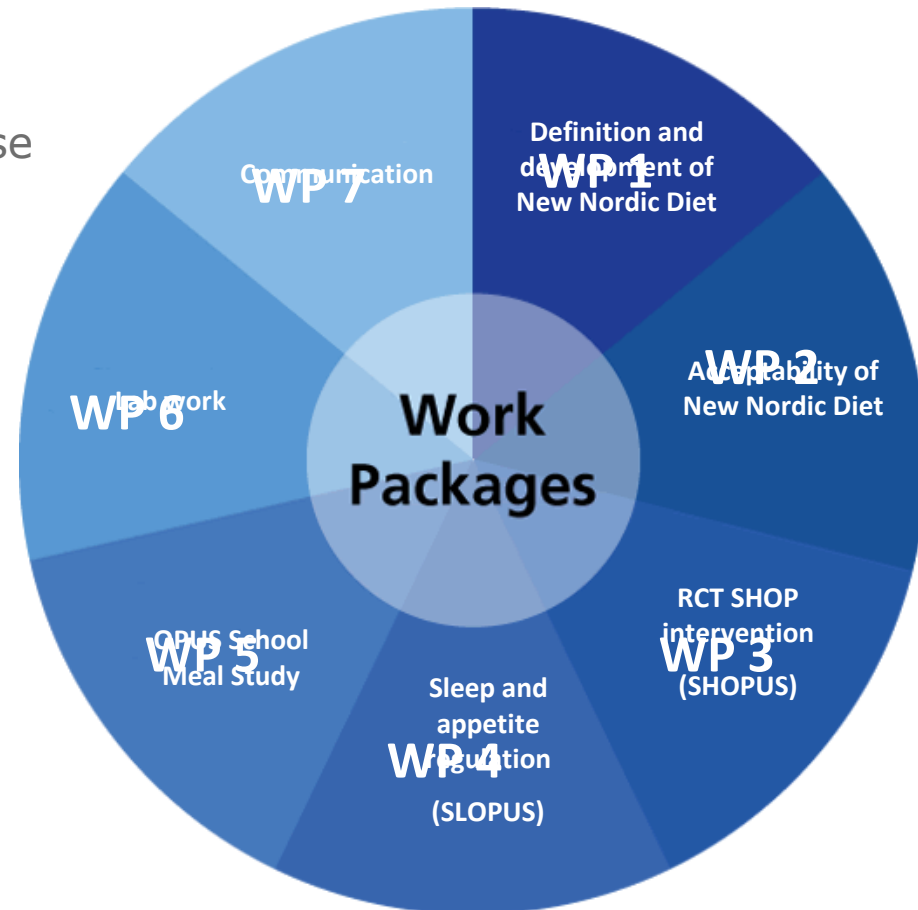
Can the New Nordic Diet strengthen the health of our planet by encouraging more sustainable food production and less environmental impact?

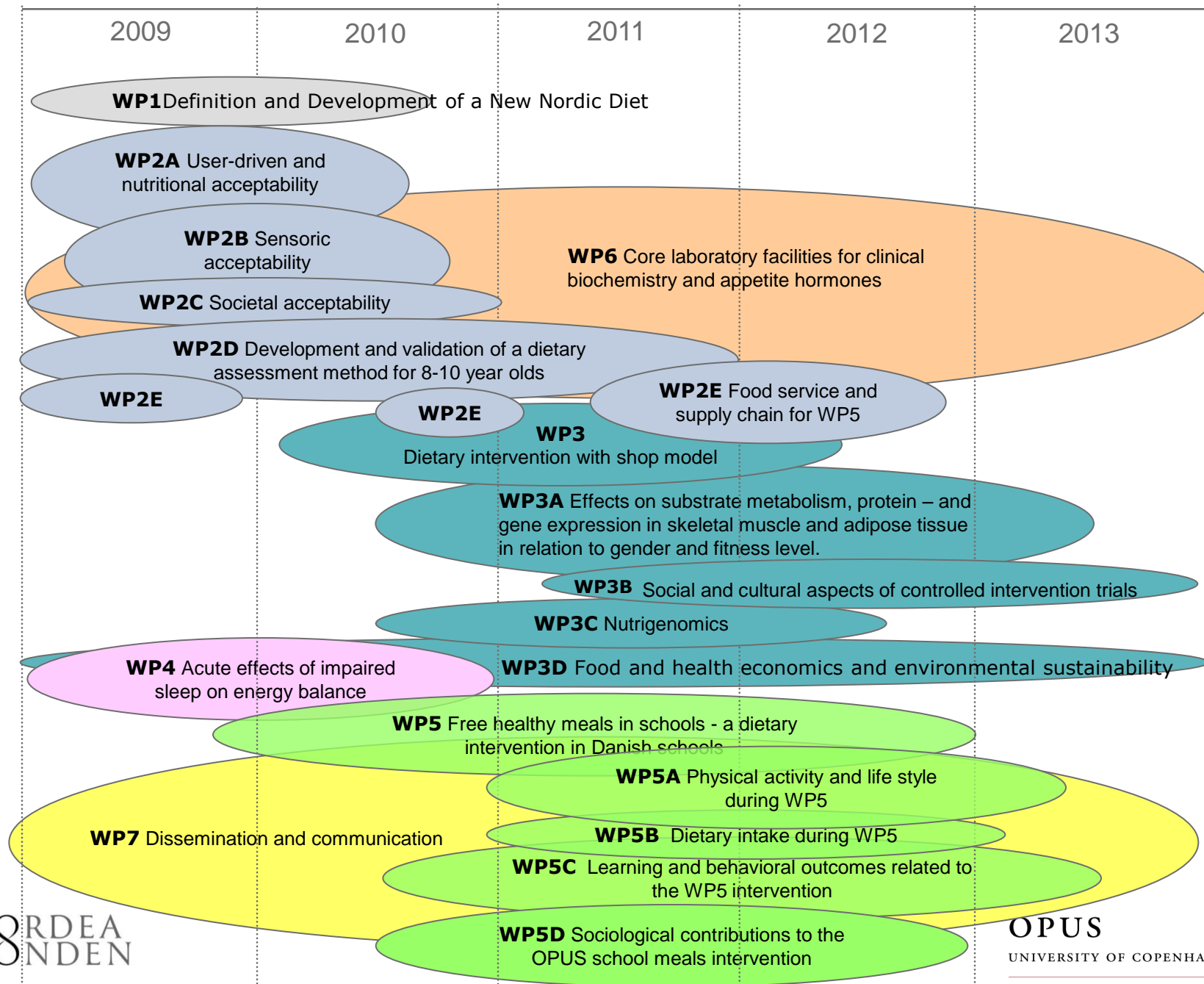


Work packages in OPUS

Collaboration between:

- Faculty of Science, UC
 - Department of Nutrition, Exercise and Sports
 - Department of Food Science
 - Department of Food Economics
- National Food Institute, DTU
- Meyers Madhus
- Gentofte Hospital
- The Danish School of Education





Food and nutrition – part 1

14.00-14.30 What are the health benefits of the New Nordic Diet? - Associate professor Thomas Meinert Larsen

14.30-15.15 Coffee

15.15-15.45 New Nordic Diet for children – OPUS School meal intervention – PhD student Rikke Petersen

15.45-16.15 New Nordic Diet; barriers, drivers and acceptance - PhD student Arun Micheelsen

16.15-16.30 New Nordic Diet; from science to daily fare? Communication officer Kristian Levring Madsen

16.30-17.00 Panel discussion [The panel is composed of the speakers]: From NOMA to normal