



# Summer School 2018

«Nutritional Aspects in Rehabilitation Exercise»  
(3<sup>rd</sup> Edition in Bern)

20 – 24 August 2018

Final Announcement



In cooperation with:



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# Summer School 2018

## «Nutritional Aspects in Rehabilitation Exercise»

This third 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: 20 – 24 August 2018

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

Participants: Health care students and professionals  
→ Number of participants: 30 maximum

Prerequisites: Minimum 3rd year BSc level,  
passive English knowledge

Workload: 2 ECTS

Lecture language: English

Course fee: – CHF 249 / student  
– CHF 649 / professional  
→ Course fee includes course programme,  
administration, tutoring and social activities  
→ Not included: travel expenses, catering,  
accommodation

Application deadline: 31 July 2018

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, 20 August 2018

**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. David Fäh (BFH – Health – CH)  
Type: Lecture

09.30 – 10.15: Ergospirometry testing: basics and advanced principles of exercise testing  
Lecturer: Prof. Dr. Dominique 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. Dominique 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. Dominique 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. Dominique 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. Inge 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. Inge Huybrechts

Type: Lecture

15.30 – 16.00: Break

16.00 – 16.45: Calculation of different indexes based on diaries and based on FFQs and its application on (real) data sets (Part 1)

Lecturer: Prof. Dr. Inge Huybrechts

Type: Assisted worked examples

16.45 – 17.30: Calculation of different indexes based on diaries and based on FFQs and its application on (real) data sets (Part 2)

Lecturer: Prof. Dr. Inge Huybrechts

Type: Assisted worked examples

From 17.45 on: Social event (short lecture) with aperitif

Host: Prof. Dr. Franziska Pfister (BFH - Health - CH)

# Tuesday, 21 August 2018

## Morning session: «Personalised Nutrition»

08.00 – 08.45: IT-support (if needed)

08.45 – 09.30: Introduction to personalised nutrition

Lecturer: Prof. Dr. Inge Huybrechts

Type: Lecture

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

Lecturer: Prof. Dr. Inge Huybrechts

Type: Assisted worked examples

10.15 – 10.45: Break

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

Lecturer: Prof. Dr. Inge Huybrechts

Type: Assisted worked examples

11.30 – 12.15: Introductory lecture to prepare the afternoon's workshop

Lecturer: Prof. Dr. Dominique Hansen

Type: Lecture

12.15 – 13.00: Anaerobic threshold, ventilatory threshold, lactate threshold... what's in a name?

Lecturer: Prof. Dr. Dirk Vissers

(University of Antwerp)

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)

Lecturers: Prof. Dr. Dominique Hansen  
Prof. Dr. Dirk Vissers

Type: Demonstrations & Workshop

14.45 – 15.30: Demonstration step test

Lecturers: Prof. Dr. Dominique Hansen  
Prof. Dr. Dirk Vissers

Type: Demonstrations & Workshop

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. Dominique Hansen  
Prof. Dr. Dirk Vissers

Type: Demonstrations & Workshop

From 19.45 on: Social event (guided tour of Bern)

## Wednesday, 22 August 2018

### **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. Jan Taeymans (BFH – Health – CH)  
Type: Lecture
- 09.30 – 10.15: How to read critically a meta-analysis study report  
Lecturer: Prof. Dr. Jan Taeymans  
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. Jan Taeymans  
Type: Workshop
- 11.30 – 12.15: Break-out session: small groups present critically their meta-analysis study report  
Lecturer: Prof. Dr. Jan Taeymans  
Type: Workshop
- 12.15 – 13.00: Physical activity and nutrition: from rehabilitation to athletes  
Lecturers: Prof. Dr. Peter Clarys  
Prof. Dr. Dirk 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. Peter Clarys  
Prof. Dr. Dirk Aerenhouts  
Type: Lecture
- 14.45 – 15.30: Introductory lecture to prepare the workshop (Part 2)  
Lecturer: Prof. Dr. Peter Clarys &  
Prof. Dr. Dirk 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. Peter Clarys  
Prof. Dr. Dirk Aerenhouts  
Type: Workshop (work in small groups on cycle ergometers)

## Thursday, 23 August 2018

### **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. Samuel 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. Samuel 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. Samuel Mettler  
Type: Lecture
- 11.30 – 12.15: Proteins, protein anabolism and catabolism: Theoretical refresher and indication examples in rehabilitation  
Lecturer: Prof. Dr. Helena Jenzer  
Prof. Dr. Leila Sadeghi (BFH – Health – CH)  
Type: Lecture
- 12.15 – 13.00: Nutrigenomics: The way towards personalised nutrition  
Lecturer: Prof. Dr. Helena Jenzer  
Prof. Dr. Leila Sadeghi  
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. Helena Jenzer

Prof. Dr. Leila Sadeghi

Type: Lecture

14.45 – 15.30: The interpretation of blood and saliva analysis results and its practical implications for dietary advice (Part 1)

Lecturer: Prof. Dr. Helena Jenzer

Prof. Dr. Leila Sadeghi

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 advice (Part 2)

Lecturer: Prof. Dr. Helena Jenzer

Prof. Dr. Leila Sadeghi

Type: Assisted worked examples

16.45 – 17.30: Demonstration on nutrigenomics in the Laboratory (Part 1)

Lecturer: Prof. Dr. Helena Jenzer

Prof. Dr. Leila Sadeghi

Type: Laboratory demonstration

17.30 – 18.15: Demonstration on nutrigenomics in the Laboratory (Part 2)

Lecturer: Prof. Dr. Helena Jenzer

Prof. Dr. Leila Sadeghi

Type: Laboratory demonstration

From 18.30 on: Social event (dinner in nearby restaurant)

# Friday, 24 August 2018

## Morning session: «New Technologies»

- 08.45 – 09.30: mHealth – the key to successful long-term health behavior change?  
Lecturer: Prof. Dr. Karin Haas (BFH – Health – CH)  
Type: Lecture
- 09.30 – 10.15: mHealth – ongoing research activities  
Lecturer: Prof. Dr. Karin Haas  
Type: Lecture & demonstration
- 10.15 – 10.45: Break
- 10.45 – 11.30: The dark side of science (Part 1)  
Lecturer: Prof. Dr. Samuel Mettler  
Type: Lecture
- 11.30 – 12.15: The dark side of science (Part 2)  
Lecturer: Prof. Dr. Samuel Mettler  
Type: Lecture
- 12.15 – 12.30: Break
- 12.30 – 13.15: The placebo effect  
Lecturer: Prof. Dr. Samuel Mettler  
Type: Lecture
- 13.15 – 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. Matteo 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. Matteo Briguglio  
Type: Lecture
- 15.30 – 16.00: Break
- 16.00 – 16.45: Neurological disorders that affect movement and nutrition (Part 1)  
Lecturer: Dr. Matteo Briguglio  
Type: Lecture
- 16.45 – 17.30: Neurological disorders that affect movement and nutrition (Part 2)  
Lecturer: Dr. Matteo Briguglio  
Type: Lecture

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