



NNEdPro Global Centre for Nutrition and Health

Advancing and implementing nutrition knowledge to improve health, wellbeing and society

Summer School in Applied Human Nutrition

Handbook For Candidates

Virtual Event - September 2020

Co-organised with the School of Advanced Studies on Food and Nutrition of the University of Parma, Italy





WELCOME AND ABOUT US

Welcome to the NNEdPro Global Centre for Nutrition and Health. We are headquartered at St John's Innovation Centre in Cambridge (UK) and work closely with local, regional and international partners. As a not-for-profit global think-tank, training academy and knowledge network (including a research lab consortium), we provide a gateway to individuals and organisations interested in opportunities to improve nutrition and health via education, research, evaluation and advocacy. Established as a University-based project group in 2008, we were subsequently hosted in a UK Medical Research Council facility for several years, before being constituted as an independent non-government education and research organisation, retaining formal University affiliations, in the conduct of research as well as delivery of education. Our aim is to improve nutrition-related health outcomes by training professionals, strengthening research, implementing solutions and addressing inequalities, in line with the United Nations' Sustainable Development Goals and the Decade of Action on Nutrition 2016-2025. We are delighted to celebrate our 12th anniversary with you this year at our Virtual Summer School and International Summit.

Our principal hubs of academic activity are in Cambridge, London, Ulster and Parma. Our international networks, including regional hubs, span six continents: Australia and New Zealand, Brazil, China and South-East Asia, India, Italy, Mexico, Morocco, Switzerland, the United Kingdom and Ireland and the United States. We work via strategic partnerships and key collaborations, connecting both individuals and institutions through membership of our think-tank, the NNEdPro Global Centre, as well as the International Academy of Nutrition Educators (IANE). Working closely with diverse professional groups enables an inter-disciplinary knowledge base that is greater than the sum of its parts. We gratefully acknowledge all those forming our knowledge vanguard and amplifying our impact footprint from science to society.

By choosing to complete the Summer School in Applied Human Nutrition you are about to embark on a long-term journey as we look forward to welcoming you as prospective members of our uniquely interdisciplinary, international and impact-orientated scientific community!

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INTRODUCTION

Dear Summer School Participants,

It is with utmost pleasure that we welcome you (virtually) to the fifth annual NNEdPro Summer School, taking place in September 2020.

The Summer School delivers a foundation level certificate in Applied Human Nutrition for those interested in health and biological sciences and will cover basic concepts in nutrition but will also delve into contemporary and cutting-edge topics such as the Mediterranean Diet and Diet-Microbe Interactions. Each session has been carefully chosen to provide participants with adequate training while also aiming to promote further study and interest upon completion of the course. The 2020 edition of the Summer School is co-organised with the School of Advanced Studies on Food and Nutrition of the University of Parma, Italy, and will be delivered by a contingent of internationally recognised lecturers for the occasion.

The Summer School will equip you with the basic knowledge needed to implement nutritional change in your work context and more broadly. Learning will not end after five days however - once the final assessment has been completed, participants of the Summer School will receive membership of the International Academy of Nutrition Educators (IANE) for one year. This will provide each of you with a limited amount of continued mentoring and opportunities to further advance your career in various aspects of nutrition. The Summer School is followed immediately by the NNEdPro International Summit which presents an unparalleled opportunity for participants to interact with key opinion leaders from across the world.

We hope that you take this opportunity to learn and challenge yourself. Good luck and make sure to enjoy the experience!

With very best wishes,

Organising Committee of the NNEdPro Cambridge Summer School – 2020

www.nnedpro.org.uk

www.nnedpro.org.uk/summer-school

BOARD OF DIRECTORS



Prof Sumantra (Shumone) Ray, RNutr

Founding Chair and Executive Director (Strategic Development) | Summer School Course Director and Organising Committee Co-Chair



Pauline Douglas, RD

Vice Chair and Operational Governance Director (Education) | Summer School Assessment Co-Lead



Dr Celia Laur, RNutr

Associate Director (Innovation and Implementation)



Dr Minha Rajput-Ray

Medical Director (Non-Executive)



Prof Daniele Del Rio

Scientific Director (Non-Executive)

EXECUTIVE SUPPORT



Matheus Abrantes

Senior Operations and Strategy Co-Ordinator/Executive Officer to the Chair & Vice-Chair | Summer School Digital Lead and Key Contact for Candidates



ORGANISING COMMITTEE



James Bradfield, RD
Co-chair and Curriculum/
Content Lead



Jorgen Johnsen, MSc
Deputy Co-chair



Shane McAuliffe, RD
Deputy Co-chair



Breanna Lepre, APD
Co-ordinator and Faculty/
Candidate Liaison lead



Sucheta Mitra, MSc
Deputy Co-ordinator



Prof Eleanor Beck
Assessment Co-Lead



**Melissa Adamski,
APD**



**Prof Martin
Kohlmeier**



**Dr Kathy Martyn,
RN, RNutr**



**Emeritus Prof
Caryl Nowson**



Helena Trigueiro, RD

SUMMER SCHOOL OBJECTIVES

The overall objectives of the NNEdPro summer school are to provide the following:

- An introduction to key diet and nutrition concepts.
- A general overview of key concepts in nutrition and disease prevention.
- An outline of public health nutrition, practice and policy using worked examples.
- Key points from healthcare related nutrition and hydration practices and the impact of advice/interventions on populations and individuals.
- Exposure to a range of tools and frameworks that can be used to critically appraise and apply knowledge from the current evidence base in nutrition and hydration.

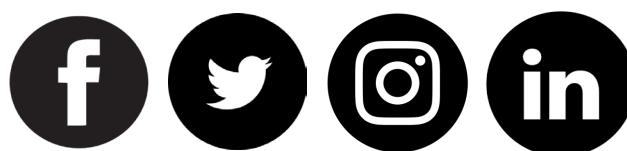
EDUCATIONAL QUALITY ASSURANCE

NNEdPro's foundation certificate course in Applied Human Nutrition has run annually since 2016 and was originally established by combining the sum total of two separate modular courses, Generic Nutrition Training (GNT) and Nutrition/Hydration Education and Leadership for Improved Clinical Outcomes (NHELICO), previously and separately endorsed by Cambridge University Health Partners (CUHP) and the MRC Human Nutrition Research Unit at the Elsie Widdowson Laboratory (2008-2018) in Cambridge

Given NNEdPro's formal affiliations with the University sector and professional associations as well as learned societies, assuring high quality evidence-informed educational content is at the heart of course development and delivery.

In addition, Continuing Professional Development (CPD) has been received every year from the Royal Society for Biology and the Royal College of Physicians, particularly for the benefit of clinically qualified candidates and those from the biological sciences or related fields.

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5TH NNEDPRO SUMMER SCHOOL IN APPLIED HUMAN NUTRITION PROGRAMME

DAY 1: TUESDAY, SEPTEMBER 1ST

- Participants will receive access to the on NNEdPro Virtual Learning Environment
- Introduction to Diet & Nutrition Module launched, including:
 - Welcome & Course Preview, Prof Sumantra Ray, James Bradfield RD, Breanna Lepre APD
 - Introduction to Diet & Nutrition, Prof Sumantra Ray
 - Dietary Assessment Theory, Breanna Lepre APD
 - Nutrition Knowledge, Attitudes and Practices (KAP), Prof Sumantra Ray
 - Body Composition & Anthropometry, James Bradfield RD, Dr Marjorie Lima do Vale, Helena Trigueiro RD
- Participants will be assigned a research paper and CASP checklists for the critical appraisal mini workshop the following Sunday

DAY 2: THURSDAY, SEPTEMBER 3RD

- First small group live mentoring session – 18.30-19.30 (BST, CET, IST or EDT, depending on group allocation by geographical region)

ASSESSMENT A: FRIDAY, SEPTEMBER 4TH

- Essay submission deadline (23.59h British Summer Time)

DAY 3: SATURDAY, SEPTEMBER 5TH

(LIVE SESSIONS: 9.55 – 14.10 BST)

CORE CONCEPTS IN HUMAN NUTRITION

Overview of Day	James Bradfield RD	09.55 – 10.00
Introduction to Faculty	Prof Sumantra Ray	10.00 – 10.30
Introduction to Macronutrients	Dr Kathy Martyn	10.30 – 11.15
Break		11.15 – 11.45
Introduction to Micronutrients	Prof Caryl Nowson	11.45 – 12.30
Body Composition & Energy Metabolism	Dr Mei Yen Chan	12.30 – 13.00
Break		13.00 – 13.30
Dietary Assessment Methods	Dr Kathy Martyn	13.30 – 14.00
Summary of the Day	Prof Sumantra Ray	14.00 – 14.10

5TH NNEdPRO SUMMER SCHOOL IN APPLIED HUMAN NUTRITION PROGRAMME

DAY 4: SUNDAY, SEPTEMBER 6TH (LIVE SESSIONS: 9.55 – 14.10 BST)

NUTRITION RESEARCH METHODS

Overview of Day	James Bradfield RD	09.55 – 10.00
Intro to Quantitative Methods & Study Design in Nutrition	Dr Rajna Golubic	10.00 – 10.45
Break		10.45 – 11.00
Intro to Qualitative Methods in Nutrition	Dr Celia Laur	11.00 – 11.45
Break		11.45 – 12.00
Critical Appraisal Presentation	Alan Flanagan	12.00 – 12.30
Break		12.30 – 13.00
Critical Appraisal Mini-Workshop (working on paper in smaller groups)	Various NNEdPro GIP Members	13.00 – 13.40
Presentation of Group Work		13.40 – 14.00
Summary of the Day	Prof Sumantra Ray	14.00 – 14.10

DAY 5: MONDAY, SEPTEMBER 7TH AT 5PM BRITISH SUMMER TIME (POST-LIVE SESSIONS)

All live and pre-recorded topics in Core Concepts in Human Nutrition and Nutrition Research Methods will go online on NNEdPro Virtual Learning Environment.

