



Exam commission:

Prof. dr. R. Meeusen – Chairman
Department of Human Physiology
Vrije Universiteit Brussel, Brussels,
Belgium

Prof. dr. J.M. Lecerf
Institut Pasteur, Lille, France

Prof. dr. K. Demartelaer
Department of Movement Education and
Sports Training
Vrije Universiteit Brussel, Brussels,
Belgium

Prof. dr. J. Deschepper
Universitair Ziekenhuis Brussel
Vrije Universiteit Brussel, Brussels,
Belgium

Dr. K. Descheemaeker
Nutrimedes, Belgium

Dr. P. Mullie
International Prevention Research
Institute (iPRI), Ecully (Lyon), France

Promoter and co-promoter:

Prof. dr. P. Clarys
Department of Human Biometry and
Biomechanics
Vrije Universiteit Brussel, Brussels,
Belgium

Em. Prof. dr. M. Hebbelinck
Department of Human Biometry and
Biomechanics
Vrije Universiteit Brussel, Brussels,
Belgium

We cordially invite you to the public defence
of the doctoral dissertation of:

Peter Deriemaeker

which will take place on Wednesday,
June 27 at 17:00 in room "Auditorium Dufour"
located on the campus of Etterbeek, 1050 Brussels,
Triomflaan entrance 8,
Building L, 2nd floor

NUTRITIONAL ASPECTS OF HEALTH: THE POSSIBLE CONTRIBUTION OF PLANT-BASED VEGETARIAN DIETS

Promoter: Prof. dr. P. Clarys
Co-promoter: Em. Prof. dr. M. Hebbelinck

Prof. dr. P. Van Roy
Dean of the Faculty of Physical Education and Physiotherapy

Please confirm your presence by June 20

How to reach the Vrije Universiteit Brussel <http://www.vub.ac.be/infoover/campussen/index.html>

Pleinlaan 2 – 1050 Brussel
Tel: 02/629.27.19 – 27.26 – 27.27 – 39.57
Fax: 02/629.27.01
E-mail: faclk@vub.ac.be



Presentation of the dissertation

Plant-based vegetarian diets have been studied since a long time. The research evolved from risk analyses to health advantages of a plant-based vegetarian diet. The possible risk analyses still persist for strict vegetarian (vegan) diets concerning vitamin B12, calcium, iron and zinc which is not the case for a well-planned lacto-ovo-vegetarian diet. Previous research showed possible positive effects of vegetarian diets on several prosperity diseases. Studies were conducted all over the world but data on vegetarians in Belgium are scarce. Regional differences in omnivorous but also vegetarian dietary patterns have been demonstrated. This necessitates an in depth analyses and evaluation in Belgium.

Most research conducted agrees that vegetarian diets that are high in complex unrefined carbohydrates, high in fiber, and low to moderate in fat, either alone or in conjunction with other lifestyle factors, have been evidenced to be an effective strategy in the control of diet related health risk factors. Vegetarian diets, as any other dietary pattern, have potential health risks, namely marginal intake of certain essential nutrients. However, from the public health viewpoint, the health benefits of a plant-based vegetarian diet far outweigh the potential risks.

The research strived to respond to questions related to the nutritional intake and adequacy of a vegetarian diet and the contribution of a vegetarian or mainly plant-based diet to health and fitness.

The first article provides an overview of valuable information on the nutritional intake of various vegetarian groups in the Flemish region of Belgium.

The second article investigated the contribution of a vegetarian or mainly plant-based diet to an improvement of the Belgian food pattern for a better prevention of diet related diseases.

The third article explored the assertion of many professional instances that a balanced and well planned vegetarian diet can be a responsible choice also at older age.

Finally, the fourth article compared the alkaline outcomes between vegetarian and omnivorous diets.

Overall, the 4 articles investigated how a mainly plant-based diet contributes to better nutritional habits in the Flemish population which consists mainly out of omnivores, at the moment.

The fact that data were derived from studies with some differences in design is a drawback in the present survey. Further weaknesses of the present survey are the relatively

small numbers of subjects in the different groups, as well as the cross-sectional nature of the studies. The latter makes it hazardous to establish causality between observed associations. Nevertheless, inferences and generalizations from small samples to a population are to a certain extent possible and permitted, especially when the samples constitute a series of studies of different design such as the matched pair sample technique as used in three out of four of the studies in this thesis. Also, the self-selection of subjects imposed by the way of recruiting vegetarians may have attracted the more health conscious subjects, yielding a certain bias. Since the reasons for being a vegetarian have not been considered, no discrimination was possible between health versus ethical vegetarians.

Strengths of the present study include the matched pair design and the age span covered. This thesis performed the first series of dietary and health related data of a total of 272 subjects covering a wide range of age (1-90 yrs), including 2 unique groups of 36 lifelong and 29 elderly (mean age >80 yrs) vegetarians.

Follow-up studies are needed to evaluate health-related long-term compliance with a vegetarian diet. Evidence-based comparative effectiveness research for the potential health benefits of vegetarian diets is sorely needed. To obtain information of a larger and more random sample a general survey with specific questions about vegetarian or plant-based diets would be very valuable.

In conclusion, this doctoral thesis provides invaluable information on the nutritional intake and the health status of various vegetarian groups.

Our data indicate that a vegetarian diet if properly planned can be adequate for all age groups.

Our results are in accordance with the literature on vegetarian diets. The reported positive influences of a plant-based or a vegetarian diet on the nutritional habits and health aspects may be applicable on the Flemish population.

Curriculum Vitae

Peter Deriemaeker graduated in 1998 from the Vrije Universiteit Brussel as Master in Physical Education and Movement Sciences. His master thesis was the beginning of a growing scientific interest and passion in the field of the possible contribution of plant-based diets to nutrition and health. After his studies he had the opportunity to start as part time researcher on projects in nutrition and physical activity at the department of Human Biometry and Biomechanics from the faculty of Physical Education and Physiotherapy at the Vrije Universiteit Brussel. These first steps and successes in the world of nutritional research sharpened his specific interest in vegetarian nutrition. The opportunity to work as a full time teaching and research assistant made it possible to continue working in this domain. This was the start for this PhD research project tackling more specific questions on vegetarian nutrition. His main areas of interest are nutrition, fitness, health, biometry and statistics.