



**The EU Thematic Network:  
'Dietitians Improving Education and Training  
Standards' in Europe  
(DIETS)**

**Proceedings of the  
4th DIETS Conference  
Amsterdam, The Netherlands,  
December 2010**

Improving the nutrition of Europe  
through a fully evidenced-based  
profession of dietetics

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**Contact Address for Publication Requests:** Professor Anne de Looy, School of Health Professions, Faculty of Health, Education and Society, Plymouth University, England PL4 8AA, UK (+44) (0)1752 588888

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## Welcome,

Dietitians Improving Education and Training Standards (DIETS) was an EU-funded Thematic Network of Dietetic Associations, Departments of Nutrition and Dietetics in Higher Education and NGOs across 29 countries in Europe. DIETS had over 120 partner institutions, 70 of which were in Higher Education (HEIs) and ran from 2006 to 2009. The Network ran three successful conferences and promoted the education and training of dietitians. In 2010 the EU invested further resources in the Network and this time the theme is 'Ensuring education, teaching and professional quality' (DIETS2).

DIETS2 has increased its HEI representation and now spreads over 31 countries. The European Federation of the Associations of Dietitians (EFAD) is a prime partner promoting dietetics at European level and representing some 30,000 dietitians across Europe. The website [www.efad.org](http://www.efad.org) and [www.thematicnetworkdietetics.eu](http://www.thematicnetworkdietetics.eu) provide further details.

The 4th Conference takes as its theme '*Improving the nutrition of Europe through a fully evidenced-based profession of dietetics*'. The Conference will explore the foundations of education required to ensure a fully competent and educated dietetic workforce. It will also explore areas of dietetics where professional dietitians provide specialist services such as in diabetes, obesity, paediatrics and renal disease. One particular feature is the promotion of the evidence base for administrative dietitians.

The proceedings and abstracts for the posters presented will be proactively promoted by NDAs to all 30,000 dietitians in the Network as well as NGOs, HEIs and agencies in individual Nation States. The Network, working with EFAD, is already an established guarantor of the quality of education and the future research activity of dietitians through the publication of academic standards both for first cycle degrees and practice. DIETS2 will continue this work, especially focussing on post qualification practice and their standards.

The organising committee and I hope you really enjoy this important conference, in the beautiful city of Amsterdam.



Anne de Looy  
Professor of Dietetics  
Thematic Network Coordinator and Honorary President of EFAD

## Objectives of the DIETS2 Conferences

- To raise the profile of the profession of dietetics and dietitians as experts in the nutritional health of individuals and groups
- To increase the professional knowledge of those within dietetics and all who are interested in human nutritional health
- To provide opportunities for networking, mentoring and employment
- To create a discussion between dietitians, educators, industry and those who can affect the continuing improvement of nutritional health of the vulnerable within Europe

## Aims of the 4th Conference

- To highlight issues facing the profession, educators, industry and others working together to improve nutritional health of the gaps in our evidence base
- To engender new thoughts and actions for dietitians and others in enhancing our knowledge, skills and influence to change

## Event Format

- Two days of presentations and workshops by both European and international high profile and experts, primarily dietitians
- Networking where attendees can meet face-to-face with colleagues and others across disciplines and industry
- Poster presentations of contemporary research activities of dietitians and others in Europe

## Partners, Participants and Delegates

- *Dietitians and researchers* – who have a special interest in specific areas of dietetic practice as well as dietetics overall
- *Key decision makers* interested in nutritional health within the dietetic profession, higher education, non-governmental organisations, industry and charities
- *Academics* including researchers, teachers, researchers, information gatherers, analysts and students
- *Others* within the food & pharmaceutical industry

*Certificates of attendance and recommendations for learning credits are available for attendees.*

# Conference Programme

## Friday 3 December 2010

09:00	Registration	
09:45	Welcome	
10:00	Achievements for the Thematic Network DIETS and new beginning for DIETS2	Anne de Looy <i>Network Coordinator</i>
10:30	European Federation of the Associations of Dietitians: Dietetic Priorities for Europe	Judith Liddell <i>General Secretary EFAD</i>
11:00	<i>Tea and coffee</i>	
11:30	Working together in a nutritionally vulnerable Europe; identifying priorities	Anne Hoel <i>EU Policy Manager, EPHA</i>
12:00	The key role of placements for the achievement of dietetic competences in undergraduate education	Clare Corish <i>Lecturer in Nutrition &amp; Dietetics Dublin Institute of Technology, Ireland</i>
12:30	Using Information Technology and Communication (ITC) for improving nutritional habits	Roy Ballam <i>Education Programme Manager, British Nutrition Foundation</i>
13:00	<i>Lunch (and posters)</i>	
14:30	Standardising dietetic practice terminology implications for the profession in Europe and worldwide (ADA)	Esther Myers <i>Chief Science Officer, American Dietetic Association</i>
15:00	European perspective; the ICF terminology	Jose Tiebie <i>Dutch Association of Dietetics</i>
	Workshops on the following themes:	
15:30	<ul style="list-style-type: none"> <li>➤ Innovative student placement</li> <li>➤ Introducing Enquiry-based learning at first, second and third cycle degrees</li> <li>➤ Using ITC creatively</li> </ul>	Lead by the Theme Leaders for DIETS2
16:30	<i>Tea and coffee (and posters)</i>	
16:45	Workshop on Standardising Dietetic Practice Terminology	Esther Myers <i>Chief Science Officer, American Dietetic Association</i>  Jose Tiebie <i>Dutch Association of Dietetics</i>
18:00	Dissemination Techniques	<i>Dissemination Group DIETS2</i>

## Saturday 4 December 2010

09:15	Re-formulation of our food in Europe through technology	Annelies Rotteveel <i>Lecturer, Hague University, The Netherlands</i>
09:45	Themed Workshops: Briefing by specialist dietitians on evidence base and current challenges to practice	Theme Leaders
	➤ Obesity	Ellen Govers <i>Research Dietitian, The Netherlands</i> Maria Hassapidou <i>Professor of Nutrition &amp; Dietetics, Thessaloniki, Greece</i>
	➤ Diabetes	Cathy Breen <i>Research Dietitian, Endocrine Unit, Dublin, Ireland</i>
	➤ Renal	Barbara Gillman <i>Clinical Specialist Renal Dietitian, Mater Misericordiae University Hospital, Dublin, Ireland</i>
	➤ Administrative dietitians	Ylva Mattsson Sydnér <i>Head of Nutrition &amp; Dietetics, University of Uppsala, Sweden</i>
	➤ Public health dietitians	Clare Pettinger <i>Lecturer in Public Health Nutrition, Plymouth University, England</i> Jolein Lestra <i>Utrecht University, The Netherlands</i>
	➤ Paediatric	Peter Jacobs <i>Dozent Bachelorstudiengang Ernährung und Diätetik, Bern, Switzerland</i> Anne de Looy <i>Plymouth University, England</i>
12:15	The role of lifelong learning for supporting dietetic specialisation	Sandra Capra <i>Chair, International Confederation of Dietetic Associations, Canada</i>
12:45	<i>Lunch &amp; posters</i>	
14:15	Resume of the morning workshops and key findings from specialist groups	Theme Leaders
15:15	Dietitians and their approach to malnutrition in Europe	Elisabet Rothenberg <i>President, Swedish Association of Clinical Dietitians</i>
15:45	Enquiry-Based learning and Evidence-Based Practice, what is the difference what are the similarities?	Eleni Andreou <i>President, Cyprus Dietetic Association</i>
16:15	<i>Tea and coffee</i>	
16:45	Summary and close	Anne de Looy <i>DIETS Coordinator</i>

## **Speaker Abstracts**

## Achievements for the Thematic Network DIETS and new beginning for DIETS2

Anne de Looy  
Professor of Dietetics, Plymouth University, England

### Biography

*In addition to being the Network Coordinator for DIETS, Anne is currently Professor of Dietetics at Plymouth University, England. She is also the Honorary President of EFAD, and a partner for dietetics at the UK Health Professions Council. In 2005 Anne received the Rose Simmonds Award for her work in research from the British Dietetic Association (BDA), and in 2006 Anne was made a Fellow of the BDA for services to the profession. Her research interests include the role of carbohydrate in controlling appetite (especially in energy-reduced diets) and the professionalisation of dietetics.*

### Abstract

The DIETS Network had 128 partner institutions. Between 2006 and 2009, three conferences were held, eight Newsletters produced and working groups produced reports on:

- the use by dietitians of Information Technology and Communication (ITC)
- academic and practice placements across Europe
- best practice in dietetic education and change over three years
- Dissemination activities and added value of a Thematic Network for dietitians

48 exchange visits were made between dietitians and their academic colleagues across Europe to learn more about culture, education and dietetic practice. All of the information including documents used to assess practice across Europe is on the DIETS website [www.thematicnetworkdietetics.eu](http://www.thematicnetworkdietetics.eu)

In 2009, EFAD adopted European Dietetic Competences Statements and their performance indicators for newly qualified European dietitians. These are available in 15 European languages. Practice Placement Standards were formulated (based on best practice) and adopted by EFAD at its General Meeting in September 2010.

On 1 October, DIETS2 begins the good work started in DIETS, again funded by the EU. This three year project will look specifically at:

- practice placements in novel surroundings
- produce a 'toolkit' for European dietitians concerning lifelong learning
- be involved in promoting the use of ITC for learning
- the production of resources for teaching enquiry-based learning
- produce dietetic competences for Master's level and Doctoral level dietitians

DIETS2 draws on partners from all 31 countries of Europe (including the aspiring countries, such as Turkey). An interesting fact is that Lichtenstein has only 4 dietitians. The enthusiasm to share resources, expertise and the motivation to succeed are the keys to success and the Network has these in abundance.

