



# Summer School 2017

«Nutritional Aspects in Rehabilitation Exercise»  
(2<sup>nd</sup> Edition in Bern)

21 – 25 August 2017

Final Announcement



In cooperation with:



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# Summer School 2017

## «Nutritional Aspects in Rehabilitation Exercise»

This second edition of the summer school on «Nutritional Aspects in Rehabilitation Exercise» at Bern University of Applied Sciences – Health Division is organised in close cooperation with the Vrije Universiteit Brussel ([www.vub.ac.be](http://www.vub.ac.be)). The program concerns aspects of nutrition linked to rehabilitation exercise. The focus will be on the complex relation between (individualised) nutrition, rehabilitation (exercise) and health.

By the end of this one week summerschool participants will be able to explain the relationship between nutrition and rehabilitation exercise, based on current evidence and state-of-the-art information. They will be able to conduct nutritional and biochemical-physiological assessments following up-to-date clinical and epidemiologic guidelines. Furthermore, participants can conduct a critical reading of meta-analyses within the field of nutrition and rehabilitation. Hence, participants may profit from an improved transfer of basic and applied research into daily clinical practice.

The program offers participants the unique opportunity to widen their network, as well as to interact with other professionals and get insights in their teaching and research activities.

We are looking for health professionals and advanced students (nutritionists, dietitians, physiotherapists, exercise therapists, physicians, etc.) who are interested in applied sciences and who want to work with clinicians and students from different disciplines.

Date: 21 – 25 August 2017

Location: BFH Bern University of Applied Sciences,  
Bern, Switzerland

Participants: Health-Care professionals  
→ Number of participants: 30 maximum

Prerequisites: BSc diploma level (equivalent or higher),  
passive English knowledge

Workload: 2 ECTS

Lecture language: English

Course fee: – CHF 249 / student  
– CHF 299 / student of BFH in practical modul B  
– CHF 555 / professional  
→ Course fee includes course programme,  
administration, tutoring and social activities  
→ Not included: travel expenses, catering,  
accommodation

Application deadline: 31 July 2017

Insurance: Insurance is the participants own responsibility

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Further information  
and registration: [www.gesundheit.bfh.ch/summerschool](http://www.gesundheit.bfh.ch/summerschool)

# Programme

Monday 21 August 2017

**Morning session: «Exercise and Exercise Testing in Patients with Unhealthy Nutrition Related Disorders – State of the Art» (Part 1)**

08.00 – 08.45: Welcome greetings & IT-support

08.45 – 09.30: Diet, physical activity and health – how can we postpone the development of chronic disease  
Lecturer: Prof. Dr. med. D. Fäh (BFH – Health – CH)  
Type: Lecture

09.30 – 10.15: Ergospirometry testing: basics and advanced principles of exercise testing  
Lecturer: Prof. Dr. D. Hansen (Hasselt University – B)  
Type: Lecture and practical work

10.15 – 10.45: Break

10.45 – 11.30: Exercise intervention in obesity and diabetes: state of the art  
Lecturer: Prof. Dr. D. Hansen  
Type: Lecture

11.30 – 12.15: Exercise intervention in heart disease (coronary artery disease, heart failure, heart transplantation): state of the art  
Lecturer: Prof. Dr. D. Hansen  
Type: Lecture

12.15 – 13.00: Ergospirometry testing: evaluation of exercise tolerance and exercise physiology in patients with cardio-metabolic disease  
Lecturer: Prof. Dr. D. Hansen  
Type: Lecture and practical work

13.00 – 14.00: Lunch

## **Afternoon session: «Diet Quality Indices as Used in Nutritional and Rehabilitation Epidemiology»**

- 14.00 – 14.45: Diet quality indices: overview of the different indices, use of indices in nutritional epidemiology (Part 1)  
Lecturer: Prof. Dr. I. Huybrechts (Ghent University – B)  
Type: Lecture
- 14.45 – 15.30: Diet quality indices: overview of the different indices, use of indices in nutritional epidemiology (Part 2)  
Lecturer: Prof. Dr. I. Huybrechts  
Type: Lecture
- 15.30 – 16.00: Break
- 16.00 – 16.45: Calculation of different indexes based on diaries and based on FFQ\_s and its application on (real) data sets (Part 1)  
Lecturer: Prof. Dr. I. Huybrechts  
Type: Assisted worked examples
- 16.45 – 17.30: Calculation of different indexes based on diaries and based on FFQ\_s and its application on (real) data sets (Part 2)  
Lecturer: Prof. Dr. I. Huybrechts  
Type: Assisted worked examples
- From 17.45 on: Social event with aperitif  
Host: Prof. J. Eisenblätter (BFH – Health – CH)

