The overall aim of this PhD thesis was to investigate the acute effects of iso-caloric, macronutrient-balanced, and fiber-matched meals with protein from vegetables, eggs, fish, or meat on components of energy balance. In two of the three studies, the combined effect of protein source and glycemic index of the accompanying carbohydrates was additionally investigated. This PhD thesis is based on three independent acute cross-over meal test studies conducted at the Department of Nutrition, Exercise and Sports (NEXS), Faculty of Science, University of Copenhagen.

The three acute meal studies led to the following three papers:


Paper III. **Lone V. Nielsen**, Signe Nyby, Lars Klingenberg, Nicole Juul-Hindsgaul, Jullie Rudnicki, Christian Ritz, Bjørn Liaset, Karsten Kristiansen, Lise Madsen, Anne Raben. *Meals based on protein from cod or veal and carbohydrates with high or low glycemic index have similar effects on diet-induced thermogenesis, appetite sensations, and subsequent energy intake in overweight men and women: an acute randomized crossover meal test study*. Pending resubmission to Appetite, April 2018.

Study I (Paper I) was financed by the Danish Agriculture and Food Council. Study II and Study III (Paper II and Paper III) were financed by the Norwegian Seafood Research Fund.
In addition to the three papers included in my thesis, I have contributed to three other published peer-reviewed papers and presented abstracts at international conferences.


Contributions to international conferences

Lone V. Nielsen, Signe Nyby, Lars Klingenberg, Christian Ritz, Bjørn Liaset, Karsten Kristiansen, Lise Madsen, Anne Raben. Meals with salmon has potential to suppress appetite sensations to a greater extent than meals with veal. Abstract for the Nordic Nutrition Conference. Gothenburg Sweden 2016. Accepted for a poster presentation.


Lone V. Nielsen, Signe Nyby, Lars Klingenberg, Christian Ritz, Bjørn Liaset, Karsten Kristiansen, Lise Madsen, Anne Raben. Protein from salmon can potentially reduce appetite sensations to a greater extent than protein from veal. Abstract for the European Obesity Summit. Gothenburg Sweden 2016. Accepted for a poster presentation.
Signe Nyby, Lone V. Nielsen, Lars Klingenberg, Christian Ritz, Bjørn Liaset, Karsten Kristiansen, Lise Madsen, Anne Raben. **Increased diet-induced-thermogenesis after consumption of fish protein in combination with high glycemic index carbohydrates compared with meat protein - a randomized crossover study.** Abstract for the European Obesity Summit. Gothenburg Sweden 2016. Accepted for a poster presentation.

Anne Raben, Mikael Fogelholm, Thomas M Larsen, Lone V Nielsen, Mathijs Drummen, Sally Poppitt, Alfredo Martinez, Ian Macdonald, Svetoslav Handjiev, Gareth Stratton, Edith Feskens, Tony. Lam, Wolfgang Schlicht, Jennie Brand-Miller. **PREVIEW: PREVention of diabetes through lifestyle Intervention and population studies in Europe and around the World – more than 2,100 volunteers randomized to the 3-y intervention trial.** European Congress on Obesity. Prague 2015. Poster presentation in the “EU village”.