### Key References

de Looy AE, Naumann E, Govers E, Jager MJ, Liddell J, Maramba IDC and Cuervo M (2010) Thematic Network DIETS mapping dietetic education in Europe 2006-2009: comparisons to the European Academic and Practitioner Standards for Dietetics Act diet.14(3):109-119  
EFAD (2009) *European Dietetic Competences and their Performance Indicators attained at the point of qualification and entry to the profession of Dietetics*. Available at [www.efad.eu](http://www.efad.eu)  
DIETS (2009a) Report 5: *Quality assurance, dietetic competence and dietetic practice placement standards*. Available at [www.thematicnetworkdietetics.eu](http://www.thematicnetworkdietetics.eu)

**European Federation of the Associations of Dietitians:  
Dietetic Priorities for Europe**

Judith Liddell

Secretary General, European Federation of the Associations of Dietitians, Germany

**Biography**

*Judith Liddell is Secretary General of EFAD and lead of Quality Assurance for DIETS2. Prior to becoming Network Manager of DIETS1 from 2006-2009, Judith worked as a freelance dietitian in Germany. Following qualification in UK in 1982, Judith worked as a community dietitian and obtained a Master of Philosophy in 1987 for work on “The Effect of Nutrition Education on Students’ Eating Habits”.*

**Abstract**

Established in 1978 with 10 member associations, EFAD has grown substantially and now represents over 29,000 dietitians in 24 EU countries.

EFAD members recently agreed that future priorities for EFAD were to:

- Standardise the practice of dietetics across Europe
- Embed research and evidence-based practice into all dietetic learning and practice
- Advocate for dietitians at EU level
- Standardise education and ensure lifelong learning
- Improve communication and information

These priorities will be met through the work of various committees. The DIETS2 network will address the research and education issues, while the EFAD executive committee will continue to work with various EU bodies to raise the political profile of dietitians and to improve the nutritional situation of the people of Europe. A new professional practice committee will work towards introducing standardised dietetic practice throughout Europe, and will address the areas of qualifications, continued professional development and registration. The EFAD website will be developed to improve communication and to act as a hub of information for all dietitians and stakeholders. EFAD recognises that the members represent a valuable resource and plans to utilise this expertise increasingly in future.

**Key References**

European Academic and Practitioner Standards for Dietetics (EFAD, 2005)  
 European Dietetic Competences and Performance Indicators (EFAD, 2009)  
 European Practice Placement Standards for Dietetics (EFAD, 2010)  
 All available on [www.efad.org](http://www.efad.org)

**The key role of placements for the achievement of dietetic competences in undergraduate education**

Clare Corish  
Programme Director and Lecturer in Human Nutrition & Dietetics  
Dublin Institute of Technology, Ireland

**Biography**

*Dr Clare Corish is currently programme director and lecturer on the joint Dublin Institute of Technology/University of Dublin, Trinity College BSc (Hons) Human Nutrition & Dietetics, having worked for over 15 years as a clinical dietitian. She is the Work Package lead for dissemination in the DIETS Thematic Network. Clare is a fellow of the Irish Nutrition and Dietetics Institute; a member of the INDI Education Board and the research, nutrition support, gastroenterology and sports nutrition interest groups. She was President of INDI from 1994-1996 and was voted Dietitian of the Year in 2009 by the members of INDI. Clare has published many peer-reviewed articles and is a regular contributor to medical and dietetic publications and conferences.*

**Abstract**

The Irish BSc in Human Nutrition & Dietetics is an honours programme run jointly by the Dublin Institute of Technology (DIT) and the University of Dublin (Trinity College). The programme provides integrated training in the science of nutrition and dietetics and its application to human health and wellbeing. To fulfil professional requirements, it includes 30 weeks of practice placement. Research on the Irish system of practice education for student dietitians indicated that students experienced difficulty in changing from the academic to the workplace learning environment and had difficulty understanding how to gain competence. Practice placement educators reported a lack of guidelines and assessment criteria. In response to these issues, the programme team, supported by the DIT Learning, Teaching & Technology Centre developed practice placement learning outcomes and performance indicators, staged competence criteria for monitoring students on placement, staged formative and summative assessments and general guidelines for practice placement. A practice education coordinator was appointed and training of practice placement educators instigated within a process that acknowledges and uses their experience. Practice placement has been integrated into the academic curriculum and a standardised, explicit assessment process that contributes to progressive skills acquisition has been implemented. The professional skills of self-directed learning, self-assessment and reflective practice are now viewed as outcomes of practice placement.

**Key References**

Bowles M (2008) *Challenges and Strategies in Assessing Clinical Skill Acquisition: A Study of the Assessment of Practical Placements amongst Undergraduate Dietetic Students in Ireland* MA Thesis, Edgehill University, UK

Crehan M, Moloney M, Bowles M & Corish C (2010) New innovations in the development of practice placement education for student dietitians *Proceedings of the International Association of Technology, Education and Development* 4404-4415 Eds: Gomez Chova L, Marti Belenguer D, Candel Torres I. Valencia, Spain: International Association of Technology, Education and Development ISBN: 978-84-613-5538-9

European Federation of the Associations of Dietitians and Thematic Network Dietitians Improving Education and Training Standards in Europe (2009) *European Dietetic Competences and their Performance Indicators attained at the point of qualification and entry to the profession of Dietetics.* <http://www.efad.org/downloadattachment/1653/EuropeanDieteticCompetencesandPerformanceIndicatorsEnglish.pdf>.

## Using Information Communication Technology (ICT) for Improving Nutritional Habits

Roy Ballam

Education Programme Manager, British Nutrition Foundation (BNF), England

### **Biography**

*Roy currently leads the European Food Framework project, which seeks to establish a unique food, nutrition and lifestyle resource to promote healthy active lifestyles to children and young people (aged 5-16 years) throughout Europe. Roy Ballam originally trained as a secondary school food technology teacher, and has been a moderator and principal examiner. Roy's work includes the production of innovative resources in food and nutrition for the BNF, government and other organisations, as well as being involved in national UK school food and nutrition programmes. He has extensive experience in using, and evaluating, ICT to enhance teaching and learning in school, community and other settings to a wide variety of audiences.*

### **Abstract**

The use and adoption of ICT in effective teaching and learning is well documented, as are case studies about the use ICT in engaging people with food and nutrition. However, it is of paramount importance when ICT is used, that it delivers consistent, up-to-date and accurate messages – all of which are communicated in an appropriate way, at the right level, to the end users.

ICT needs to be engaging and relevant to the learner, using a range of delivery styles that provide them with personalised learning experiences. It has to be meaningful to them, in the context of an active, healthy lifestyle.

School-based case studies will be used to highlight the use of ICT in food and nutrition education, featuring interactive whiteboards, website design, differentiated online tutorials, audio and video podcasts, webinars and interactive activities. In addition, the development and use of online health tools will be examined.

## Standardised Language European Perspective

### The ICF perspective

José Tiebie

Dutch Association of Dietitians (DAD), Dietitian in primary care sector

#### Biography

*José Tiebie has run her own dietitian practice with 4 colleagues in the north-west part of the Netherlands for almost 5 years now. She was President of the Dutch Dietetic Association from 2004-2008. By that time she was involved in introducing a new finance funding system for dietetics and in introducing the workshops on nutrition diagnosis, which runs until 2010. In 2010 she was also involved in the update of the Dietetic part of the ICF (International Classifications of Functioning). From 1992 -1998 she lived and worked as a dietitian in both the United States and the United Kingdom. In both countries she got her credentials and is now a RD. Before she started her own practice, she worked for several years as a manager of community dietitians.*

#### Abstract

The International Classification of Functioning, Disability and Health (ICF) is a classification of health and health-related domains. These domains are classified from body, individual and societal perspectives and also includes a list of environmental factors. In 2001, all 191 WHO Member States officially endorsed the ICF (resolution WHA 54.21) for use as the international standard to describe and measure health and disability.

Supplemented to the ICF lists the Dutch Association of Dietitians (DAD) introduced the dietetic classifications in 2003. With this, the whole Nutrition Care Process can be described. In 2010 an update was made, which was approved by the WHO.

The DAD chose ICF as it looks at the total picture of the patient. By shifting the focus from cause to impact, it places all health conditions on an equal footing, allowing them to be compared using a common metric. Furthermore, ICF takes into account the social aspects of disability and does not see disability only as a 'medical' or 'biological' dysfunction. Because it is also used by other care-takers (such as medical staff, physiotherapists, speech therapists), it allows the dietitian to discuss and adjust her contribution to the whole treatment of the patient. This broad perspective stimulates critical thinking.

#### Key Reference

[www.who.int/classifications/icf](http://www.who.int/classifications/icf)

## Reformulation of food products to reduce salt, saturated fat and sugar levels: Challenges for the Food Industry

Annelies Rotteveel

Lecturer in Nutrition & Dietetics, Hague University of Applied Sciences, The Netherlands

### Biography

*Annelies has more than 6 years experience working as a nutritionist in product development and Regulatory Affairs for Chefaro and Unilever. Working as a nutritionist in the food industry involves working closely with marketing, research and development to both innovate new foods and improve current food formulations. Within Regulatory Affairs, she gained regulatory approvals for food products and supplements.*

*From 1995-2000, Annelies studied Nutrition and Health (MSc) at Wageningen University, The Netherlands. She also has a degree in Nutrition and Dietetics (Hogeschool Arnhem & Nijmegen, The Netherlands). After graduating she started working in the food industry.*

### Abstract

The food industry is developing food products with a lower content of sugar, salt and fat to meet the demand for healthy food products. The reduction of these unhealthy ingredients is not such an easy matter. Changes in product composition also have impact on the physical state and properties of food products, and thereby the storage stability, processing, and consumer preferences. Lowering sugar, salt and fat content may diminish the taste, shelf-life and texture.

The composition of many foods is regulated by law, and reformulation efforts often lead to products that could not be sold under the original product name anymore. Moreover, reformulation generates higher costs for raw materials and processing. Reformulation requires high investments and is almost impossible for smaller companies. Besides reformulation there are other ways for the food industry to decrease the consumption of foods with poor nutrient profiles (like reduced portion sizes, food labelling and health claims).