## Tuesday 22 August 2017

### Morning session: «Personalised Nutrition»

08.00 – 08.45: IT-support (if needed)

08.45 – 09.30: Introduction to personalised nutrition

Lecturer: Prof. Dr. I. Huybrechts

Type: Lecture

09.30 – 10.15: Practical aspects of personalised nutrition (Part 1)

Lecturer: Prof. Dr. I. Huybrechts

Type: Assisted worked examples

10.15 – 10.45: Break

10.45 – 11.30: Practical aspects of personalised nutrition (Part 2)

Lecturer: Prof. Dr. I. Huybrechts

Type: Assisted worked examples

11.30 – 12.15: Introductory lecture to prepare the afternoon's workshop (Part 1)

Lecturer: Prof. Dr. D. Hansen

Type: Lecture

12.15 – 13.00: Introductory lecture to prepare the afternoon's workshop (Part 2)

Lecturer: Prof. Dr. D. Vissers

(Universiteit Antwerpen – B)

Type: Lecture

13.00 – 14.00: Lunch & transfer to BFH Laboratory of Movement Analysis

**Afternoon session: «Workshop on Exercise and Exercise Testing in Patients with Unhealthy Nutrition Related Disorders»**

14.00 – 14.45: Demonstration treadmill ergometry (e.g. single stage treadmill walking)

14.45 – 15.30: Demonstration step test

15.30 – 15.45: Break & transfer to Ergometry Laboratory of Inselspital

15.45 – 18.15: Demonstration CPET and cycling ergometry in small groups (e.g. Astrand-Rhyming test)

Lecturers: Prof. Dr. D. Hansen & Prof. Dr. D. Vissers

Type: Demonstrations & Workshop

From 19.45 on: Social event with guided tour of Bern

Host: N.N. (BFH – Health – CH)

## Wednesday 23 August 2017

### **Morning session: «Meta-Analysis as Used in Nutrition and Exercise Rehabilitation Sciences»**

08.45 – 09.30: Theoretical aspects of meta-analysis as used in nutrition and exercise rehabilitation sciences

Lecturer: Prof. Dr. P. Mullie  
(Vrije Universiteit Brussel – B)

Type: Lecture

09.30 – 10.15: How to read critically a meta-analysis study report

Lecturer: Prof. Dr. P. Mullie

Type: Lecture

10.15 – 10.45: Break

10.45 – 11.30: Break-out session: small groups read critically a meta-analysis study report

Lecturer: Prof. Dr. P. Mullie

Type: Workshop

11.30 – 12.15: Break-out session: small groups present critically their meta-analysis study report

Lecturer: Prof. Dr. P. Mullie

Type: Workshop

12.15 – 13.00: Physical activity and nutrition: from rehabilitation to athletes

Lecturers: Prof. Dr. P. Clarys & Prof. Dr. D. Aerenhouts  
(Vrije Universiteit Brussel – B)

Type: Lecture

13.00 – 14.00: Lunch



## **Afternoon session: «Physical Activity and Nutrition: from Rehabilitation to Athletes»**

- 14.00 – 14.45: Introductory lecture to prepare the workshop (Part 1)  
Lecturer: Prof. Dr. P. Clarys & Prof. Dr. D. Aerenhouts  
Type: Lecture
- 14.45 – 15.30: Introductory lecture to prepare the workshop (Part 2)  
Lecturer: Prof. Dr. P. Clarys & Prof. Dr. D. Aerenhouts  
Type: Lecture
- 15.30 – 16.00: Break & transfer to Ergometry Laboratory of Inselspital
- 16.00 – 20.00: Sweat analysis, urine analysis  
Blood glucose and blood lactate concentration measurements during cycle ergometry  
Lecturers: Prof. Dr. P. Clarys & Prof. Dr. D. Aerenhouts  
Type: Workshop (work in small groups on cycle ergometers)