Participants will be expected to watch/study these in the coming days to consolidate their learning from the previous weekend.

The pre-recorded lectures will be:

- Case Study: Novel Micronutrient Research – Dr Dora Pereira
- Introduction to Nutrition and Non-Communicable Diseases – Breanna Lepre APD
- Mediterranean Diet Beyond the Mediterranean Shores – Gabriele Mocciano & Dr Simon Poole
- European Legislation on Food/ Study Designs for EFSA Health Claims – Dr Daniela Martini
- *Overview of Nutritional Epidemiology – Dr Giuseppe Grosso*
- Nutrigenetics & Nutrigenomics: An Overview – Prof Martin Kohlmeier
- New Frontiers in Carbohydrates: Glycaemic Index – Giuseppe Di Pede
- Dietary Bioactives: An Overview – Dr Donato Angelino
- Diet-Microbe Interactions in the Gut: More Complex than it Seems – Dr Letizia Bresciani



5TH NNEDPRO SUMMER SCHOOL IN APPLIED HUMAN NUTRITION PROGRAMME

DAY 6: THURSDAY, SEPTEMBER 10TH

Second small group mentoring session – 18.30-19.30 (BST, CET, IST or EDT, depending on group allocation by geographical region)

DAY 7: SATURDAY, SEPTEMBER 12TH (LIVE SESSIONS: 9.55 – 14.00 BST)

GLOBAL AND PUBLIC HEALTH PART 1

Overview of Day	James Bradfield RD	09.55 – 10.00
Global Food and Nutrition Security towards 2030: Innovation in Implementation	Prof Sumantra Ray	10.00 – 10.30
Global Evidence in Nutrition/Global Burden of Disease	Dr Giuseppe Grosso	10.30 – 11.00
Break		11.00 – 11.30
Nutrition Security: Practical Experience in Developing Countries	A/Prof Francesca Scazzina	11.30 – 12.00
Public Health Nutrition Case Study 1	Shivani Bhat	12.00 – 12.20
Break		12.20 – 12.50
Public Health Nutrition Case Study 2	Shane McAuliffe RD	12.50 – 13.10
Public Health Nutrition Case Study 3	Helena Trigueiro RD	13.10 – 13.30
Public Health Nutrition Case Study 4	Prof Sumantra Ray & Jørgen Johnson	13.30 – 13.50
Summary of the Day	Prof Sumantra Ray	13.50 – 14.00

5TH NNEDPRO SUMMER SCHOOL IN APPLIED HUMAN NUTRITION PROGRAMME

DAY 8: SATURDAY, SEPTEMBER 12TH (LIVE SESSIONS: 09.55 – 14.10 BST)

GLOBAL AND PUBLIC HEALTH PART 2

Overview of Day	James Bradfield RD	09.55 – 10.00
Nutrition and Cardiometabolic Disease: Causal Inference Pathways	Prof Sumantra Ray & Marjorie Lima do Vale	10.00 – 10.45
Break		10.45 – 11.15
Nutrition and Ageing	Prof Caryl Nowson	11.15 – 12.00
Food and Diet Sustainability: A Challenge	Dr Beatrice Biasini	13.15 – 14.00
Break		12.30 – 13.15
Navigating Nutrition in the Media	Navigating Nutrition in the Media	Navigating Nutrition in the Media
Summary of the Day	Prof Sumantra Ray	14.00 – 14.10

DAY 9: MONDAY SEPTEMBER 14TH AT 5PM BRITISH SUMMER TIME (POST-LIVE SESSIONS)

Global and Public Health live recorded lectures and Introduction to Healthcare Nutrition pre-recorded lectures will go online on [NNEdPro Virtual Learning Environment](#).

Participants will be expected to watch/study these in the coming days to consolidate their learning from the previous weekend.

The pre-recorded lectures will be:

- Nutritional Screening & Assessment in Healthcare – Prof Eleanor Beck
- Hydration & Health in Primary Care – Pauline Douglas RD
- Fluids & Electrolytes in Acute Care – Prof Sumantra Ray
- Managing Undernutrition & Nutritional Support in Acute Care – Dr Lisa Sharkey
- Managing Obesity in Acute Care – Dr Rajna Golubic
- Nutrition and Cancer – Dr Francesca Ghelfi
- Nutrition in Disability Management & Occupational Wellbeing – Dr Minha Rajput-Ray

DAY 10: THURSDAY, SEPTEMBER 17TH

Third small group mentoring session – 18.30-19.30 (BST, CET, IST or EDT, depending on group allocation by geographical region).



5TH NNEDPRO SUMMER SCHOOL IN APPLIED HUMAN NUTRITION PROGRAMME

DAY 11: SATURDAY, SEPTEMBER 19TH (LIVE SESSIONS: 9.55 – 13.40 BST)

REMAINING TOPICS IN THE INTRODUCTION TO HEALTHCARE NUTRITION

Overview of Day	James Bradfield RD	09.55 – 10.00
Nutrition and Mental Health	Justyna Godos	10.00 – 10.45
Strategies to Implement a Healthy Population Diet: the Case of Parma, Italy	A/Prof Daniele Del Rio	10.45 – 11.30
Break		11.30 – 12.00
Executive Summaries of Healthcare Nutrition Content	Prof Sumantra Ray	12.00 – 13.30
Summary of the Day	Prof Sumantra Ray	13.30 – 13.40

DAY 12: SUNDAY, SEPTEMBER 20TH (LIVE SESSIONS: 10.00 – 14.00 BST)

- Course summary – Prof Sumantra Ray & James Bradfield RD
- Final Q&A session with selected course faculty
- Anything that has not been covered
- Participants reflection on the course
- Final thoughts before assessment

ASSESSMENT-B: MONDAY, SEPTEMBER 21ST AT 5PM BRITISH SUMMER TIME (POST-LIVE SESSIONS)

Assessment goes live

- The assessment will be live for five days (until midnight, Friday September 25th) however participants will have 90 mins to complete it once they open/begin the assessment.
- Students will have flexibility to do the assessment in their own time as well as having an opportunity to study before undertaking the assessment.
- Essays will also be marked by this point to give a final result.

All live sessions will be recorded and available on [NNEdPro Virtual Learning Environment](#)

SUMMER SCHOOL ASSESSMENT OVERVIEW COURSEWORK

NNEdPro Summer School in Applied Human Nutrition has three assessment tasks contributing to the overall completion of the Award. The first task is a short essay, completed prior to commencement of the Summer School (20% of total marks). In week one (Sunday, September 6th), you will engage in sessions on critical appraisal of the nutrition research literature. Marks are awarded for participation in the exercise and a short reflection on strategies that may be used to improve critical appraisal skills (10% of total marks). Finally, an online multiple-choice examination will be undertaken at the conclusion of the Summer School (70% of total marks). Students are awarded a pass for marks above 50%.

Further details on assessment are provided by email and on the Virtual Learning Environment.



6TH NNEDPRO INTERNATIONAL SUMMIT

As a 2020 Summer School Candidate, you have free registration to the 6th International Summit on Medical & Public Health Nutrition Education & Research. This year's event will comprise a series of 7 webinars released prior to the main live event on Saturday, 26th September 2020. The International Summit is a leading annual international scientific meeting in nutrition research and scientific dialogue attracting delegates who are key opinion leaders in the field from all over the globe

Six pre-recorded Summit webinars will be released to you on the NNEdPro Virtual Learning Environment following completion of Summer School modules and assessment. The 7th webinar will be available for you to view live on 24th September. We strongly encourage you to attend the live Summit event on Saturday 26th September 2020. There will also be online networking sessions on the evening of Saturday 26th and morning of Sunday 27th September (UK time) to enable informal interaction between summer school candidates and faculty as well as the speakers and delegates of the summit. You can find the Summit programme and more information on the Summit [here](#).