The session addresses the challenges and benefits for the food industry to develop nutritionally balanced and enhanced foods. Finally a best practice example will be described of 'food product development' in dietetic education.

## The role of Lifelong Learning for Supporting Dietetics Specialisations

Sandra Capra

Chair, International Confederation of Dietetic Associations

### Biography

After more than 15 years in professional practice in NSW, Victoria, Queensland and New Zealand, Prof Capra entered academia full time and built on her interests in teaching, research and writing on nutrition and dietetics education and practice, food and nutrition policy and service provision, broader workforce development and quality outcomes, with more than 200 published works. She has held academic positions at the University of the South Pacific, Queensland University of Technology, the University of Newcastle and the University of Queensland.

### Abstract

Lifelong learning (LLL) is the continuous building of skills and knowledge throughout the life of an individual. It can be formal or informal and is the "*lifelong, voluntary, and self-motivated*" pursuit of knowledge for either personal or professional reasons. It enhances social inclusion, active citizenship and personal development, as well as competitiveness and employability.

([http://en.wikipedia.org/wiki/Lifelong\\_learning](http://en.wikipedia.org/wiki/Lifelong_learning)). The International Code of Good Practice (ICDA, 2008) includes a section "*Continued competence and professional accountability*" which includes "*Maintain continued competence by being responsible for lifelong learning and engaging in self-development*". To be a specialist, you need to be expert, current and always seeking to improve. Specialists are usually deemed to have a higher and deeper understanding of a field compared to others. Whereas most countries with dietetics professionals do not recognise specialists in formalised ways, they are recognised by peers and employers to have higher or particular competence in particular areas of practice. Formal LLL includes undertaking advanced degrees (for example in sports nutrition), but for many of the sub-fields, there are simply too few practitioners for these to be offered widely. In Australia the lifelong learning policy agenda of the national government has four distinguishing features:

- the recognition of both informal and formal learning
- the importance of self-motivated learning
- an emphasis on self-funded learning
- the idea that participation in learning should be universal ([www.dest.gov.au](http://www.dest.gov.au))

In Europe the higher education sector has worked hard to cross-credit and bring a more organised approach to the sector, including the LLL component. It is important that dietetics professionals use these opportunities in addition to informal methods to maintain and improve practice. For example, undertaking applied research enhances LLL and builds knowledge and skill, as well as challenging practice paradigms. Key skills that every practitioner needs in order to get the most out of LLL opportunities are:

- reflective practice
- the ability to invest resources into personal growth
- understanding competence
- critical thinking
- research skills

It is no longer quite good enough to practice in the way one was taught, using the same knowledge and skill base. Rather, commitment to continuous improvement through LLL is a 'must' for the dietetics practitioner of today and tomorrow.

## Dietitians and their Approach to Malnutrition in Europe

Elisabet Rothenberg

President of the Swedish Association of Clinical Dietitians (DRF)

### Biography

Dr Rothenberg has been President of the DRF since 2000. Within DRF, her focus has been on the development of a standardized language for nutrition and on the nutrition care process. From 1997-2009 she was a Chief Dietitian, working as clinical dietitian within geriatric settings. Her research interests include geriatric nutrition - epidemiology and clinical aspects on food intake, texture modified food, energy metabolism and body composition. Elisabet has frequently lectured for dietitians, nurses and medical students and has written articles and textbooks within the field of clinical nutrition. She is a Board member of SWESPEN (the Swedish Association of Clinical Nutrition and Metabolism).

### Abstract

Malnutrition is a state of nutrition in which a deficiency or imbalance of energy and nutrients causes measurable adverse effects on tissue/body, function, and clinical outcome (1). The prevalence is high: up to 40% of patients of all ages are malnourished upon admission to hospital ([www.european-nutrition.org](http://www.european-nutrition.org)). Older people, patients with cancer, renal disease, chronic heart failure and patients who have had major surgery are particularly at risk. Extensive documentation exists showing the strong relationship between disease-related malnutrition in chronic disease and increased morbidity, mortality, and extended hospital stays (2). Treatment of the condition is expensive, but still under-recognised and under-treated. Dietitians are uniquely qualified to contribute to its prevention, identification and treatment, through inter-disciplinary work and evidence-based nutrition management.

Dietitians master nutrition therapy from normal food to artificial nutrition and to guide the patient's journey from one form of therapy to another. Based on the individual clinical condition of patients, dietitians undertake systematic problem-solving methods as the Nutrition Care Process to critically appraise and make decisions regarding practice-related problems (3). Dietitians have a leading role as experts to combat malnutrition. All malnourished patients should therefore have the right to consult a dietitian.

### Key References

Elia M (2000) *Guidelines for Detection and Management of Malnutrition* Malnutrition Advisory Group (MAG) Standing Committee of BAPEN Ed Maidenhead.

Elia M, Zellopour L, Stratton RJ (2005) To screen or not to screen for adult malnutrition? *Clin Nutr* 24(6) 867-84

The American Dietetic Association Quality Management Committee (2008) American Dietetic Association Revised 2008 Standards of Practice for Registered Dietitians in Nutrition Care; Standards of Professional Performance for Registered Dietitians; Standards of Practice for Dietetic Technicians, Registered, in Nutrition Care; and Standards of Professional Performance for Dietetic Technicians, Registered *J Am Diet Assoc* 108(9) 1538-42

## Enquiry-Based Learning and Evidence-Based Practice

### What is the difference what are the similarities?

Eleni Andreou , RD LD DProf Cand

President of the Cyprus Dietetic & Nutrition Association

#### **Biography**

*Eleni is a Clinical Dietitian, Vice-President of the Cyprus Registration Board for Food Scientists, Food Technologists and Dietitians, Lecturer and Coordinator of the Nutrition/ Dietetics Program of the University of Nicosia/Intercollege*

#### **Abstract**

##### *What is Enquiry-Based Learning (EBL)?*

EBL describes an environment in which learning is driven by a process of enquiry owned by the student/learner. Starting with a 'scenario' and with the guidance of a facilitator, learners identify their own issues and questions. They then examine the resources they need to research the topic, thereby acquiring the requisite knowledge. Knowledge so gained is more readily retained because it has been acquired by experience and in relation to a real problem. It is essential that learners are educated for knowledge creation, lifelong learning and leadership. They will take on leading roles in their future working environments: directing change, asking important questions, solving problems and developing new knowledge.

##### *Characteristics of EBL*

- *Learning* is essentially student-centred, with an emphasis on group work and use of library, web and other information resources.
- Lecturers become facilitators, providing encouragement and support to enable the students to take responsibility for what and how they learn.
- Students reach a point where they are not simply investigating questions posed by others, but can formulate their own research topics and convert that research into useful knowledge.
- Students gain not only a deeper understanding of the subject-matter, but also the knowledge-development and leadership skills required for tackling complex problems that occur in the real world.

##### *Benefits of EBL*

- Fundamentally, students are more engaged with the subject. Learning is perceived as being more relevant to their own needs, thus they are enthusiastic and ready to learn.
- Students can expand on what they have learned by following their own research interests.
- EBL allows students to develop a more flexible approach to their studies, giving them the freedom and the responsibility to organize their own pattern of work within the time constraints of the task.
- Working within and communicating to a group are vital for a student's employability.
- Self -directed learning not only develops key skills for postgraduate study, but also leads to original thought that contributes to larger research projects, papers and publications.
- For teaching staff, developing an EBL module helps to understand the learning process and the changing needs of students.

### *What is Evidence-Based Practice (EBP)?*

There are many definitions of EBP with differing emphases. In Sackett et al's (1996) definition from the field of medicine: "*Evidence-based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research. By individual clinical expertise we mean the proficiency and judgment that individual clinicians acquire through clinical experience and clinical practice. Increased expertise is reflected in many ways, but especially in more effective and efficient diagnosis and in the more thoughtful identification and compassionate use of individual patients' predicaments, rights, and preferences in making clinical decisions about their care. By best available external clinical evidence we mean clinically relevant research, often from the basic sciences of medicine, but especially from patient centered clinical research into the accuracy and precision of diagnostic tests (including the clinical examination), the power of prognostic markers, and the efficacy and safety of therapeutic, rehabilitative, and preventive regimens.*"

Some in social work view EBP as a mix of a) learning what treatments 'work' based on the best available research (whether experiential or not), b) discussing client views about the treatment to consider cultural and other differences, and to honor client self determination and autonomy, c) considering the professionals 'clinical wisdom' based on work with similar and dissimilar cases that may provide a context for understanding the research evidence, and d) considering what the professional can, and cannot, provide fully and ethically (Gambrill, 2003, Gilgun, 2006). With much similarity but some differences, the American Psychological Association (2006) defines EBP as "*the integration of the best available research with clinical expertise in the context of patient characteristics, culture and preferences*"

### **Key References**

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## Posters

### Friday 3 December

Interdisciplinary Training on the Job  
*Dieijen TW, The Netherlands*

Insight into the work fields and areas of services delivered by dietitians  
*Daniel Buchholz, Germany*

Delivering food composition and other tools to support dietitians and health professionals,  
*Simone Bell, Belgium*

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The effect of nutritional habits of pregnant women on somatometric characteristics of newborns, *Markaki A, Greece*

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*Teresa Iglesias, Spain*

## Interdisciplinary Training on the Job

van Dieijen TW, Doornink N & Stanic-Jovic L

The Netherlands

### Description/Abstract

*Aim:* To prepare students for working in a multidisciplinary team, the department has drawn up a bedside training programme, with the dietetians of the Academic Medical Center (AMC)

*Methods:* Third year students are trained at the AMC in interpreting data from medical and nursing files. This training is between students of dietetics and students of nursing. Together they use nutritional and medical topics and they draw up a dietary plan of treatment. Emphasis is on the exchange of knowledge and experiences

*Results:* Evaluation showed that students are enthusiastic about this type of education and that they are stimulated to evaluate their own actions critically.

