



International Research Network for Food Quality and Health

Seminar the 21th of February, from 09.00-10.00 am CET at zoom

Diet and food type affect urinary pesticide residue excretion profiles in healthy individuals: results of a randomized controlled dietary intervention trial

Join Zoom Meeting

Susanne Gjedsted Bügel is inviting you to a scheduled Zoom meeting.

Join Zoom Meeting

<https://ucph-ku.zoom.us/j/64201380284?pwd=pmQgrWiaJT17wxIjkYgNPzbQkBro1.1>

Meeting ID: 642 0138 0284

Passcode: 125011

The workshop is free of charge

Program:

09.00-09.05 am welcome by FQH Carola Strassner

09.05-09.35 am

09.35-09.55 am discussions in plenum or breakout-rooms (dependent on the numbers of attendants)

Assoc. Prof. Dominika Średnicka-Tober



Dominika obtained her doctoral degree in 2012, at the Warsaw University of Life Sciences in Poland, in the scientific discipline of Food Technology and Nutrition. From 2010 to 2014, she worked as a Research Associate at Newcastle University (UK) in the School of Agriculture, Food and Rural Development. Since 2014, she has been working as a researcher and lecturer at the Warsaw University of Life Sciences, in the Institute of Human Nutrition Sciences, in the area of sustainable food systems, the environmental footprint of food and agriculture, and organic food quality and safety in relation to human health. In 2019 she obtained her habilitation and got a position as a university professor. During her work as a researcher, she has authored and co-authored numerous scientific publications and has been actively involved in many international research and educational projects and activities in various subjects related to organic food and sustainable food systems.

09.55-10.00 am wrap-up, presentation of next workshop and goodbye

Abstract

This study aimed to determine the effects of diet (Western compared with Mediterranean) and food type (conventional compared with organic) on urinary pesticide residue excretion (UPRE). In this 2-week, randomized dietary intervention trial healthy adults were randomly allocated to an intervention or conventional group. Whereas the participants in the intervention group consumed a Mediterranean diet (MedDiet) made entirely from organic foods, the conventional group consumed a MedDiet made entirely from conventional foods. Both groups consumed habitual Western diets made from conventional foods before and after the 2-week intervention period. Participants were aware of the group assignment, but the study assessors were not. The study showed that during the intervention period, total UPRE was over 90% lower with organic than with conventional food consumption. Moreover, in the conventional group, switching from the habitual Western diet to the MedDiet significantly increased insecticide, organophosphate, and pyrethroid residue excretion. The authors concluded that changing from a habitual Western diet to a MedDiet may be associated with increased insecticide, organophosphate, and pyrethroid exposure, whereas organic food consumption shows a potential to reduce exposure to all groups of synthetic chemical pesticides. This may explain the positive health outcomes linked to organic food consumption in many observational studies. The study results were published in 2022 in the American Journal of Clinical Nutrition.

Reference:

Rempelos L, Wang J, Barański M, Watson A, Volakakis N, Hoppe HW, Kühn-Velten WN, Hadall C, Hasanaliyeva G, Chatzidimitriou E, Magistrali A, Davis H, Vigar V, Średnicka-Tober D, Rushton S, Iversen PO, Seal CJ, Leifert C. Diet and food type affect urinary pesticide residue excretion profiles in healthy individuals: results of a randomized controlled dietary intervention trial. *Am J Clin Nutr.* 2022 Feb 9;115(2):364-377. doi: 10.1093/ajcn/nqab308. PMID: 34718382.