COURSE OUTLINES *(in order of lecture)*

INTRODUCTION TO DIET AND NUTRITION

This session will provide a historical perspective on diet and nutrition as well as describing some of the fundamental scientific underpinnings of diet and nutrition.

By the end of this session participants will be able to:

- Describe the relevance of nutrition science discoveries in broad health and social systems over time
- Define nutrition, diet and malnutrition
- Demonstrate understanding of the biochemical demand for energy and nutrients
- Define nutrients and their classification and identify food sources of major nutrients
- Demonstrate understanding of dietary guidelines, Nutrient Reference Values and identify sources of evidence-based nutrition
- Describe the principles of a healthy diet and factors which influence food choice
- Describe the relationship between diet, lifestyle and health

DIETARY ASSESSMENT METHODS

This session will provide an overview of dietary assessment methods as well as challenges and advantages associated with different methods.

By the end of this session participants will be able to:

- Describe different dietary assessments, both prospective and retrospective
- Describe the advantages and challenges of using different dietary assessment methods
- Demonstrate understanding of basic techniques and methods for collecting dietary intake
- Demonstrate understanding of basic methods for managing and coding dietary intake data
- Compare basic diets to reference standards

BODY COMPOSITION AND ENERGY METABOLISM

This session will provide an overview of how nutrition influences body composition and energy metabolism.

By the end of the session participants will be able to:

- Describe the key components of energy expenditure and understand how nutrient intake can influence energy balance.
- Describe how body composition is measured using a variety of methods and techniques including densitometry, bioelectrical impedance, dual energy x-ray absorptiometry and other anthropometric techniques
- Describe the relationship between body composition and disease risk.
- Discuss how nutrition intervention strategies can be used to improve of body composition and subsequent health outcomes at individual and population levels.



COURSE OUTLINES *(in order of lecture)*

ANTHROPOMETRY AND BIOIMPEDANCE METHODS

This session will provide a demonstration of a series of simple measurements including:

- Height & weight
- Surrogate measures of height
- Handgrip strength
- Bioelectrical impedance analysis

By the end of this session participants will be able to:

- Describe the principles, advantages and challenges of using the above measures including bioelectrical impedance analysis to measure body composition

INTRODUCTION TO MICRONUTRIENTS

This session will introduce micronutrients and their role in health and the prevention of chronic disease.

By the end of this session participants will be able to:

- Identify the physiological function of common micronutrients
- Identify dietary and other sources of common micronutrients
- Demonstrate an awareness of population and individual approaches to ensuring micronutrient adequacy
- Demonstrate an awareness of the specific dietary challenges relating to ensuring micronutrient adequacy across the life course
- Demonstrate an awareness of population/fortification approaches to addressing micronutrient deficiencies for: Vitamin A, Iodine, Folate, Vitamin D

INTRODUCTION TO MACRONUTRIENTS

This session will introduce the concepts involved in the digestion and absorption of macronutrients.

By the end of this session participants will be able to:

- Describe the physiologic role and requirements of dietary macronutrients (carbohydrates, lipid and protein)
- Describe the anatomical structure, function and regulation of the gastrointestinal (GI) tract
- Describe the mechanisms of lipid, carbohydrate and protein digestion, absorption and distribution
- Explore current issues and controversies related to macronutrients and concept of a balanced diet
- Critically review literature related to macronutrient digestion, absorption and distribution, and dietary recommendations.

COURSE OUTLINES *(in order of lecture)*

DIETARY BIOACTIVES: AN OVERVIEW

This session will provide an overview of the main categories of the bioactive compounds present in food, particularly plant-based foods.

By the end of this session, participants will be able to:

- Describe the beneficial effects of fruit and vegetable consumption
- Define bioactive compounds
- Differentiate between bioactive compounds and nutrients
- Identify food-based sources of bioactive compounds
- Describe the main categories of bioactive compounds present in food-stuffs
- Describe the effect of cooking/processing on dietary bioactives
- Describe the metabolism and uptake of dietary bioactives
- Review literature related to food bioactives and health outcomes
- Describe the role of gut microbial metabolites of some classes of bioactives such as (poly) phenols and their effective biological activity

NUTRITION AND NON-COMMUNICABLE DISEASE

This session will provide a broad overview of nutrition and its contribution to the global burden of disease, particularly via non-communicable diseases such as Cardiovascular Disease, diabetes, hypertension and cancer.

By the end of this session participants will be able to:

- Demonstrate knowledge of categories of non-communicable disease
- Describe the components, risk factors and incidence of cardiometabolic disease
- Describe the health effects of hypertension
- Define hypertension
- Demonstrate knowledge of the prevalence of hypertension
- Describe nutritional factors which affect blood pressure

CARBOHYDRATES: NEW FRONTIERS

This session will provide an overview of the role of carbohydrate in the diet and current and emerging scientific evidence related to carbohydrate and human health.

By the end of this session participants will be able to:

- Describe the role of carbohydrate in the diet
- Identify dietary sources of carbohydrates
- Define carbohydrate quality
- Describe factors and parameters describing the quality of carbohydrate rich foods
- Demonstrate awareness of current and emerging scientific evidence related to carbohydrates and human health
- Demonstrate awareness of emerging evidence on interpersonal glycaemic variability in response to carbohydrate rich foods



COURSE OUTLINES *(in order of lecture)*

INTRODUCTION TO STUDY DESIGN AND QUANTITATIVE METHODS IN NUTRITION

This session will provide an overview of different types of study design and quantitative methods used in nutrition research.

By the end of this session participants will be able to:

- Describe the relevance of nutrition research
- Describe principles of quantitative and clinical/epidemiological research methods
- Demonstrate awareness of the hierarchy of scientific evidence
- Demonstrate awareness of key characteristics, advantages and disadvantages of commonly used study designs
- Describe basic concepts in biostatistics and epidemiology
- Demonstrate the ability to interpret nutrition evidence in a critical and scientific manner

INTRODUCTION TO QUALITATIVE METHODS IN NUTRITION

This session will provide an overview of qualitative research methods and examples of how this has advanced scientific understanding of topics in nutrition.

By the end of this session participants will be able to:

- Demonstrate awareness of the rationale for using qualitative research in nutrition
- Describe common methodological approaches in qualitative research, including semi-structured interviews and focus groups
- Describe qualitative analysis methods for health research, including thematic and content analysis

INTRODUCTION TO NUTRITIONAL EPIDEMIOLOGY

This session will provide an overview of epidemiology and its application to nutrition, including examples of nutritional epidemiological studies.

By the end of this session participants should be able to:

- Define epidemiology
- Identify key sources of demographic and public health data
- Describe and interpret basic epidemiologic concepts and measures of disease occurrence in populations including incidence, prevalence, relative risk, attributable risk and standardisation
- Describe challenges associated with determining causality
- Describe the strengths and limitations of epidemiological strategies (e.g. cohort, case control, cross-sectional and intervention studies) for studying associations between dietary risk factors in populations and rates of disease occurrence or death
- Demonstrate awareness of the policy implications of nutritional epidemiological research including meta-analyses of trial and observational evidence

COURSE OUTLINES *(in order of lecture)*

CRITICAL APPRAISAL MINI-WORKSHOP

This session will aim to equip participants with the tools needed to critically analyse and interpret recent research findings and their implications.

By the end of this session participants should be able to:

- Describe the strengths and limitations of different study designs, including potential sources of bias
- Apply critical analytical skills to interpretation of a published article
- Interpret levels of scientific evidence

LEGISLATION ON FOOD AND STUDY DESIGNS FOR HEALTH CLAIMS

This session will provide an overview of current legislation on food including nutrition and health claims. The session will use the European/EFSA systems as an example.

By the end of this session participants should be able to:

- Demonstrate awareness of legislation on foods
- Describe the general aims of food regulation
- Define nutrition and health claim and identify examples
- Define general function claims
- List the key steps involved in the application for a health claim
- Demonstrate understanding of the hierarchy of pertinent studies for the scientific substantiation of a claim
- Review literature related to the nutrient profile between products with and without health and nutrition claims

NUTRIGENETICS & NUTRIGENOMICS: AN OVERVIEW

This session will provide an overview of the complexity of gene-nutrient interactions and the utility of each interaction.

By the end of this session participants should be able to:

- Demonstrate awareness of the history of nutrigenomics
- Demonstrate understanding of nutrigenetic heterogeneity
- Define key terms related to nutrigenetics and nutrigenomics
- Demonstrate understanding of the significance and impact of research in nutrigenomics including examples of practical applications



COURSE OUTLINES *(in order of lecture)*

BEYOND THE MEDITERRANEAN SHORES: THE MEDITERRANEAN DIET

This session will provide an overview of the Mediterranean Diet (MD) and its potential role in health.