*Conclusion:* Interdisciplinary training on the job creates a win-win situation for both groups and gives them tools for their future duties.

### Key Reference that can be used to inform future work:

Silverman J, Kurtz S, Draper J (2006) *Vaardig communiceren in de gezondheidszorg; een evidence-based benadering* Lemma Den Haag

### Correspondence:

T W van Dieijen Doctor, Meurerlaan 8, 1067 Sm Amsterdam, The Netherlands

**Phone:** +31 205953540

**Email:** T.W.van.Dieijen@hva.nl

## Insight into the Work Fields and Areas of Services Delivered by Dietitians

Daniel Buchholz, Judith Hoffman, Birgit Babitsch

**Germany**

### Description/Abstract

*Aim:* Despite the long tradition of dietitians as professionals in Germany, data on the work fields and the professional profile of contemporary dietitians is scarce. The aim of the present study was to provide an insight into the work fields and areas of services delivered by dietitians.

*Method:* A self-administered questionnaire was developed and distributed in the December 2009 issue of the journal of the German Dietitians Association.

*Results:* 86% of all employed dietitians worked in the field of dietetic therapy and preventive nutrition, 54% were also involved in food service management and 29% in research.

*Conclusion:* More research is needed to illustrate the potential of dietitians, and the effect of the therapeutic and preventive services that they offer to individuals and groups.

### Outcomes that participants can take away to inform their future practice

- Although dietitians in Germany have a wide range of work fields, the majority perform diet therapy and preventive nutrition.
- Dietitians in Germany spend a medium or high amount of their work time in the fields of diabetology, gastroenterology and internal medicine (> 50%).
- In the opinion of dietitians in Germany, the following will gain more importance in their future work: certain competencies (eg psychology, interdisciplinary cooperation), settings (eg prevention, health promotion, self-employment) and fields of specialization / special types intervention.

### Correspondence:

Prof. Dr. Birgit Babitsch MPH, Daniel Buchholz, B.Sc. (hons.), MPH, RD  
 Berlin School of Public Health an der Charité – Universitätsmedizin Berlin, Seestrassen  
 73 | Haus 10, D - 13347 Berlin, Germany

**Phone:** +49 30450570811

**Email:** birgit.babitsch@charite.de / daniel.buchholz@charite.de

## Delivering Food Composition and other Tools to Support Dietitians and Health Professionals

<sup>1</sup>Simone Bell, <sup>2</sup>Paolo Colombani, <sup>3</sup>George Chryssochoidis,  
<sup>4</sup>Anders Møller, <sup>5</sup>Paul Finglas

<sup>1</sup>EuroFIR AISBL, Brussels, Belgium, <sup>2</sup>SwissFIR Consumer Behavior, ETH Zurich, Switzerland, <sup>3</sup>FoodCon, Brussels, Belgium, <sup>4</sup>Danish Food Information, Roskilde, Denmark, <sup>5</sup>Institute of Food Research, Norwich, United Kingdom

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- **Description/Abstract**
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Food information is essential to dietitians and other health professionals, but until recently the collation and access to such information was neither standardised nor centralised. The European Commission-funded Network of Excellence "European Food Information Resource" (EuroFIR: [www.eurofir.org](http://www.eurofir.org)) tackled these issues in order to improve the field of food information in Europe and launched an association (EuroFIR AISBL) that now continues the work of the EuroFIR Network. EuroFIR AISBL offers a single and unique resource with continuously expanding food information, covering food composition databases in Europe, specialised databases and training opportunities. This represents a time-saving, centralised and standardised tool for dietitians and other health professionals.

### Outcomes that participants can take away to inform their future practice

EuroFIR AISBL provides a range of benefits comprising access to food information via innovative data interfaces, including data on nutrients from European countries linked with EuroFIR and on non-nutritive bioactive compounds with putative health benefits. The information on the composition of foods (nutrients, energy values) is available for single foods, recipes and some branded foods and can be used for dietary assessment, menu and recipe calculation, advising patients and their families on nutritional principles and any consultation during the daily work. EuroFIR AISBL developed and continues developing tailor-made training courses and materials including e-learning modules on major food components, as well as seeking to collaborate with producers of innovative software for electronic devices and internet portals, which integrate food information.

### Correspondence:

Simone Bell, EuroFIR AISBL Business & Technical Development Manager & Paul Finglas EuroFIR Managing Director, 40, Rue Washington, 1050 – Brussels, Belgium

**Phone:** +32 26262903

**Email:** [sb@eurofir.org](mailto:sb@eurofir.org); [paul.finglas@bbsrc.ac.uk](mailto:paul.finglas@bbsrc.ac.uk)

## Application of Dietary Reference Intakes in Dietary Assessment and Planning: Development of an E-Learning Module

Jeanne de Vries, Agnes Berendsen, Cora Busstra,  
Adrienne Cavelaars, Pieter van't Veer, Lisette de Groot

**The Netherlands**

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- **Description/Abstract**

Dietitians use dietary reference intakes (DRIs or also DRVs, PRIs, NIVs) to evaluate self-reported dietary intake and planned diets. We are developing an e-learning module consisting of interactive exercises and visual animations. This e-module intends to give insight in the application of DRIs taking into account uncertainties with regard to assessment and DRIs. The module starts with a general introduction on reference intakes addressing estimated average requirement, recommended dietary allowance, adequate intake, and tolerable upper intake level. Dietitians will learn by working on different interactive cases dealing with evaluation on the individual and the population level, and planning of diets.

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- **Key References**

Barr SI, Murphy SP, Agurs-Collins TD, Poos MI (2003) Planning diets for individuals using the dietary reference intakes *Nutr Rev Oct 61(10)* 352-60 Review  
 Murphy SP, Barr SI (2005) Challenges in using the dietary reference intakes to plan diets for groups *Nutr Rev Aug 63(8)* 267-71 Review  
 Murphy SP & Vorster HH (2007) Methods for using nutrient intake values (NIVs) to assess or plan nutrient intakes *Food Nutr Bull 1 Suppl* S51–S60

### **Outcomes that participants can take away to inform their future practice**

The participants will be informed about an e-learning module (developed within the framework of EURRECA: [www.eurreca.org](http://www.eurreca.org)) that will be available in near future to help them in planning their diets according to dietary guidelines and evaluate the diets of their patients on the individual and the group level.

- - **Correspondence:**  
- Wageningen University, Human Nutrition, P.O Box 8129, 6700 EV Wageningen, The Netherlands  
-

**Phone:** +31 317 482503/482589

**Email:** [jeanne.devries@wur.nl](mailto:jeanne.devries@wur.nl)

## Review of Innovations for Assessing Student Dietitians

AM Lynam, M Crehan, M Moloney, M Bowles & C Corish

### Ireland

#### **Description/Abstract**

##### *Introduction*

Research completed (Bowles, 2008) on the model of practice placement for student dietitians in Ireland highlighted a lack of guidelines and assessment criteria for placement educators.

##### *Objectives*

The aim of this study was to review the efficacy of newly developed formative and summative assessment forms.

##### *Methodology*

Feedback was compiled from seven academic teaching hospitals taking students for 17 weeks of their 24-week practice placement.

##### *Results*

The assessment forms were reported as more systematic, comprehensive and user-friendly than those used previously. Reduction in the length and number of forms, inclusion of reflection on practice and consistency in terminology were recommended.

##### *Conclusion*

This work demonstrates the importance of continuous collaboration between the academic and practice placement educators.

#### **Outcomes that participants can take away to inform their future practice**

Assessment forms developed and used for formative and summative assessment were positively received by practice placement educators.

The forms facilitated a more detailed assessment of students, as they were more systematic, comprehensive and user-friendly; and requested specific examples of practice from the practice placement educators.

All assessment materials should be reviewed regularly.

Recommendations from the practice placement educators included a reduction in the length and number of forms, inclusion of reflection on practice and consistency in terminology. The assessment forms have been reviewed based on the recommendations made.

#### **Key References**

EFAD (2005) *European Academic and Practitioner Standards for Dietetics* [www.efad.org](http://www.efad.org)

Irish Nutrition and Dietetic Institute (2005) *INDI Standards of Education* [www.indi.ie](http://www.indi.ie)

Bowles M (2008) *Challenges and Strategies in Assessing Clinical Skill Acquisition: A study of the Assessment of Practical Placements amongst Undergraduate Dietetic Students in Ireland* MA thesis Edgehill University UK

#### **Correspondence:**

Ann-Marie Lynam, School of Medicine, Trinity Centre for Health Sciences, St James's Hospital, Dublin 8, Ireland

**Phone:** +35 318962477

**Email:** [annmarie.lynam@tcd.ie](mailto:annmarie.lynam@tcd.ie)

**Lab4Food**

Johan Claes

**Belgium**

**Description/Abstract**

In September 2010, food-engineers and dietitians of the Kempen University College decided to collaborate on research within four different domains:

- texture, rheology and sensory research
- nutritional research
- shelf life and food preservation
- legislation and food safety

*Aims:*

- To use a multidisciplinary approach in research at the interface of technology, nutrition and health care
- To combine fundamental and applied research: from PhD research to in-the-field applications.
- To achieve valorisation and added value for our stakeholders
- To work in partnership and close cooperation with other research institutions, industry and health care organisations
- To do research for the benefit of (and in cooperation with) our students

**Outcomes that participants will take away to inform their future practice**

- implementation of scientific research in the education programme
- multidisciplinary approach

**Correspondence:**

Johan Klaus, Kempen University College, Kleinhoefstraat 4, 2440 Geel, Belgium

**Phone:** +32 14562310

**Email:** johan.claes@khk.be

## Food Satisfaction of Patients at Hacettepe University Hospitals

Evrım Gungör A, Balıkcıođlu A, Timurkutluđ M, Onat N, Yucemen J, Dogrukartal K, Terzi O, Senkal S, Tunalı S, Bas D, Ozturk S, Dede A, Kuyrukcu N, Erdogan G, Topallar N, Gunyel S

**Turkey**

### Description/Abstract

*Introduction:* Patient satisfaction from catering services is an important factor for hospital malnutrition.

