

The NURMI Study – First Publications released

The largest study of running in Europe, the NURMI Study, presented first results and released first publications by April 2016.

Apperance in chronological order:

1. Study Protocol

Wirnitzer K, Seyfart T, Leitzmann C, Keller M, Wirnitzer G, Lechleitner C, Rüst C, Rosemann T, Knechtle B (2016). Prevalence in running events and running performance of endurance runners following a vegetarian or vegan diet compared to non-vegetarian endurance runners: the NURMI Study. *Springer Plus* 5:458

DOI: 10.1186/s40064-016-2126-4

The article is available online: <http://www.springerplus.com/content/5/1/458> or

<http://link.springer.com/article/10.1186/s40064-016-2126-4>

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/27119062>



2. VegMed Congress, Abstract

Wirnitzer K, Leitzmann C, Knechtle B, Nikolaidis P, Wirnitzer G, Lechleitner C, Seyfart T, Boldt P (2016). The NURMI Study: Methodology and First Results of the Prevalence of Vegetarians and Vegans in Running Events. In: Kessler C, Michalsen A (eds.). VegMed – Scientific Congress for Vegetarian Nutrition and Medicine. April 22-24, 2016, Berlin. Abstracts. Research Sessions, NO.36. *Forschende Komplementärmedizin* 23(suppl 1):9

Abstract book is available online only:

http://vegmed.de/user/pages/03.program/intro/FOK_S1_16_VegMed.pdf

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**VegMed:
«VegMed – Scientific Congress
for Vegetarian Nutrition and Medicine»**

April, 22–24, 2016, Berlin

ABSTRACTS

Editors
Christian Kessler,
Andreas Michalsen,
Berlin

NO 30
Impact of Elimination or Reduction of Dietary Animal Proteins on Cancer Progression and Survival
Aguiar, G., Caviglia, R.,
Veron, E. and Krebs, V. *Verona, Austria*

Background: There is evidence that the incidence of cancer is low in veg-
an populations but currently there is little data available on the effect of a
plant-based diet on the progression of diagnosed cancer.
Hypothesis: A reduction or total elimination of animal proteins from the diet
can positively influence the course of an existing cancer disease and
in addition to oncological standard therapies – increase the remission rate.
We expect a higher effect the lower the consumption of animal proteins.
Purpose of the pilot study:

- To test the hypothesis that elimination/reduction of dietary animal
proteins leads to an improved tumor prognosis. Tumor behavior
(numbers and percentage of tumor recurrences) at 6 months was
chosen as primary end point in the respective diet focus (omnivore/
lacto-ovo vegetarian/vegan).
- To estimate the efficacy and thus to enable sample size calculations
in further studies.
- To test the feasibility of the different diets especially of a vegan diet,
in cancer patients.
- To test the tolerance of different diets and to proof that a vegan diet
does not lead to a deterioration of health, tumor progression or mal-
nutrition.
- To test the online portal as a study platform (technical aspects, se-
curity of dataflow, questionnaires).
- To test the validity of self reported and online-generated data.

The concept of this ongoing pilot study and first experiences with its set-
ting as a patient driven online study are presented.

NO 30
**Fasting Protects Against Experimental Colitis and Commensal
Microbial Gut Dysbiosis**
Gross, J. A.,¹ Bostrom, E. S.,² Jacobson, K. J.,¹ Valasek, R. A.¹