By the end of this session participants should be able to:

- Describe the epidemiology of chronic diseases
- Demonstrate an awareness of landmark studies on Mediterranean Diet (MD) and health
- Describe the elements of a Mediterranean style diet pattern, including extra virgin olive oil
- Describe the relationship between the Mediterranean diet and cardiovascular diseases

DIET-MICROBE INTERACTIONS IN THE GUT: EFFECTS ON HUMAN HEALTH AND DISEASE

This session will provide an overview of general diet-microbe interaction in the gut including the complex colonic microbial metabolism undergone by dietary polyphenols.

By the end of this session participants should be able to:

- Describe diet-microbe interaction in the gut
- Define pre and pro-biotics
- Describe the metabolic processes dietary polyphenols undergo
- Demonstrate awareness of the most recent advancements in the study of polyphenol biological activity

CASE STUDY: NOVEL MICRONUTRIENT RESEARCH

This session provides a case-study on iron deficiency anaemia (IDA) as the largest nutritional deficiency disorder worldwide.

By the end of this session participants should be able to:

- Demonstrate awareness of the global impact of nutritional deficiency disorders including iron deficiency anaemia
- Describe challenges associated with the prevention and management of iron deficiency anaemia
- Describe strategies to reduce the prevalence and burden of iron deficiency anaemia in line with the United Nations Sustainable Development Goals (SDGs)

COURSE OUTLINES *(in order of lecture)*

INTRODUCTION TO NUTRITION IN HEALTHCARE

This session will provide an overview of areas that healthcare professionals are likely to encounter in practice.

This session is a series of rotational workshops covering the following:

- Nutritional Screening and Assessment in Health Care
- Hydration and Health in Primary Care
- Fluids and Electrolytes in Health and Disease
- Managing Undernutrition and Nutritional Support in Acute Care
- Managing Obesity in Acute Care

NUTRITIONAL SCREENING AND ASSESSMENT IN HEALTH CARE

This session will provide an overview of the importance and role of health professionals in nutrition screening and assessment.

By the end of this session participants should be able to:

- Demonstrate understanding of the difference between nutrition screening and assessment
- Describe the importance of nutrition screening and assessment
- Identify nutrition screening and assessment tools which are commonly used and identify how and why some may be preferred
- Describe the role of doctors/health professionals (e.g. nurses) in nutrition screening and assessment
- Describe the role of the dietitian in nutrition screening and assessment

HYDRATION AND HEALTH IN PRIMARY CARE

This session will provide an overview of the role of hydration in health and primary care.

By the end of this session participants should be able to:

- Identify key functions of water in the human body
- Describe the role of adequate hydration in health and the management of chronic disease including obesity and type 2 diabetes
- Outline hydration needs throughout the lifespan
- Demonstrate awareness of practical aspects related to fluid intake including strategies to improve hydration status



COURSE OUTLINES *(in order of lecture)*

FLUIDS AND ELECTROLYTES IN HEALTH AND DISEASE

This session will provide an overview of the clinical assessment of fluid and electrolyte status in the acute care setting.

By the end of this session participants should be able to:

- Identify common IV fluids in use on the ward
- Critically review an acute clinical case example related to fluid and electrolyte status
- Describe risk factors for refeeding syndrome
- Describe the role of thiamine (Vitamin B1) in refeeding syndrome
- Outline considerations in the management of refeeding syndrome in acute care
- Describe strategies for the prevention of refeeding syndrome in acute care

MANAGING UNDERNUTRITION AND NUTRITIONAL SUPPORT IN ACUTE CARE

This session will provide an overview of undernutrition in acute care and the implementation of nutrition support in hospital.

By the end of this session participants should be able to:

- Demonstrate awareness of the incidence and impact of undernutrition in acute care
- Describe the organisational implementation of nutritional care in the acute care setting
- Describe dietary strategies for the prevention and management of undernutrition in acute care
- Outline the advantages and disadvantages of parenteral nutrition

MANAGING OBESITY IN ACUTE CARE

This session will provide an overview of management of obesity in the acute care setting.

By the end of this session participants should be able to:

- Define overweight and obesity
- Recognise obesity in adult hospitalised patients
- Describe the classification and consequences of obesity, and the role of other factors including medications and genetic factors in influencing weight
- Describe strategies for the practical management of obesity in acute care
- Describe the role of discharge care in obesity management

NUTRITION AND CANCER PREVENTION

This session will provide an overview of the role of nutrition in cancer prevention including the WCRF/AICR Diet and cancer report.

By the end of this session participants should be able to:

- Outline cancer prevention recommendations based on the latest scientific research
- Describe cancer preventability estimates for diet, nutrition, body fatness and physical activity
- Describe evidence-based dietary strategies for cancer prevention
- Describe evidence-based dietary changes following cancer diagnosis

COURSE OUTLINES *(in order of lecture)*

NUTRITION AND MENTAL HEALTH

This session will provide an overview of existing evidence related to dietary factors and mental health.

By the end of this session participants should be able to:

- Identify common types of mental illness and disability
- Describe dietary factors related to mental health
- Describe preventive approaches to mental health including the role of sleep
- Assess and identify optimum dietary patterns for sleep quality
- Identify nutrients and antioxidants which may play a role in mental health
- List reasons individuals with mental illness may be a nutritional risk

NUTRITION IN DISABILITY MANAGEMENT AND OCCUPATIONAL WELLBEING

This session will explore nutritional factors that may contribute to disease processes and impact morbidity, with effect on wellbeing and performance.

By the end of this session participants should be able to:

- Describe the relationship between poor diet and early death and disability
- Demonstrate an understanding of workplace nutrition culture and how it may impact intake
- Describe how workplace nutrition can promote productivity and reduce disability
- Demonstrate awareness of the workplace as a platform to support behaviour change and healthier nutrition practices

NUTRITION IN AGEING INCLUDING MICRONUTRIENT DEFICIENCIES

This session will provide an overview of nutrition in ageing with a focus on nutrition requirements and micronutrient deficiencies.

By the end of this session participants should be able to:

- Describe physiological changes associated with ageing
- List characteristics of ageing related to nutrition including influence on body composition and energy intake
- Identify nutrition related diseases of ageing
- Demonstrate understanding of the role of micronutrients and ageing
- Describe changes in body composition associated with ageing
- Define Sarcopenia and Sarcopenic Obesity
- Describe risk factors for inadequate nutrition in the elderly, including social determinants of health
- Identify the desirable range of BMI for older people
- Demonstrate understanding of nutrition requirements for macro- and micronutrients that are altered by ageing and malnutrition risk
- Review key nutrition factors in the prevention of falls and fracture in older people
- Describe dietary strategies to reduce the risk of malnutrition



COURSE OUTLINES *(in order of lecture)*

NUTRIENT QUALITY AND HEALTH: IMPACT OF CARBOHYDRATE QUALITY ON HUMAN HEALTH – NEWS FROM THE RESEARCH FRONT

This session will provide an overview of the role of carbohydrates in the human diet and nutritional evaluation of carbohydrates.

By the end of this session participants should be able to:

- Describe the classification of dietary carbohydrates
- Identify food sources of carbohydrates and dietary patterns for optimum health
- Describe international recommendations for intake of dietary carbohydrate
- Describe post-prandial glucidic metabolism
- Review literature related to post-prandial glucidic metabolism
- Describe concepts related to the nutritional evaluation of dietary carbohydrates
- Review literature from in vivo and in vitro assessment methods related to the nutritional quality of carbohydrate-rich foods

THE GLOBAL NUTRITION REPORT & UN DECADE OF ACTION ON NUTRITION

This session provides an overview of the purpose and aims of the Global Nutrition Report and key mechanisms to support progress across the UN Decade of Action on Nutrition.

By the end of this session participants will be able to:

- Demonstrate awareness of the global burden of malnutrition in all its forms
- Identify the aim and key messages of the Global Nutrition Report
- Describe key mechanisms which support progress on nutrition commitments across the UN Decade of Action on Nutrition
- List the six pillars of nutrition action as part of the UN Decade of Action on Nutrition

GLOBAL EVIDENCE IN NUTRITION – HOW DO WE MITIGATE THE GLOBAL BURDEN OF DISEASE?

This session will provide an overview of the level of evidence of the association and the global impact of nutritional factors on human health.

By the end of this session participants will be able to:

- Demonstrate awareness of the global impact of nutritional factors on human health
- Evaluate the level of evidence for the association between the consumption of major food groups including meat (red and processed), fish, whole-grains, fruit, vegetable, nuts, legume, egg and dairy products and the risk of various diseases
- Describe the global impact of selected nutrition risk factors of disability-adjusted life years and mortality by major non-communicable diseases including cardiovascular diseases and cancer

COURSE OUTLINES *(in order of lecture)*

PUBLIC HEALTH NUTRITION CASE STUDIES

This session will review a case example of an initiative related to nutrition education and leadership for improved clinical public health outcomes in India.

By the end of this session participants should be able to:

- Review key objectives of a public health nutrition intervention
- Describe key concepts of a culinary skills nutrition education intervention

NUTRITION AND AGEING

This session will focus on the influence of ageing on physiological functions related to nutrition and strategies to reduce risk of malnutrition and malnutrition.