*Objective:* This study aimed to investigate the changes in consumption, appetite and satisfaction of patients.

*Methodology:* A total of 421 adult patients (233 surgery, 188 internal) who stayed in Hacettepe Hospitals during April 2010 participated. After staying  $\geq 3$  days, a questionnaire for hospital food satisfaction was applied to the patients before discharge. *Results:* Mean hospital stay (days) was  $15.7 \pm 16.2$ , during which period 33.2% reduction was observed in patients' appetite. Of the patients, 61.1%, 55.8% and 32.8% completely consumed breakfast, lunch and dinner, respectively. Food portions were found to be normal by 84.6% of the patients. Breakfast was the least satisfactory meal (51.3%). Whereas 58.2% of the patients reported their satisfaction with the hospital foods in general, 30.6% suggested a change in variety of meals. There was no statistically significant relationship between length of hospital stay and food satisfaction ( $p > 0.05$ ).

*Conclusion:* In prevention of hospital malnutrition, ways to improve patients' food consumption should be sought.

### Outcomes that participants will take away to inform their future practice:

Patients' food intakes should be monitored.

Meals should be customized for the individual patient.

Meals should be improved based on patient satisfaction.

### Key References:

Donini LM et al (2008) Improvement in the quality of the catering service of a rehabilitation hospital *Clin Nutr Feb 27(1)* 105-14

Kondrup J (2001) Can food intake in hospitals be improved? *Clin Nutr 20 (Supplement 1)* 153-60

### Correspondence:

A. Evrim Gungör, Chief of Dietetics and Nutrition, Hacettepe University Hospitals (Adult), 06100, Ankara, Turkey

**Phone:** +90.312.3051212

**Email:** aevrim@hacettepe.edu.tr aevrimt@yahoo.com

## Food Photographs in Nutritional Surveillance: Errors in Portion Size Estimation Using Drawings of Bread & Photographs of Margarine & Beverages Consumption

Willem De Keyzer, Inge Huybrechts, Mieke De Maeyer, Marga Ocke',  
Nadia Slimani, Pieter van 't Veer and Stefaan De Henauw

Belgium

### Description/Abstract

*Introduction:* In this study, errors in portion size estimation (PSE) of bread, margarine on bread and beverages by two-dimensional models are investigated.

*Methodology:* A sample of 111 participants were invited for breakfast. Both conceptualization and perception skills of PSE were tested.

*Results:* At the group level, large overestimation of margarine, acceptable underestimation of bread and only small estimation errors for beverages were found. Individual estimation errors were large for all foods.

*Conclusions:* Food photographs for PSE of bread and beverages are acceptable for use in nutrition surveys. For photographs of margarine on bread, further validation using smaller amounts corresponding to actual consumption, is recommended.

### Outcomes that participants will take away to inform their future practice:

For individual dietary intake assessment, dietitians can benefit from tools like food photographs to estimate intake. However, awareness about associated errors is paramount.

### Key References:

De Keyzer W, Huybrechts I, De Maeyer M, Ocké M, Slimani N, van 't Veer P and De Henauw S (in press) Food photographs in nutritional surveillance: errors in portion size estimation using drawings of bread and photographs of margarine and beverages consumption *Br J Nutr*

Nelson M, Haraldsdottir J (1998) Food photographs: practical guidelines I. Design and analysis of studies to validate portion size estimates *Public Health Nutr* 1(4) 219-30

Nelson M, Haraldsdottir J (1998) Food photographs: practical guidelines II. Development and use of photographic atlases for assessing food portion size *Public Health Nutr* 1(4) 231-7

### Correspondence:

Willem De Keyzer, University College Ghent, Keramiekstraat 80, B-9000 Ghent, Belgium

**Phone:** +32 9 321 21 38

**Email:** mia.verschraegen@hogent.be

## Fruit & Vegetables Nutrition Tools Through Websites

Laurence Depezay, Karine Morel and Anne de Looy

**France & England**

### Description/Abstract

*Introduction:* The purpose of this study was to better understand how websites promote nutrition, fruit and vegetables; discover who are the target audiences and what are the main types of information.

*Methodology:* The project involved scanning websites that presented information in English and French, classifying the sources, the information provided and the target groups.

*Results:* The scan revealed 60 websites concerned with fruit and vegetables. The majority were hosted by promotional 'guilds' (18), most gave information on nutrition (53) followed by cooking, agriculture, botanics and gardening. The websites provided educational tools on fruit & vegetables and were targeted at children (32) and teachers (26), but only 12 of the websites we studied were dedicated to health professionals.

### Outcomes that participants will take away to inform their future practice:

- The most important targets for websites are children and teachers.
- The two main subjects most reported are nutrition & health benefits (mainly about nutrients) and healthy eating (food behaviour).
- There is a need to develop specific tools for health professionals.

### Key References:

Nitzke S, Kritsch K, Boeckner L, Greene G, Hoerr S, Horacek T, Kattelman K, Lohse B, Oakland MJ, Beatrice P and White A (2007) A stage-tailored multi-modal intervention increases fruit and vegetable intakes of low-income young adults *Am J Health Promot* 22 6-14

Norman J (2007) A Review of e-Health Interventions for Physical Activity and Dietary Behavior Change *Am J Prev Med* 33 336

Richards A, Kattelman KK and Ren C (2006) Motivating 18- to 24-year-olds to increase their fruit and vegetable consumption *J Am Diet Assoc* 106 1405-11

### Correspondence:

Laurence Depezay, BP 30173, F-59653 Villeneuve d'Ascq Cedex, France

**Phone:** +33 320 436060

**Email:** [fondationlouisbonduelle@bonduelle.com](mailto:fondationlouisbonduelle@bonduelle.com)

## Belgian City Goes Vegetarian on Thursday

Sven Van Caneghem, Inge Huybrechts, Willem De Keyzer, Mia Verschraegen

**Belgium**

### **Description/Abstract**

In 2009, the campaign ‘Thursday Veggie day’ was launched in Ghent, Belgium, stimulating schools to provide a vegetarian meal during canteen lunch every Thursday. In the present study, both qualitative and quantitative aspects of the vegetarian meals were investigated. First, the nutritional value of the meals served on Thursday Veggie Day were evaluated on three criteria and, second, a comparison of food leftovers on regular days and Thursdays was made using a visual plate-waste method. The latter served as an indirect indicator of children’s appreciation of the vegetarian meals.

### **Outcomes that participants will take away to inform their future practice:**

Thursday Veggie Day illustrates how a local initiative for promotion of a healthy lifestyle can receive attention from all over the world and can therefore inspire every public health dietitian striving for a high impact health promotion plan.

### **Key Reference:**

A scientific paper is to be published during 2011, in the meantime any internet search engine will respond to following search terms: Thursday Veggie Day international press

**Correspondence:** Mia Verschraegen, University College Ghent, Keramiekstraat 80, B-9000 Ghent, Belgium

**Telephone Number:** +32 9 321 21 21

**Email:** mia.verschraegen@hogent.be

## Protective Nutrition

Mojca Bizjak and Tamara Poklar Vatovec

Slovenia

### Description/Abstract

Improper nutrition is one of the risk factors for cancer. High intake of meat is accompanied by high fat intake and/or carcinogens generated through various cooking and processing methods. Cancer risk may be reduced by addition of anticarcinogens in the diet, especially during meat consumption or cooking, or modification of food preparation methods. In the paper we propose a model for evaluating nutrition in cancer prevention with DEXi educational computer program for multi-attribute decision-making. Adjusting the balance between meat and other dietary components may be critical to protect against potential cancer risk.

### Outcomes that participants will take away to inform their future practice:

Protective nutrition include appropriate food intake, sufficient quantity of protective compounds in food and appropriate cooking methods. Our model demonstrated how we can estimate appropriate nutrition for individuals.

### Key References:

Ferguson LR (2010) Meat and cancer *Meat Science* 84 308 – 313  
 Bohanec M (2008) *DEXi: A Program for Multi-Attribute Decision Making. Version 3.02*  
<http://www-ai.ijs.si/MarkoBohanec/dexi.html>

### Correspondence:

University of Primorska, College of Health Care Izola, Polje 42, 6310 Izola, Slovenia

**Phone:** +38 6566 26468

**Email:** [mojca.bizjak@vszi.upr.si](mailto:mojca.bizjak@vszi.upr.si) and [tamara.vatovec@vszi.upr.si](mailto:tamara.vatovec@vszi.upr.si)

## Adherence to the Mediterranean Diet and Reduction of Breast Cancer Risk in Postmenopausal Women

Markaki A, Papadopoulou A M, Vlahaki M, Fragkiadakis, G A,  
Gkouskou K, Vlastos I, Papadaki A

**Greece**

### Description/Abstract

*Introduction:* The Mediterranean diet is protective against many types of cancer, including breast cancer.

*Objective:* To evaluate the relationship between adherence to the Mediterranean diet and breast cancer risk incidence among postmenopausal women in three metropolitan areas of Greece.

*Methodology:* 80 breast cancer patients and 80 healthy controls completed a food frequency questionnaire, assessing usual food intake in the period before menopause (and before cancer incidence). Adherence to the Mediterranean diet was assessed by the MedDietScore (low compliance=0-20, moderate compliance=21-35, high compliance=36-55).

*Results:* Cases had a higher BMI compared to the control group (26.5 vs. 24.6,  $P=0.006$ ) and a lower average MedDietScore (20.1 vs. 34.9,  $P<0.001$ ). A significantly lower proportion of cases had a high compliance to the Mediterranean diet (1.3 vs. 56.3%). In contrast, 68% of patients and none of the controls had low compliance ( $P<0.001$ ).