## Thursday 24 August 2017

### **Morning session: «Biochemistry in Nutrition and Exercise Rehabilitation»**

- 08.45 – 09.30: In and out: drinking and fueling guidelines for exercise performance and health  
Lecturer: Prof. Dr. S. Mettler (BFH – Health – CH)  
Type: Lecture
- 09.30 – 10.15: In and out: drinking and fueling guidelines for exercise performance and health  
Lecturer: Prof. Dr. S. Mettler  
Type: Lecture
- 10.15 – 10.45: Break
- 10.45 – 11.30: In and out: drinking and fueling guidelines for exercise performance and health  
Lecturer: Prof. Dr. S. Mettler  
Type: Lecture
- 11.30 – 12.15: Proteins, protein anabolism and catabolism: Theoretical refresher and indication examples in rehabilitation  
Lecturer: Prof. Dr. H. Jenzer (BFH – Health – CH)  
Type: Lecture
- 12.15 – 13.00: Nutrigenomics: The way towards personalised nutrition  
Lecturer: Prof. Dr. H. Jenzer  
Type: Lecture
- 13.00 – 14.00: Lunch

## **Afternoon session: « Biochemistry and Nutrigenomics - Proteins in Rehabilitation Medicine»**

- 14.00 – 14.45: Biochemistry: Metabolic principles and interpretation in blood analysis  
Lecturer: Prof. Dr. H. Jenzer  
Type: Lecture
- 14.45 – 15.30: The interpretation of blood and saliva analysis results and its practical implications for dietary advise – Part 1  
Lecturer: Prof. Dr. H. Jenzer  
Type: Assisted worked examples
- 15.30 – 16.00: Break
- 16.00 – 16.45: The interpretation of blood and saliva analysis results and its practical implications for dietary advise – Part 2  
Lecturer: Prof. Dr. H. Jenzer  
Type: Assisted worked examples
- 16.45 – 17.30: Demonstration on nutrigenomics in the Laboratory (Part 1)  
Lecturer: Prof. Dr. H. Jenzer  
Type: Laboratory demonstration
- 17.30 – 18.15: Demonstration on nutrigenomics in the Laboratory (Part 2)  
Lecturer: Prof. Dr. H. Jenzer  
Type: Laboratory demonstration
- From 18.30 on: social event (joint dinner in nearby restaurant)

# Friday 25 August 2017

## Morning session: «New Technologies»

08.45 – 09.30: mHealth – the key to successful long-term health behavior change?

Lecturer: Prof. Dr. K. Haas (BFH – Health – CH)

Type: Lecture

09.30 – 10.15: mHealth – ongoing research activities

Lecturer: Prof. Dr. K. Haas

Type: Lecture & demonstration

10.15 – 10.45: Break

10.45 – 11.30: Protein metabolism in exercise, training and rehabilitation

Lecturer: Prof. em. Dr. Dr. h. c. J. Poortmans  
(Université Libre de Bruxelles – B)

Type: Lecture

11.30 – 12.15: Protein needs and supplies related to (rehabilitation) exercise training (Part 1)

Lecturer: Prof. em. Dr. Dr. h. c. J. Poortmans

Type: Lecture

12.15 – 13.00: Protein needs and supplies related to (rehabilitation) exercise training (Part 2)

Lecturer: Prof. em. Dr. Dr. h. c. J. Poortmans

Type: Lecture

13.00 – 14.00: Lunch

## **Afternoon session: «Nutritional Aspects of Exercise Rehabilitation Specific Clinical Conditions»**

- 14.00 – 14.45: Nutritional aspects in exercise rehabilitation of patients with orthopaedic disorders (Part 1)  
Lecturer: Dr. M. Briguglio (IRCCS Istituto Ortopedico Galeazzi Milano – I)  
Type: Lecture
- 14.45 – 15.30: Nutritional aspects in exercise rehabilitation of patients with orthopaedic disorders (Part 2)  
Lecturer: Dr. M. Briguglio  
Type: Lecture
- 15.30 – 16.00: Break
- 16.00 – 16.45: Neurological disorders that affect movement and nutrition (Part 1)  
Lecturer: Dr. M. Briguglio  
Type: Lecture
- 16.45 – 17.30: Neurological disorders that affect movement and nutrition (Part 2)  
Lecturer: Dr. M. Briguglio  
Type: Lecture

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