By the end of this session participants should be able to:

- Demonstrate an understanding of the physiological changes associated with ageing and their impact on nutritional status
- Demonstrate and understanding of inflammation mechanism of ageing and interaction with nutrients
- Describe changes in body composition associated with ageing
- Identify the desirable range of BMI for older people
- Define Sarcopenia and Sarcopenic Obesity
- Demonstrate an understanding of the physiological changes associated with ageing and their impact on nutritional requirements for macro and micro-nutrients
- Identify the risk factors and strategies to address inadequate nutrition/malnutrition in the elderly
- Identify the nutrition factors in the prevention of falls and fracture in older people

FOOD AND DIET SUSTAINABILITY: WHAT'S YOUR FOOTPRINT?

This session will provide an overview of food and diet sustainability, challenges to food system sustainability and strategies to drive change.

By the end of this session participants should be able to:

- Define food systems and food supply chains
- Describe the environmental impact of the food system and diet
- Describe current challenges associated with food system sustainability
- Define sustainable diet(s)
- Describe the impact of sustainable diet(s) on nutrition and health and environmental, economic and social equity outcomes
- Identify and describe environmental and socio-economic indicators used to assess diet sustainability
- Describe and apply strategies to improve the sustainability of dietary habits and food choices

NUTRITION KAP ASSESSMENT IN COMMUNITY SETTINGS

- To outline the place of Nutrition Knowledge, Attitudes and Practices (KAP) surveillance as part of the Nutritional Assessment Toolkit
- To understand that a KAP survey is a quantitative method accompanied by qualitative information
- To appreciate that KAP surveys reveal misconceptions or misunderstandings that may represent obstacles to behaviour change.
- To be aware that KAP surveys record “opinions” based on expressed needs and reported actions and not free from bias



LECTURER BIOGRAPHIES *(in alphabetical order)*



BEATRICE BIASINI

After her master graduation in Biology applied to Nutrition Sciences (University of Milan, 2015) Beatrice got a research grant from May 2015 until October 2016 at the Department of Food and Drug of Parma University working on a project funded by EFSA, through which she provided supporting activity on the evaluation of scientific substantiation of health claims made on food. In May 2020 she received her PhD in Food Science at the University of Parma with a thesis entitled “Understanding, assessing and modelling sustainable eating behaviours”. Beatrice spent her research activity working on two main areas: i) the public food procurement sector, through activities carried out within the European research project Strength2Food (<https://www.strength2food.eu/>); ii) the assessment of diet sustainability, both investigating the factors able to affect sustainable eating behaviour by the adult population, and evaluating the nutritional, environmental and economic impact of children’s plate waste generated in Italian primary school canteens. Beatrice is currently working as post-doctoral research fellow at the Department of Food and Drug being involved in projects addressed to improve diet sustainability in young adults and childhood. Her interests pertain both to individuals and population approaches, as part of her research is addressed to assess good practices to improve food quality schemes and public governance and efficiency in school canteens. She is co-author of eleven papers published in major peer-reviewed journals in nutrition or socio-economic area.



BREANNA LEPRE

Breanna is an Accredited Practising Dietitian (APD) and current member of the Dietitians Association of Australia (DAA). She is also a Project Officer for the NNEdPro Global Centre for Nutrition and Health in Cambridge, UK, where she is an alumnus of Cambridge University. Breanna provides co-ordination and input across many aspects of NNEdPro including the Summer School, Virtual Summit, International Academy of Nutrition Educators (IANE) and the International Knowledge Application Network Hub in Nutrition (I-KANN-25), currently under development.

She is currently completing her PhD at the University of Wollongong, Australia, with a focus on nutrition education in medicine. Her vision is that all people have equitable access to safe and effective health care. For this to be achieved, medical practitioners and other healthcare professionals must cognisant of the central role of nutrition to health promotion and disease prevention. She also has an interest in strategic policy, advocacy and knowledge translation.

LECTURER BIOGRAPHIES *(in alphabetical order)*



CARYL NOWSON

Emeritus Professor Caryl Nowson is a qualified dietitian, a Fellow of the Nutrition Society of Australia who held the Deakin Chair of Nutrition and Ageing 2006-2019. She has a research program spanning more than 35 years that has focused on two major diseases of ageing: nutrition related to hypertension, and nutrition related to bone health. She has conducted many community based nutrition interventions, some combined with exercise, assessing impact on cardiovascular risk, osteoporosis risk and muscle strength. More recently she has engaged in research and relating public health strategies to achieve population salt reduction. She further extended her work into embedding nutrition into medical education both nationally and internationally. She is a principal advisor to the NNEdPro-GIP Network in Australia and New Zealand and non-executive member of NNEdPro Global Research, Education and Innovation Panel.



CELIA LAUR

Dr Celia Laur is an implementation scientist and health services researcher who works across disciplines and settings to understand how effective interventions can be sustained, spread, and scaled-up. She predominantly uses qualitative research methods, collaborating with others for a mixed methods approach. Her PhD at the University of Waterloo focused on understanding healthcare professionals' perspectives on implementing, sustaining and spreading nutrition care activities in hospitals across Canada. She is currently a Canadian Institutes of Health Research Health System Impact Fellow (postdoctoral), based at Women's College Hospital and the University of Toronto.



DANIELA MARTINI

Dr. Daniela Martini is currently Assistant Professor at the University of Milan. She is also member of the Board of Directors of the Italian Society of Human Nutrition and coordinates the SINU Young Working Group.

She previously joined the Human Nutrition at the University of Parma (Italy) as Post-Doctoral Senior Research Fellow (2015-2019). She completed a master's degree in human nutrition at the University of Milan (2007) and a PhD in Food Science and Nutrition (2015) at the University Campus Bio-Medico University of Rome. Her expertise includes food regulation (i.e. food labelling, nutrition and health claims), the analysis of antioxidant compounds in foods and the evaluation of their role in the modulation of markers of oxidative stress in in vivo models.



LECTURER BIOGRAPHIES *(in alphabetical order)*



DANIELE DEL RIO

Daniele Del Rio is Associate Professor of Human Nutrition at the University of Parma. His research career began in 2002 with an initial focus on oxidative stress and antioxidants. After a period as a visiting scientist at the University of Glasgow in 2002-2003, he developed interests and expertise in HPLC-MS/MS analysis of polyphenols and related compounds in food and in human tissues/fluids. After gaining his PhD in May 2004, the absorption, metabolism and bioactivity of dietary polyphenolics became the principal focus of Daniele's interests and his research and collaborations in this area have made him one of the leading researchers in the field.

Daniele has been invited to present lectures on his research on polyphenol bioavailability and bioactivity at several international conferences and has co-authored more than 100 papers on internationally peer reviewed journals. He is listed among the ISI – Thomson most influential scientists for his citation record. Dan is the Editor in Chief of the International Journal of Food Sciences and Nutrition and is a member of the editorial board of Molecular Nutrition and Food Research (Wiley), Nutrition Metabolism & Cardiovascular Diseases (Elsevier). He has also served as Commissioned Reviews Editor for the Journal Of Human Nutrition and Dietetics, the official Journal of the British Dietetic Association. Since January 2011, Daniele is leading the Laboratory of Phytochemicals in Physiology, a research laboratory of the Department of Food Science of the University of Parma and is the co-funder of the LS9 Bioactives & Health Interlab Group. His lab is allied with the Nutrition and Vascular Studies platform led by Ray et al in Cambridge and he is a Visiting Fellow of Wolfson College, University of Cambridge.



DONATO ANGELINO

Dr. Donato Angelino is Post-Doctoral Senior Research Fellow in Prof. Daniele Del Rio's Lab at the University of Parma (Italy). He completed a Master Science in Molecular Biology and a PhD in Biochemical and Pharmacological Methodologies at the University of Urbino. He previously attended as Post-Doctoral Research Fellow the Department of Food Science and Human Nutrition at the University of Illinois at Urbana-Champaign, USA.

He has skills in purification and characterization of plant-derived compounds from vegetables and evaluation of their bioavailability as well as their antioxidant and anti-inflammatory effects *in vitro* and in animals. He has been involved in the design and management of human dietary intervention trials, focusing on anti-inflammatory and anti-diabetic effects of functional foods. He is currently the senior fellow of the JPI-VALID project, focused on the identification and quantification, in plasma samples of TUDA Cohort subjects, of phenyl- γ -valerolactones (jpi-valid.com). He is an Editorial Board Member for *Heliyon* and *PharmaNutrition* (Elsevier) and has served as Guest Editor for *Nutrients*.