*Conclusion:* Adherence to the Mediterranean diet may contribute to the prevention of postmenopausal breast cancer.

### Outcomes that participants will take away to inform their future practice:

Dietitians can play a major role in educating premenopausal young women on the benefits of the Mediterranean diet and provide advice and skills to increase adherence to this dietary pattern. Dietitians should promote the Mediterranean diet during general public seminars/ lectures and collaborate with health practitioners, obstetricians, University and work setting nurses and health officers to educate premenopausal women on this diet's protective properties against breast cancer risk.

### Key References:

Panagiotakos D B et al (2007) Adherence to the Mediterranean food pattern predicts the prevalence of hypertension, hypercholesterolemia, diabetes and obesity, among healthy adults; the accuracy of the MedDietScore *Prev Med* 44 335–340

Trichopoulou A, et al (2000) Review: Cancer and Mediterranean Dietary Traditions. *Cancer Epidemiol Biomarkers & Prev* 9 869-873

Trichopoulou A et al (1995) Consumption of Olive Oil and Specific Food Groups in Relation to Breast Cancer Risk in Greece *J Natl Cancer Inst* 87110-116

**Correspondence:** Technological Educational Institute of Crete, Department of Nutrition and Dietetics, Trypitos Area, 72 300, Sitia, Crete, Greece

**Phone:** +30 28430 20003 / 29497 **Email:** anmarkaki@staff.teicrete.gr

## Salt Restriction in Hypertension

Ildikó Kovács, Zita Dobák, Anna Herczeg, Bianka Tolnai,  
Réka Kegyes Bozó, Zsuzsanna Lelovics

**Hungary**

### Description/Abstract

*Introduction:* The Hungarian National Food Consumption Survey in 2009 revealed a sodium intake of 6.0 g/day.

*Methodology:* He and MacGregor (2006) showed that 3 g/day salt intake would be enough for an adult. However, Cohen et al (2008) analysed the NHANES III data, and have not found a clear connection between high sodium intake and mortality.

*Results:* A study published in 2008 underlines the importance of salt sensitivity. 50% of the patients suffering from essential hypertension are salt sensitive, so salt restriction is efficient in only half of the cases.

*Conclusions:* Salt intake, salt sensitivity and the effect of different medications have to be taken into account in the recommendations for hypertensive patients during critical thinking about diet therapy.

### Outcomes that participants will take away to inform their future practice:

- People have a much higher salt intake than recommended.
- The relationship between salt consumption and mortality is controversial.
- It is worthwhile to think about salt sensitivity.

### Key References

Cohen HW, Hailpern SM, Alderman MH (2008) Sodium intake and mortality follow-up in the Third National Health and Nutrition Examination Survey (NHANES III). *J Gen Intern Med* Sept 23(9) 1297-302

Karppanen H, Mervaala E (2006) Sodium intake and hypertension *Prog Cardiovasc Dis* Sep-Oct 49(2) 59-75

He FJ, MacGregor GA (2010) Reducing population salt intake worldwide: from evidence to implementation *Prog Cardiovasc Dis* Mar-Apr 52(5) 363-82

**Correspondence:** H-7400-Kaposvár, Németh István fasor 21, Hungary

**Phone:** + 630 8584-952

**Email:** lelovics@yahoo.com

## Probiotics as a Possible Therapy for Irritable Bowel Syndrome

Schinagl C, Grach D, Fattinger D, Fattinger E

**Austria**

### Description/Abstract

*Aims:* To state if there is enough evidence to recommend probiotics to IBS-patients.

*Methods:* Literature research in different databases, journals and books; questionnaire mailed to sample of internists / gastroenterologists in Austria.

*Results:* Detailed results differ with different probiotic strains. In general, probiotics influence IBS-symptoms in a positive way. However, further studies of longer duration and dose-finding studies are needed. Multispecies-probiotics are superior in treating IBS in comparison to monostrain-probiotics. Pharmaceutical probiotics should be preferred compared with probiotics in dairy products.

### Outcomes that participants will take away to inform their future practice:

Multispecies-probiotics, preferably in the form of pharmaceutical products, can be recommended to IBS patients, but effects differ; careful choices are required.

### Key References

Brenner D M, Moeller M J, Chey W D & Schoenfeld P S (2009) The Utility of Probiotics in the Treatment of Irritable Bowel Syndrome: A Systematic Review *The American Journal of Gastroenterology* 104 1033–1049.

Hoveyda N, Heneghan C, Mathani K R, Perera R, Roberts N & Glasziou P (2009) A systemic review and meta-analysis: probiotics in the treatment of irritable bowel syndrome *BMC Gastroenterology*, 9 (15)

**Phone:** +43 316 5453 6763

**Email:** daniela.grach@fh-joanneum.at

## Correlation Between the Metabolic Syndrome (METS) and Shift/Night Work

Habacher D, Grach D, Fattinger, E

Austria

### Description/Abstract

*Aims:* This paper investigates the correlation between shift and night work, eating habits and the genesis of METS in recent evidence-based studies and among 64 shift-workers of Styrian companies.

*Methods:* literature research; questionnaire (64 shiftworkers of 3 Styrian companies)

*Results:* Shift and night work contribute to the genesis of METS, though metabolic disturbances often do not occur until after 15-25 years of shift work. This explains why only 2 out of 64 shift workers studied were affected by the metabolic syndrome (87.5 % of them have been shift workers for less than 20 years). Their eating habits and insufficient knowledge about nutrition caused concern.

### Outcomes that participants will take away to inform their future practice:

More emphasis on nutrition information for workers (should be promoted as an area of work for dietitians)

Occupational medicine should include more practical measures that facilitate healthy eating at the workplace

### Key References

De Bacquer D et al (2009) Rotating shift work and the metabolic syndrome: a prospective study *International Journal of Epidemiology* 38(3) 848-54

Sookoian S et al (2007) Effects of rotating shift work on biomarkers of metabolic syndrome and inflammation *Journal of Internal Medicine* 261(3) 285-92

Karlsson B, Knutsson A & Lindahl B (2001) Is there an association between shift work and having a metabolic syndrome? Results from a population based study of 27,485 people *Journal of Occupational and Environmental Health* 58(11) 747-52

**Phone:** +43 316 5453 6763

**Email:** daniela.grach@fh-joanneum.at

## The Relation Between Obesity, Self-Esteem and Body Image

Dimopoulou Maria, Dimopoulou Alice, Markaki Anastasia

**Greece**

### Description/Abstract

*Introduction:* More and more researchers turn their attention to the psychological profile of obese populations, in order to explore whether it contributes to the disease etiology or is a consequence of the disease.

*Objectives:* In our sample, 60 subjects participated, aged from 18 to 65 years old. They were distributed into three groups according to their BMI: normal weight, overweight and obese.

*Methodology:* The research was based on questionnaire collection (Rosenberg's, Coopersmith's and B-Wise).

*Results:* Obese subjects showed significantly more negative body image and lower self-esteem compared to those in the two other groups. Moreover, we found that women appear to have lower self-esteem than men.

*Conclusion:* Obese subjects were characterized by negative body image and moderate or low self-esteem.

### Outcomes that participants will take away to inform their future practice:

In order to offer overall care to those suffering from obesity, psychological variables need to be examined, as they may contribute to obesity or be a consequence of obesity. In particular, low self-esteem appears to be associated with the discord between real self-image and ideal self-image.

### Key References

Olmsted MP, McFarlane T (2004) Body Weight and Body Image *Women's Health* 4 1186-1472

Schwartz MB, Brownell KD (2004) Obesity and body image *Elsevier* 1 43-56

Lundgren JD, Anderson DA, Thompson JK (2004) Fear of negative appearance evaluation: development and evaluation of a new construct for risk factor work in a field of eating disorders *Eat Behav* 5(1) 75-84

**Correspondence:** Hrakleias 1, Trikala 42100, Greece

**Phone:** +30 694 702 6228, +30 243 103 2542

**Email:** maria\_dimopoulou@yahoo.gr

## Performance of Adolescents Depending on Body Weight and Body Composition

Zsolt Vági, Zsuzsanna Lelovics

Hungary

### Description/ Abstract

*Introduction:* There is little data about the connection between BMI and motor performance.

*Objectives:* How does the BMI and body composition influence motor performance in the 14–18 age group?

*Methodology:* The stamina of adolescents aged 14.5–18.4 years (n=798) was assessed using the Eurofit test system.

*Results:* The fat proportion (Parizková method) of the best 10% of the boys was significantly ( $p < 0.05$ ) higher, than the average. In contrast, in the girls the fat proportion was lower than the average.

*Conclusions:* In this critical period, body composition should be assessed not only with anthropometry, but also by means of functionality (motor abilities).

### Outcomes that participants will take away to inform their future practice:

The influence of body fat proportion on motor performance is different between girls and boys of adolescent age.

Apart from anthropometry, functionality should also be taken into account when assessing body composition in adolescents.

### Key Reference

Castro-Piñero J et al (2010) Percentile values for running sprint field tests in children ages 6-17 years: influence of weight status *Res Q Exerc Sport June 81(2)* 143-51

**Correspondence:** H-7633 Pécs, Építők útja 20/B II/8, Hungary

**Phone:** +36 620 393 8000

**Email:** lelovics@yahoo.com

**Prevention of Type 2 Diabetes :  
Comparison Between European (IMAGE) and French Recommendations,  
Differences in Nutritional Habits in the General French Population**

Dorothee Romand

**France**

**Description/Abstract**

Type 2 diabetes is a worldwide major public health problem. Multidisciplinary prevention programs can help reduce the risk. A group of European experts (IMAGE) has created guidelines for Diabetes Prevention.

Dietitians have to compare type 2 diabetes prevention recommendations with % of population that achieve targets.