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Columbia, Vancouver, BC, Canada
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Inflammatory Bowel Disease (IBD) is an auto-inflammatory disease of the
gastro-intestinal system with unknown etiology. Many studies suggest
that an imbalance in the interplay between diet, the gut microbiota and
the intestinal epithelial barrier contribute to the pathogenesis of the dis-
ease. Our Western diet dramatically alters the makeup of our gut micro-
biota which can in turn lead to weakened gut barriers and microbial dysbi-
osis. This is characterized by loss of beneficial microbes and an increase in
potentially pathogenic bacteria. Inflammation results when these bacteria
interact with an impaired epithelial surface or leak across the epithelial
barrier and stimulate the underlying immune cells.
Experiments from our lab demonstrate that fasting greatly reduces in-
flammation in two models of experimental colitis. A 48 hour fast ame-
liorates Dextran sulfate sodium (DSS) induced colitis and leads to sig-
nificant decreases in IL-1β, IL-6 and TNFα expression in the colon along
with changes in the make-up of the gut microbiota of CD45^{cre} mice. In
experiments using a mouse model of Salmonella typhimurium induced
colitis, we found that following intermittent pre-treatment – a 48h fast
completely protects CD45^{cre} mice from the expected pathogen-induced
intestinal damage. Preliminary data show that fasting alters the resident
microbiota and increases microbial based (oxidation) resistance there-
by preventing S. typhimurium from inducing the intestine and triggering
inflammation. We therefore conclude that fasting beneficially modulates
the gut microbiota and shapes host-microbe interactions in a way that pro-
motes resistance to exogenous stressors and prevents microbial dysbiosis
and inflammation.

3. Preview: ECSS (July 2016)

Wirnitzer KC, Knechtle B, Nikolaidis PT (2016). PREVALENCE OF OMNIVORES, VEGETARIANS AND VEGANS IN RUNNING EVENTS: THE NURMI STUDY

21th annual Congress of the ECSS – European College of Sport Science:
<http://ecss-congress.eu/2016>

Preview of the respective Oral Session: *PH Nutriron & Diets – cancelling and surveys is available online:*
<http://ecss-congress.eu/2016/16/index.php/programme/scientific-programme/oral-sessions>

The NURMI team is busy with the data analysis. However, complete analysis as well as publication of all the results from the NURMI Study will be conducted stepwise over the subsequent years.

The list of publications will be kept up to date: www.nurmi-study.com/en/publications

The latest details are at www.nurmi-study.com/en
and you can follow us on social media: www.facebook.com/nurmistudy

Press: <http://www.nurmi-study.com/en/press/>

Here you will find additional press material (e.g. logos, photographs) for downloading.

If you would like to know how the NURMI Study is progressing we should be pleased to add you to our list of press contacts.

We shall be very pleased to read what you write about us.

Queries:

Dr Katharina Wirnitzer

info@nurmi-study.com

Study: <http://www.nurmi-study.com/en>

Comparative study of running

International (researchers from four countries)

Interdisciplinary (three disciplines: sports science, nutrition, medicine)

Team: <http://www.nurmi-study.com/en/team/>

Project Coordinator:

Dr Katharina Wirnitzer, Austria – sports science

Core team of scientists:

Prof. Claus Leitzmann, Germany – nutrition

Prof. Beat Knechtle, Switzerland – medicine

Prof. Andreas Hahn, Germany – nutrition

Dr Pantelis Nikolaidis, Greece – sports science

Dr Katharina Wirnitzer, Austria – sports science

Partners: <http://www.nurmi-study.com/en/partners/>

Without support it would not have been possible to carry out such a large scientific project. If *you too* would like to sponsor the NURMI Study, we should be pleased to hear from you.

NURMI – How it all began ...

Dr Katharina Wirnitzer set up this comparative study of running in order to investigate some of the still unanswered scientific questions on sporting performance and diet (omnivorous, vegetarian, vegan).

After two years' development the core team of researchers met for the first time in March 2014 to kick-start the study.

What is NURMI?

The NURMI Study (NURMI – Nutrition and Running High Mileage) is an international interdisciplinary comparative study of running, the aim of which is to investigate the endurance of omnivorous runners compared with vegetarian and vegan runners and create a broad body of scientific evidence. In STEP 1 scientists and specialists from various countries are working together to investigate epidemiological aspects (e.g. proportions of omnivorous, vegetarian and vegan runners at running events) and in STEPS 2 and 3 the focus will be on the link between nutrition, health and running performance.