LECTURER BIOGRAPHIES *(in alphabetical order)*



DORA PEREIRA

Dora Pereira holds an MEng (hons.) in Biochemical Engineering from the Technical University of Lisbon (Portugal) and a PhD in Gut Microbiology from the University of Reading (UK). Prior to her PhD she worked for 3 years as an R&D bioprocess engineer in the pharmaceutical industry. She then joined the MRC Human Nutrition Research Unit in Cambridge, initially with a 1-year Post-Doctoral Fellowship to study blood biomarkers of manganese exposure and later as an Investigator Scientist working on the development of a novel nanoparticulate oral iron supplement (namely IHAT). She was an MRC Senior Investigator Scientist leading the 'Oral Iron' research theme at the MRC HNR Unit until March 2016. In April 2016 she became a Research Group Leader at the University of Cambridge to lead a Phase II clinical trial with IHAT in collaboration with the MRC Unit The Gambia at LSHTM. Her research focused on the risks and benefits of dietary and supplemental iron, particularly in what relates to gut health and the gut microbiome. With funding from the Bill & Melinda Gates Foundation she conducted one large field trial with iron supplementation in iron deficient anaemic young children living in the Upper River Region in The Gambia. Dora has moved to industry in Dec 2018 and now works in Medical Affairs where she maintains a strong focus on providing safe and efficacious treatments for iron deficiency and anaemia across different patient groups. She lives in central Cambridge with her 2 children.



ELEANOR BECK

Professor Eleanor Beck is Discipline Leader in Nutrition and Dietetics at the University of Wollongong, Australia. Eleanor has more than 25 years of experience in clinical practice and dietetics education. Eleanor was part of the expert working group for review of the National Competency Standards for Dietitians and both the Advanced Accrediting Practising Dietitian and Fellow competency standards for the Dietitians Association of Australia. Eleanor teaches clinical dietetics and coordinates both the undergraduate and postgraduate dietetic education programs at the University of Wollongong. Her clinical research includes close links with dietetics service delivery in hospitals, while working with industry partners and international collaborators in grains research. Current projects include work on cereal fibres and whole grains including definitions and clinical trials, all relevant to effects of grains on metabolic health. Eleanor is also Deputy Chair of the Council of Deans of Nutrition and Dietetics (ANZ) and the Chair of the ANZ NNEdPro group, which as part of the NNEdPro global network, particularly works on promotion of nutrition education and research in health professions.



LECTURER BIOGRAPHIES *(in alphabetical order)*



FRANCESCA GHELFI

Francesca completed a PhD in Food Science and Human Nutrition at the University of Parma, focused on nutrition science education and communication in two different settings: catering schools and oncology centres. She has a Bachelor Degree in Gastronomic Science (University of Parma) and a Master Degree in Food and Human Nutrition (University of Milan).

Francesca is also a nutritionist with professional licence at the European Institute of Oncology (Milan, Italy), in the SmartFood project. The primary aim of the project is to fill the existing knowledge gap between health institutions and general public (in particular students and patients) about health and nutrition, through scientific dissemination.

In Italy, she realizes educational activities for Continuing Medical Education.



FRANCESCA SCAZZINA

Francesca Scazzina is an Assistant Professor at the Department of Food and Drug, University of Parma. Her research work starts in 2005 with a main focus on complex carbohydrate, dietary fibre, prebiotics and antioxidants in foods, and their effects on metabolism and intestinal functions. During her Ph.D. studies, she was a visiting scientist at the School of Food Biosciences, Food Microbial Sciences Unit, University of Reading (UK). She also was involved in population surveys in the Italian section of the European Prospective Investigation into Cancer and Nutrition (EPIC). In these research fields, she is co-author of several publications on international peer reviewed Journals. Since 2009, being involved in food educational projects implemented in primary schools of the Parma area, Francesca acquired a deep experience in educational health learning programs and children population surveys.



GABRIELE MOCCIARO

Gabriele Mocciaro's main research interest lies in the field of nutrition and metabolism. Specifically, he plans to investigate the role of diet and nutrients on the prevention and treatment of metabolic disease and its complications (coronary heart disease, type 2 diabetes, fatty liver, Alzheimer's disease, and cancer). During his MSc internship, under the supervision of Dr Franco Berrino, he worked within two trials aiming to unravel the role of the Mediterranean diet in reversing the features of Metabolic Syndrome in subjects with Mild Cognitive Impairment, and in investigating the impact of this dietary pattern in the risk of relapse of breast cancer. He then moved to the University of Newcastle as a visiting student where, under the supervision of Dr Mario Siervo, he supported interventional trials, learned basics of biomedical statistics (SPSS) that he applied to retrospective analyses (the results will be submitted soon), and he had the chance to improve his academic writing skills (manuscripts and projects). Following this experience, he moved to the MRC Elsie Widdowson Laboratory in Cambridge, where he was involved in nutritional research projects and education. Finally, he has recently joined the Department of Biochemistry at the University of Cambridge as a Research Assistant.

LECTURER BIOGRAPHIES *(in alphabetical order)*



GIUSEPPE DI PEDE

Giuseppe holds a BSc in Gastronomic Sciences and completed his studies for an MSc in Food Science and Technology at the University of Parma. His Master's Thesis in human nutrition focused on the effect of different starch sources and the addition of fat on starch digestion and glycaemic index in rice and pasta. He participated to a 3-months traineeship period at AVENTURE AB, a functional foods and biotechnologies centre in Lund (Sweden), working on the development of tasty Nordic berry-based juices rich in bioactive compounds with potential beneficial cognitive effects. After concluding the traineeship program, he followed a 2-years period as research fellow at the Human Nutrition Unit of the Department of Food and Drug at the University of Parma working principally on the bioavailability and in vitro bio-accessibility of carbohydrate-rich foods. Currently, he is a Ph.D. student in Food Science at the Human Nutrition Unit of the University of Parma. He is working in an EU-JPI Project named "FOODPHYT-Food phytochemicals matter for cardiometabolic health", and its research field is focused on the effect of the botanical extracts formulation on the production of colonic metabolites.



GIUSEPPE GROSSO

Dr. Giuseppe Grosso's research focuses on evidence-based nutrition, a recently emerged field as the bottom line of the Health Technology Assessment applied to food and nutrition. Its main interests include the impact of dietary and lifestyle habits on common non-communicable diseases. In particular, he produced over 100 papers on the effects of dietary patterns (i.e., Mediterranean diet) and specific antioxidant-rich foods (i.e., coffee, tea), as well as individual antioxidants (i.e., polyphenols, n-3 PUFA) on cardiovascular and metabolic diseases, cancer, and depression. Dr. Grosso conducted his research on cohorts of individuals in both Mediterranean and non-Mediterranean countries collaborating with several research institutions. He is interested in evidence synthesis aimed to generate policy-oriented research in the area of public health nutrition. Dr. Grosso's research also aims to measure planetary health, including the potential impact of nutrition at global level.

Dr. Giuseppe Grosso is a cum laude graduated medical doctor. Dr. Grosso holds a specialization in public health and a PhD in neuropharmacology. He is currently working as Assistant Professor of human nutrition at the Department of Biomedical and Biotechnological Sciences, School of Medicine, University of Catania, Catania, Italy.



LECTURER BIOGRAPHIES *(in alphabetical order)*



HELENA TRIGUEIRO

Helena is a Portuguese registered dietitian and nutritionist with many interests, including Public Health, Sports Nutrition, and Climate Science. She holds an MSc in Consumption Science and Nutrition and a BSc (Hons) in Nutritional Sciences, both from University of Porto. After being a candidate at 2018 Summer School, she started cooperating with NNEdPro as part of the Global Innovation Panel and the Faculty and Members Panel. In 2020 she expanded her collaboration with NNEdPro, becoming Global Strategic Lead for Network Engagement, Quality and Impact.



JAMES BRADFIELD

James is a HCPC Registered Dietitian, currently completing his in Nutrition and Dietetics at the University of Chester. He also holds a degree in Nutritional Sciences from the University College Cork where in his third year, he undertook an internship with the NNEdPro Group. Since then he has held a number of roles, most recently Education & Training Officer. James' main responsibilities lie in co-chairing the organising committee of the Summer School, e-learning activities alongside strategy work and writing the monthly Complete Nutrition article. James has many years of experience in working with individuals from a wide array of backgrounds and cultures through volunteering with the European Youth Parliament and Learning Enterprises, teaching English abroad.



JØRGEN JOHNSEN

Jørgen holds an MSc in Public Health Nutrition from Oslo Metropolitan University, and with a focus on global nutrition. During his BSc, he focused on food security and has experience with anthropometry measurements of children under five years of age, FFQ, and food insecurity. His Master's Thesis focused on the development of monitoring and evaluating system to measure the nutritional Knowledge, Attitude, and Practice among mothers with children under two years of age practicing in a nutritional education programme for an NGO in Thimi, Nepal. As well as his role as a Technical Officer at NNEdPro where he is involved in its NEHELP, Mobile Teaching Kitchen and TIGR2ESS collaboration, Jørgen is currently working as a consultant for the Food and Nutrition Action in Health System unit in the Department of Nutrition and Food Safety at the World Health Organization.