We have compared nutritional habits in the French population measured by INCA 2 and ENNS (French National Nutrition Health Studies) with French recommendations / recommendations from IMAGE.

We notice differences in the recommendations for alcohol, salt and fat.

These differences lead to widen the gap between recommendations and practices.

**Outcomes that participants will take away to inform their future practice:**

In prevention of type 2 diabetes, compare: national nutritional recommendations (in your country) / European nutritional recommendations / % of the population that achieves the targets.

Follow the future European nutritional recommendations.

**Key References**

[www.image-project.eu/](http://www.image-project.eu/)

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**Correspondence:**

Service Diététique, Hôpital Saint Louis, 1 Avenue Claude-Vellefaux, 75010 Paris, France

**Phone:** +33 142 494 437

**Email:** [dorothee.romand@sls.aphp.fr](mailto:dorothee.romand@sls.aphp.fr)

## Bread in type 2 diabetes – does the type matter?

Cathy Breen

Ireland

### Description/Abstract

*Introduction:* High fibre, low-glycaemic index foods are recommended in diabetes.

*Objectives:* To describe postprandial responses to a variety of commercial breads in adults with type 2 diabetes

*Methodology:* In a cross-over design (n=9), four commercial breads (white, wheaten wholemeal, wholegrain, pumpernickel) were consumed. Glucose, insulin and satiety responses were taken at intervals.

*Results:* There was no difference in glucose (p=0.06) or satiety (p=0.84) responses. All breads promoted postprandial hyperglycaemia (mean peak 11.5±0.3 mmol/l). There was a trend towards higher peak postprandial insulin with white and wholegrain breads (p=0.4).

*Conclusion:* In adults with type 2 diabetes, the non-white breads currently consumed do not confer advantage in terms of glycaemia or satiety.

### Outcomes that participants will take away to inform their future practice:

In adults with type 2 diabetes, the types of non-white breads currently consumed do not confer advantage in terms of glycaemic response or satiety. Consequently, during dietary education, emphasis should be placed on portion control irrespective of the type of bread being consumed. The study highlights some limitations in the use of GI in clinical practice – the brand of pumpernickel bread used did not elicit as low a glycaemic response as expected. Further research is required to ascertain the effects of other breads (with a higher wholegrain and fibre content and a lower GI) on glycaemic response and satiety in adults with type 2 diabetes.

### Key References

Mann JT et al (2004) Evidence-based nutritional approaches to the treatment and prevention of diabetes mellitus *Nutr Metab Cardiovasc Dis* 14 373–394.

Atkinson FS et al (2008) International tables of glycemic index and glycemic load values: 2008 *Diabetes Care* 31 2281– 2283

**Correspondence:** Endocrine Unit, St Columcille’s Hospital, Loughlinstown, Co Dublin, Ireland

**Phone:** +35 387 673 1637

**Email:** cathy.breen@ucdconnect.ie

**Simplification of Approach in Restrictive Diets to Improve Compliance:  
a Trial in Phenylketonuria (PKU)**

Peter Jacobs

**Switzerland**

**Description/Abstract**

PKU may be characterised as a model disease. The classical diet approach in PKU involves patients in scaling, using analysis and exchange lists, reading food labels, and doing calculations. Food choice and amounts are restricted. For patients this can be a burden.

Based on the work of Anita MacDonald, we developed a simplified approach without scaling, lists or calculating and with fewer restrictions on amounts. We conducted a retrospective study with 73 patients. We found that there were no significant differences in blood phenylalanine levels before and after simplification. This approach may be useful in other diets.

**Outcomes that participants will take away to inform their future practice:**

- In a complex disease like PKU simplification of diet approach is possible
- Simplification doesn't mean liberalization
- Simplification may help to improve compliance

**Key References:**

MacDonald A et al (2003) Free use of fruits and vegetables in phenylketonuria  
*J Inherit Metab Dis* 26(4) 327-38

Walter JH et al (2002) How practical are recommendations for dietary control in phenylketonuria? *Lancet Jul 6 360(9326)* 55-7

**Correspondence:** Bachelorstudiengang Ernährung und Diätetik, Berner Fachhochschule, Fachbereich Gesundheit, Murtenstrasse 10, 3008 Bern, Switzerland

**Phone:** +41 318 483 549

**Email:** peter.jacobs@bfh.ch

## Acceptance of Food Enriched with a Neutral Sip Feed

Reka Kegyes Bozo

Hungary

### Description/Abstract

*Introduction:* To fulfil the nutritional needs of malnourished patients is a challenge. One of the possibilities is to fortify normal food with neutral formula.

*Objectives:* Our aim was to develop and test new recipes.

*Methodology:* Ten recipes enriched with Fresubin Energy Drink neutral were developed and cooked for main course meals and soups. We developed an anonymous self-completed questionnaire for those patients who tasted the foods.

*Results:* Altogether 230 patients completed questionnaires. Their mean age was  $65 \pm 6.5$ . Nobody reported off-flavour or any unpleasant feelings. Our results showed an extraordinary acceptance and willingness (82%) to get the recipes and cook the meals at home.

*Conclusions:* The fact that nobody spotted the formula in the recipes makes the use of neutral formula feasible in salty, savoury food recipes.

### Outcomes that participants will take away to inform their future practice:

There is need for meal recipes enriched with neutral formulas.

It is possible to develop recipes that can be cooked either in the catering or at home.

### Key References:

Weekes CE, Emery PW, Elia M (2009) Dietary counselling and food fortification in stable COPD: a randomised trial *Thorax April 64(4)* 326-31

Dunne A (2007) Malnutrition: supplements and food fortification in the older population *Br J Community Nurs Nov 12(11)* 494-9

**Correspondence:** H-7200 Dombóvár, II. u. 62, Hungary

**Phone:** +36 308 584 952

**Email:** rekakegyes@yahoo.com

**Diet Quality, Serum Lipid, Selenium and Vitamins D and B<sub>12</sub> in University Students**

Teresa Iglesias

**Spain**

**Description/Abstract**

*Aim:* The aim of this study was to investigate the diet quality and nutritional status of a randomly selected group (n=70) of university students from Madrid, based on vitamin B12, vitamin D and dyslipidemias.

*Method:* Dietary intake was recorded for 3-days recall and for this data, the diet quality index was calculated. Body mass index was used as criteria to identify underweight, normal weight and overweight-obesity. Food consumption and alcohol intake were registered.

*Results:* The diet quality index for males is inadequate (50%) and similar result was observed in females (47.4%). There was inadequate good diet in 50% of university students, so it is recommended to formulate appropriate intervention programs concerning in dietary behaviour habits and improving quality of life.

**Outcomes that participants will take away to inform their future practice:**

- A decrease in the fat intake in the diet is recommended.
- Supplementation with vitamin D during the winter is recommended.
- The dietary intake was not been related to weight

**Correspondence:** Universidad Francisco de Vitoria, Ctra Pozuelo-Majadahonda km 1,800, 28223 Pozuelo de Alarcón, Madrid, Spain

**Phone:** + 34 659 116 570

**Email:** m.iglesias.prof@ufv.es

## Nutrition Habits of Primary School Children

Vilma Kriaucioniene, Indre Simonaviciute

**Lithuania**

### Description/Abstract

*Introduction:* Undesirable eating habits in children is a growing problem nowadays.

*Objectives:* To evaluate the eating habits of primary school pupils and to assess the amount of uneaten food in chosen schools.

*Methodology:* Pupils attending I-IV classes were included into the study: 565 pupils and 565 parents. The data was collected using questionnaire. Uneaten food at school was recorded.

*Results:* The survey showed that the diet primary school pupils does not meet dietary recommendations. More than a half of pupils feel hungry at school. But a majority of schoolchildren leave much uneaten food.

*Conclusion:* Offering more fresh fruits, whole grains, and a greater variety of vegetables could lead to additional health benefit.

### Outcomes that participants will take away to inform their future practice:

Participants will be familiar with the nutrition habits of primary school children at home and at school. This will help them when giving nutrition advice and teaching schoolchildren about healthy nutrition.

**Correspondence:** Lithuanian University of Health Sciences, Medical Academy, Institute for Biomedical Research, Eiveniu str. 4, LT-50009, Kaunas, Lithuania

**Phone:** +370 686 354 86

**Email:** vilmabor@yahoo.co.uk

## Dietary Calcium Intake Among Adolescents in the City Of Pireus

Markaki A, Kartsonas E, Kanakis N, Kiopektzis G, Fragkiadakis GA, Charonitaki A, Chatzi V, Papadaki A

**Greece**

### Description/Abstract

*Introduction:* Adequate intake of calcium during adolescence is necessary for maintaining healthy bone density in adulthood.

*Objective:* To investigate dietary calcium intake among adolescents (12-18y), in the city of Pireus, Greece.

*Methodology:* 509 adolescents completed a validated, self-administered semi-quantitative food frequency questionnaire assessing consumption of 30 major calcium food sources in the Greek diet.

*Results:* Mean calcium intake (1,812 mg/d) was higher than recommended (RDA, 1300mg/d). No statistical differences in calcium intake were observed between boys and girls. However, gymnasium students (mean age=13.8y) tended to have higher intakes than high school students (mean age=16.2y) (1,921 vs. 1,706 mg/d, P=0.073). A higher proportion of boys than girls achieved a  $\geq 100\%$  RDA intake (63.2 vs. 52.6%, P=0.022), whereas a higher proportion of girls had inadequate intakes ( $\leq 60\%$  RDA) (15.6 vs. 10.0%, P=0.078).

*Conclusion:* The need to maintain adequate dietary calcium intakes, especially among adolescent girls, should be addressed via nutrition education programmes.