LECTURER BIOGRAPHIES *(in alphabetical order)*



JUSTYNA GODOS

Justyna Godos's is currently a PhD candidate at the Department of Biomedical and Biotechnological Sciences, School of Medicine, University of Catania, Catania, Italy. Her primary research focus on how nutritional factors are associated with human health, and her key disciplinary areas are nutritional biochemistry and nutritional epidemiology. She co-authored over 50 articles on the effect of dietary factors toward cardiovascular diseases, cancer and mental health. During the PhD program, her research is centred on the determination of the association between specific dietary factors, such as polyphenols, nutrients, food groups and dietary patterns, and mental health.



KATHY MARTYN

Kathy researches Nutrition and Disability related issues in health care. Passionate about the importance of nutritional care to support recovery and promote health she is also a founding member of ERimNN, a collaborative group working to improve Nutrition Education in healthcare through sharing expertise and resources and UK Network lead for the NNEdPro global centre for nutrition and health (www.nnedpro.co.uk). Kathy is actively researching and supervising several undergraduate and postgraduate student researchers. Current projects including, A service evaluation project with BSUH to improve the nutritional care of adult patients in hospital – the NUTCAP project (Funded) ; a review of the use of 1:1 support for a low carbohydrate diet in the management of type 2 diabetes in a GP practice; health survey of pupils in secondary education in Brighton; An evaluation of the An Apple A day student volunteering project A Systematic review of the use of digital apps to support healthy behaviours in community living older people; Let's talk food: measuring the impact of a single workshop introducing the Easy Meals App to community dwelling older adults in Brighton. In addition Kathy supports a range of volunteer projects focussing on Food, and Food Education with Children 'Kids Kitchen' and the BSMS An Apple A Day.

Her main interest is on improving planned nutritional care in all health & social care settings to address the triple burden of malnutrition, obesity and micronutrient deficiency. In doing so she is working with AfN, NNEdPro, in the development of curricula and educational resources for all health professionals. She actively participates in the bi-monthly UK Cross Party Parliamentary Food and Health forum.



LECTURER BIOGRAPHIES *(in alphabetical order)*



LISA SHARKEY

Dr Lisa Sharkey qualified from the University of Cambridge and completed her Gastroenterology training within the East of England. She started as a Consultant in Addenbrooke's in 2015. She has specialist interests in clinical nutrition and Intestinal Failure and is the Medical Lead for the national multivisceral transplant service in Cambridge. Lisa is involved in undergraduate and postgraduate education in nutrition and is the nutrition representative for the national Gastroenterology Training Committee. Her research interests include Intestinal Failure Associated Liver Disease, nutritional outcomes after intestinal transplant and biomarkers of graft rejection.



LETIZIA BRESCIANI

Dr. Letizia Bresciani is a Post-Doctoral Research Fellow at The Laboratory of Phytochemicals in Physiology, Human Nutrition unit, of the University of Parma (Italy) led by Prof. Daniele Del Rio. She has a Master degree in Food Science and Technology (2011) and a PhD in Food Science (2016) at the University of Parma.

Her expertise includes purification and characterization of phenolic compounds from vegetables and investigation of pharmacokinetics, absorption, metabolism, bioavailability and bioactivity of human and microbial phenolic metabolites, using principally *in vivo* models, both animal and human. She has been involved in the design and management of human dietary intervention trials. Dr Bresciani is also working on a new potential marker of cardiovascular disease, namely TMAO, evaluating new dietary approaches to control it. She is a member of SINU Young Group and has served as Guest Editor for International Journal of Molecular Sciences.



MARJORIE LIMA DO VALE

Marjorie is a project officer/adviser at NNEdPro Global Centre for Nutrition and Health. She has recently completed a PhD in Nutrition and Metabolism at the University of Alberta, Canada, where she conducted projects focused in community and public health nutrition. Marjorie is interested in knowledge translation and dissemination and implementation science and research.



LECTURER BIOGRAPHIES *(in alphabetical order)*



MARTIN KOHLMEIER

The expertise of Martin Kohlmeier, MD, PhD, is in laboratory diagnostics, nutritional genetics and the use of computers in nutrition education for healthcare professionals and the general public. His clinical and laboratory experience uniquely help him translate bench research to the bedside and general consumer applications and to bring nutrition education to the health professions.

Dr. Kohlmeier graduated from the school of medicine at Heidelberg University, Germany, in 1976, and earned doctorates in biochemistry from Heidelberg University in 1977 and in clinical biochemistry from the Freie Universität, Berlin, in 1992.

Dr. Kohlmeier is Director of the Human Research Core and Nutrigenetics Laboratory at the UNC Nutrition Research Institute. He also is Director of Nutrition in Medicine project, which has provided comprehensive online nutrition education to students and healthcare professionals since 1992, currently at more than 150 medical institutions worldwide.



MEI YEN CHAN

Mei-Yen Chan was trained as a clinical dietitian and she has a strong background in food and nutrition education and research, with expertise including, chronic diseases treatment and management, specifically cardiovascular disease and obesity. As a course leader, she led the design of a postgraduate public health nutrition programme in UK. Her teaching philosophy is to enhance nutrition capacity and to develop critical food and nutrition researchers to meet today's global challenges in food security. She has a broad body of experience in the co-ordination and administration of academic duties as well as management of research projects as the lead PI.

Current translational research interests:

- Non-communicable diseases prevention and management, specifically Cardiovascular Disease and Obesity; clinical nutrition intervention studies, dietary assessment methods, diets of young children and adolescents, cognitive dissonance, food-related attitudes and behaviours, personalized nutrition interventions, role of dietary intake & health status of South East Asians- Forging strategic partnerships with relevant government, non-government bodies and food industries: to evaluate existing scientific evidence and to translate into policies and product messaging, nutrition advocacy and capacity-building.

LECTURER BIOGRAPHIES *(in alphabetical order)*



MINHA RAJPUT-RAY

Dr Minha Rajput-Ray is Medical Director of NNEdPro, an Occupational and Disability Physician holding registration with the General Medical Council (GMC) and a UK Registered Osteopath. Following osteopathic studies in London and gaining a first class honours degree, she obtained her undergraduate degree and basic medical training in Dundee and then held an NIHR Academic Clinical Fellowship in rheumatology and general medicine at the Universities of Manchester and Cambridge and its associated teaching hospitals. She then took further qualifications in occupational and disability medicine.

Within the NNEdPro medical director role, Dr Rajput-Ray assists to develop and deliver grassroots nutrition education research projects both in the UK and overseas; as aligned to the United Nations Decade of Action on Nutrition (2016–2025) and the United Nations Sustainable Development Goals. In addition, Dr Rajput-Ray provides clinical/medical advisory input with a specific emphasis on inter-professional patient focussed learning (bringing together medical students, junior doctors and allied health professions in the community).



PAULINE DOUGLAS

Pauline has over 25 years of Clinical and academic experience in dietetics. As a clinical dietitian she worked in the area of nutritional support for surgical and oncology patients in a large teaching hospital. Her main teaching disciplines in the Ulster University are in Professional Practice for dietetic students and dietetic practice educators. She is also involved in a number of inter-professional learning pilots in both academic and practice settings. Pauline is her Professional Body's European and alternate International representative.

She is a member of the Professional Practice Committee of European Federation of the Associations of Dietitians. This is currently working on dietetic Registration and Regulatory practice throughout Europe. She also is Key Contact for University of Ulster in "Dietitians Improving the Education and Training Standards (DIETS) project" and is a member of Work package 8 – Exploitation. Pauline is the current Chair and co-founder of the Commonwealth Dietitians and Nutritionists Association. Pauline is a partner with the Health and Care Professions Council, the statutory regulator for Allied Health Professions in the UK, and was a previous Honorary Chairman of the British Dietetic Association (BDA). She was elected to Fellowship of the BDA for her professional achievements in 2010.

Pauline works closely with Ray et al in Cambridge across the domains of NNEdPro and she has been an elected Visiting Scholar/College Research Associate at Wolfson College, University of Cambridge.



LECTURER BIOGRAPHIES *(in alphabetical order)*



RAJNA GOLUBIC

Rajna Golubic is a deputy co-lead of the NNEdPro Global Innovation Panel.

She qualified as an MD at the Zagreb University School of Medicine in Croatia. She obtained a doctorate (DSc) in occupational and sports medicine at the same university and undertook advanced training in clinical research methods at the Erasmus Medical Centre, Rotterdam, the Netherlands (as a Netherlands Institute for Health Sciences Fellow). Rajna completed an MPhil in Public Health at Cambridge and a PhD in Epidemiology at the MRC Epidemiology Unit, both as a Gates Scholar. Her PhD research focused on the descriptive epidemiology and measurement aspects of physical activity as well as its associations with cardio-metabolic diseases. She lectured on the MPhil in Epidemiology and MPhil in Public Health courses at Cambridge and now acts as a clinical supervisor and OSCE examiner for the medical students at Cambridge. She has been supervising medical students for a Student Selected Component (SSC) project and co-supervised an MPhil thesis in public health at Cambridge.

She is associate editor of the Oxford Handbook of Clinical and Healthcare Research. Having completed her PhD, Rajna started to work as a clinician. In 2018, Rajna has been awarded a National Institute for Health Research Academic Clinical Fellowship which allows her to pursue a higher specialist training in diabetes and endocrinology while conducting related clinical research at Cambridge.



SIMON POOLE

Simon Poole MBBS DRCOG is a Cambridge based medical doctor, broadcaster and commentator and is an internationally renowned authority on the science and application of the Mediterranean diet and lifestyle. He is author of the award winning Olive Oil Diet and speaks regularly on the subject of communication and change management in population and individual nutritional health.

He is a member of Council of the US based True Health Initiative and a scientific advisor to the Australian Olive Wellness Institute. He is a member of the Public Health Medicine Committee and General Practitioners Committee of the British Medical Association as well as a Council member of the Royal College of General Practitioners and a founding member of the British Society of Lifestyle Medicine and the European Lifestyle Medicine Organisation. Simon is an international senior collaborator with the NNEdPro Global Center for Nutrition and Health, Cambridge and has previously been involved in teaching at Cambridge University primary care department.

LECTURER BIOGRAPHIES *(in alphabetical order)*



SHANE MCAULIFFE

Shane holds a BSc in Nutritional Sciences from University College Cork, Ireland and has also recently completed an MSc in Nutrition and Dietetics Student at the University of Chester, UK. He is a HCPC Registered Dietitian and currently working with the NHS. Within NNEdPro he functions as the Science & Digital Communications Lead, providing content review for both internal and externally facing comms, including blogs, newsletters, social media and other relevant communications. During the COVID-19 pandemic he has been responsible for the management of our dedicated COVID-19 Nutrition Resources site, which aims to provide up-to-date and evidence-based nutrition information and research our stakeholders. He has also helped to coordinate the BMJ-Nutrition, Prevention & Health COVID-19 Nutrition Interactions Special Collection.



SHIVANI BHAT

Shivani is currently a final year medical student at the University of Limerick's School of Medicine and currently conducts translation research in cardiovascular risk management and medical education. She is a graduate of King's College London where she earned her Masters in Public Health and has a Bachelors of Science in Physiology from McGill University, Canada. Her thesis on the Association of Dietary Patterns and Carotid Intima Media Thickness qualified as a finalist among thousands of candidates for the Emerging Young Leaders in Nutrition Science Competition at Experimental Biology Conference 2016 in San Diego, USA and was recently published in Nutrition, Metabolism, and Cardiovascular Disease Journal.

Shivani has been a key player in NNEdPro's establishment as a Global Centre for Nutrition and Health since 2015. She currently plays a pivotal role in the development of NNEdPro's organisational structure as well as provides strategic advice to the Global Innovation Panel and Membership Programme. She is currently a Faculty and Mentor at NNEdPro's Summer School and has served as a Speaker at NNEdPro's Summit.

Shivani also collaborates with the Primary Care Research Unit at Sunnybrook Health Sciences Hospital, University of Toronto and Mallow Primary Health Care Centre, Ireland where she initiated and managed patient education programmes and quality improvement audits in improving cardiovascular health management.

Shivani hopes to pursue a career in academic medicine where she can better understand prevention methods and improve cardiovascular outcomes. She is an avid musician and had performed at various charity events.



LECTURER BIOGRAPHIES

(in alphabetical order)



SUMANTRA RAY - COURSE FOUNDER/ DIRECTOR

Sumantra (Shumone) Ray is a Licensed Medical Doctor as well as a Registered Nutritionist (Public Health), with special interests in Nutrition Education in Health Systems and Cardiovascular Disease Prevention. Since 2008 he has been Founding Chair and Executive Director of the NNEdPro Global Centre for Nutrition and Health. In 2018 he became the Co-Founder and Chair of BMJ Nutrition, Prevention and Health.

Shumone has been cross-appointed in Cambridge as a Governing Body Fellow of Wolfson College (2015-20) and Co-Lead for the Food, Nutrition and Education Work Package for the TIGR2ESS Programme in India (2017-21) led by the University of Cambridge and supported by UK Research and Innovation's Global Challenges Research Fund. Additionally, Shumone holds a fractional personal chair appointment as Professor of Global Nutrition, Health and Disease at Ulster University as well as several honorary/visiting professorial appointments more widely including Imperial College London in the UK. Over 2017-19 he was appointed as Course Director in Nutrition Science at the University of Cambridge Institute of Continuing Education. From 2008-10 Shumone was an NIHR Public Health Fellow and Corfield Scholar at Selwyn College Cambridge. Following this from 2010-18, he also held a Senior Clinician Scientist position with the Medical Research Council focussing on nutrition and vascular studies, heading up a dedicated experimental medicine facility for human nutrition studies and also functioning as the Lead Clinician for the UK National Diet and Nutrition Survey (c/o Public Health England) as well as working clinically at Cambridge University Hospitals. From 2010-2018 Shumone led undergraduate Nutrition teaching in the Cambridge clinical/medical curriculum and he was a University of Cambridge Senior Clinical Tutor from 2015-18.

In 2013, Shumone received the Josephine Lansdell award from the British Medical Association in support of work in the area of Nutrition and Cardiovascular Prevention. In 2014, he was elected to the award of Honorary Lifetime Associateship by the council of the British Dietetic Association (BDA). Shumone was also elected as Deputy Chairman of the 2015 BMA Conference of Medical Academic Representatives (COMAR). In 2015 NNEdPro won the Complete Nutrition Outstanding Achievement Award and Shumone was appointed as Adjunct Professor at University of Waterloo in Canada as well as receiving a Griffith University Visiting Fellowship from Australia. In 2016, he was appointed as Visiting Professor at Imperial College London as well as Ulster University in Northern Ireland and NNEdPro was a finalist and runner-up in the 2016 BMJ Awards. Also in 2016, Shumone published the Oxford Handbook of Clinical and Healthcare Research aimed at strengthening basic research skills across the global health-related workforce and became Programme Director for the Cambridge Summer School in Applied Human Nutrition. In 2017 Shumone was elected to an Honorary Professorial Fellowship at the University of Wollongong Australia whilst NNEdPro won

LECTURER BIOGRAPHIES *(in alphabetical order)*

the Medical Nutrition Industry International Award in conjunction with the European Society for Parenteral and Enteral Nutrition. In 2018, Shumone became the Founding Chair, along with the British Medical Journal (BMJ) Group, of BMJ Nutrition, Prevention and Health. He was also invited to lecture at the University of Brunei Darussalam under their 'Eminent Visiting Professorship' scheme in 2018.

In 2019, Shumone has also been appointed as a presidential Council Advisor at the University of Parma School of Advanced Studies on Food and Nutrition. Most recently, in 2019, he was appointed as Honorary International Dean to the Cordia Colleges in India and recognised through invitation to speak as an 'International Visiting Professor' to the University of Sao Paulo in Brazil. From December 2018 to July 2019 Shumone served part-time as a Consultant on special assignment to the Nutrition Directorate of the World Health Organization Headquarters in Geneva leading on the development of a strand of work in nutrition and healthcare capacity building within the United Nations Decade of Action on Nutrition 2016-25. Since October 2019 He has also been serving as Director of Research in Food Security, Health and Society within the School of Humanities and Social Sciences at the University of Cambridge. In March 2020 Shumone established and now Co-Chairs a dedicated Nutrition and COVID19 Taskforce.



CONTACT US

As always, we can be contacted at summer2020@nnedpro.org.uk, if you prefer, you can contact our course coordinator, James Bradfield, at j.bradfield@nnedpro.org.uk

READING LIST

GENERAL NUTRITION

Oxford Handbook of Nutrition and Dietetics
Edited by Joan Webster-Gandy
Second Edition

Introduction to Human Nutrition
The Nutrition Society Textbook Series
Second Edition

NUTRITION AND METABOLISM

Nutrition and Metabolism
The Nutrition Society Textbook Series
Second Edition

Public Health Nutrition
The Nutrition Society Textbook Series

NUTRITION EPIDEMIOLOGY

Nutritional Epidemiology
Walter Willett
Third Edition

KEY UK SOCIETIES/ASSOCIATIONS WITH NUTRITION RESOURCES

Nutrition Society
www.nutritionssociety.org

British Dietetic Association
www.bda.uk.com

Association for Nutrition
www.associationfornutrition.org

British Nutrition Foundation
www.nutrition.org.uk

SCIENTIFIC REPORTS

Science Advisory Committee on Nutrition (SACN)
www.sacn.gov.uk

Reports and Position Papers:
www.sacn.gov.uk

WHO Nutrition
www.who.int

Food and Agriculture Organisation
of the United Nations
www.fao.org

Useful Educational Resources

<https://www.nnedpro.org.uk/useful-resources>

Please also see our Nutrition & Covid-19 Microsite Resources
for information on this topic.