### Outcomes that participants will take away to inform their future practice:

Dietary calcium intake, especially during adolescence, is reported to be lower than the recommended dietary guidelines in many countries. The majority of adolescents in this study seemed to have adequate calcium intakes. However, more adolescent girls, than boys, did not reach the calcium dietary guidelines. Dietitians can play a major role in educating individual adolescent patients and their parents on the major, and most bioavailable, dietary sources of calcium, the number of food portions necessary to achieve the recommended dietary guideline intake, as well as on methods to increase calcium absorption (e.g. adequate vitamin D intake).

Dietitians should collaborate with schools, where possible, to educate adolescents on wiser dietary choices to achieve recommended calcium intakes.

### Key References

Greer FR, Krebs NF, Committee on Nutrition (2006) Optimizing bone health and calcium intakes of infants, children and adolescents *Pediatrics* 117 578-585

DeBar LL et al (2004) YOUTH: decisions and challenges in designing an osteoporosis prevention intervention for teen girls *Prev Med* 39 1047-1055

Hirota T, Kusu T, Hirota K (2005) Improvement of nutrition stimulates bone mineral gain in Japanese school children and adolescents *Osteoporos Int* 16 1057-1064

**Correspondence:** Technological Educational Institute of Crete, Department of Nutrition and Dietetics, Trypitos Area, 72 300, Sitia, Crete, Greece

**Phone:** +30 28430 20003/29497

**Email:** anmarkaki@staff.teicrete.gr

**The Effect of Nutritional Habits of Pregnant Women on Somatometric Characteristics Of Newborns**

Markaki A, Gkouskou K, Menelaou V, Vlastos I, Dimitropoulakis P, Papadaki A, Fragkiadakis, GA

**Greece**

**Description/Abstract**

*Introduction:* The effect of nutrient consumption and dietary habits of pregnant women on fetal somatometric characteristics is a matter of conflict.

*Methodology:* Correlations between somatometric characteristics of the newborns of 104 pregnant Cypriot women and their maternal dietary and medical records were examined.

*Results:* A positive correlation was found between red meat and caffeine consumption and birth weight. On the other hand consumption of vegetables, fruits, bread, fish, white meat, fat, and various sweets, supplement intake, iron percentage in blood, exercising and smoking were not correlated to birth weight.

*Conclusions:* Further studies are needed in order to delineate the role of dietary habits and nutrient consumption on birth weight and most importantly on health status of the newborn in western countries

**Outcomes that participants will take away to inform their future practice:**

Maternal nutrition, at least in industrialised populations, seems to have only a small effect on birth weights. Until further studies come to conclusive results, dietitians should advise pregnant women to follow a healthy and balanced diet according to the recommended daily intakes.

**Key References**

Seo Won Bang and Sang Sun Lee (2009) The factors affecting pregnancy outcomes in the second trimester pregnant women *Nutrition Research and Practice* 3(2) 134-140

Knudsen VK et al (2008) Major dietary patterns in pregnancy and fetal growth *Eur J Clin Nutr April* 62(4) 463-70 Epub 2007 Mar 28

Mathews F, Yudkin P, Neil A (1999) Influence of maternal nutrition on outcome of pregnancy: prospective cohort study *BMJ August* 7 319(7206) 339–343

**Correspondence:** Technological Educational Institute of Crete, Department of Nutrition and Dietetics, Trypitos Area, 72 300, Sitia, Crete, Greece

**Phone:** +30 28430 20003/29497

**Email:** anmarkaki@staff.teicrete.gr

## Multivariate analysis in Adolescents and Young students in Madrid

Teresa Iglesias

Greece

### Description/Abstract

A total of 1596 students (657 men and 939 women) from private and public centres, in Northwest area in Madrid, participated in the study. 1245 students were  $\leq 18$  years and 351 students were  $\geq 19$  years. In the  $\leq 18$  group, more women than men were underweight. When we looked at overweight-obesity in the same group, the numbers were similar between men and women. Amongst students who were 19 years or older, there were more women than men with underweight and overweight-obesity. By using multivariate analysis, cluster 1 featuring 453 women (28.4%) was related to good eating habits (often eating fruit and vegetables) no smoking and no alcohol. Cluster 2 featured 533 men aged  $\leq 18$  years (33.4%). In this cluster, the men had a poorer diet and smoked. Cluster 3 included 457 men and women aged  $\geq 19$  years, who had a sedentary way of life, frequently consumed both alcohol and tobacco, slept less than 6 hours per day, and normally ate precooked meals and always added salt to their meals.

### Outcomes that participants will take away to inform their future practice:

- critical perspective and structural change on nutrition
- impact of nutrition habits at societal level
- some practical recommendations regarding specific target groups

### Key References

[http://ec.europa.eu/health/index\\_en.htm](http://ec.europa.eu/health/index_en.htm)

[http://ec.europa.eu/health/nutrition\\_physical\\_activity/policy/index\\_en.htm](http://ec.europa.eu/health/nutrition_physical_activity/policy/index_en.htm)

**Correspondence:** Universidad Francisco de Vitoria, Ctra Pozuelo-Majadahonda km 1,800, 28223 Pozuelo de Alarcón, Madrid, Spain

**Phone:** +34 659116570

**Email:** m.iglesias.prof@ufv.es

## Workshop Reports

The following reports reflect the discussions that dietitians interested in particular areas of dietetics had at the conference.

The reports differ in their presentation for this reason.

## Workshop Special Theme: Obesity

**Theme Leaders:** Ellen Govers, *Research Dietitian, The Netherlands*  
Maria Hassapidou, *Professor of Nutrition & Dietetics, Thessaloniki, Greece*

### Should there be specialisation?

Yes, we need specialisation after the bachelor level. Postgraduate education on the treatment of obesity is necessary. Specialisations include:

- lifelong learning
- defining skills that are necessary
- how to work in a multidisciplinary way
- how to treat comorbidities
- Masters and PhD level study in dietetics

### Where should skills be improved?

- behavioural skills
- communication skills, both in different settings
- coaching skills
- nutritional assessment and treatment skills
- advanced skills in physiology and energy expenditure
- dietetic diagnosis, similar to SOAP for physicians (subject, objective, assessment, plan)
- skills in working in multi-disciplinary settings
- skills in treating comorbidities
- skills in sustaining weight maintenance
- skills in evidence-based research

### What should we have to agree on?

- patient-centred treatment
- clinical indicators
- definition of successful treatment
- evaluation of outcomes

There was not yet the momentum for a European network of obesity dietitians. This may lie in the near future. A first step could be: national networks of obesity dietitians.

NB: in November 2010 the Dutch network of obesity dietitians was formed: Knowledge Centre of Dietitians treating Overweight and Obesity (KDOO; which pronounces as the Dutch word for present: *cadeau*). [www.nvdietist.nl/netwerken/KDOO](http://www.nvdietist.nl/netwerken/KDOO).

In the UK a special interest group is already established: 'Dietitians in Obesity Management'. They offer meetings and training courses. [www.domuk.org](http://www.domuk.org)

## Workshop Special Theme: Diabetes

**Theme Leader:** Cathy Breen *Research Dietitian, Endocrine Unit, Dublin, Ireland*

Delegates from a wide range of both geographical and work areas attended the diabetes workshop, including clinical, public health, industry and universities.

Cathy and Ulirich opened the workshop by presenting an overview of effective treatments and working methods in which specialist diabetes dietitians play key roles in both the prevention and management of diabetes. A lively discussion then followed on the competencies, knowledge and skills that delegates felt were important for diabetes specialist dietitians.

There was consensus that a thorough, up-to-date knowledge of the evidence base for effective treatments was very important. (These include carbohydrate counting and intensive insulin therapy in type 1 and weight management strategies such as meal replacements and bariatric surgery in type 2).

Another key competence that was identified was having good communication and facilitation skills for delivering education for effective diabetes self-management.

The group also felt that a specialist diabetes dietitian needed advanced skills in encouraging and motivating lifelong behaviour change in clients.

The workshop concluded with delegates completing the proforma, and a significant number reported being interested in taking part in a network of specialist diabetes dietitians in Europe.

## Workshop Special Theme: Administrative Dietetics

**Theme Leader:** Ylva Mattsson Sydner, *Associated Professor, Department of Food, Nutrition and Dietetics, Uppsala University, Sweden*

ICDA and EFAD define administrative dietitians as one of three main areas for the practice of dietetics. EFAD describe the administrative dietitian as "*a dietitian who focuses and works primarily within food service management with responsibility for providing nutritionally adequate, quality food to individuals or groups in health and disease in an institution or a community setting*". For this kind of work, Griffin et al (JADA 2001) have stated that management of resources needs to be combine with knowledge and skills in different areas, for example: food service science and safety, food service systems and nutrition in health and disease. Moreover they identified six Standards of Professional Practise to describe expectations in management and food service. One of these standards is the application of research. However, to develop the profession of administrative dietetics and the area of food service, it is necessary that the administrative dietitians also identify the research questions themselves and as well as accomplish the research.

During the workshop, nine administrative dietitians from six countries agreed on the necessity to discuss and develop the area of administrative dietician profession. Questions to be discussed and develop covered:

- leadership and management
- communication and marketing
- the need for research, particularly specific research questions in administrative dietetics
- best practice - how to plan, produce and serve meals based on nutritional needs and the wishes of different target groups

We also agree on the need for writing a position paper about the competence of administrative dietitians. A small network was established and hopefully it will develop during DIETS2.

## Workshop Special Theme: Public Health Dietetics (PHD)

**Theme Leaders:** Clare Pettinger, *Plymouth University, England*  
 Jolein Lestra, *Utrecht University, The Netherlands*

This workshop included 20 individuals from 12 countries (Belgium, Spain, Italy, Slovenia, UK, The Netherlands, Germany, Austria, Portugal, Lithuania, France, Denmark). The discussion took place around these questions:

### What is PHD?

1. No country has a protected title
2. No clear definition of what a PHD is
3. No clear distinction between Public Health Nutrition & Public Health Dietetics
4. Other health workers assume this role (eg nurses, paediatricians, food technologists etc)
5. In some countries PHN = Masters, PHD = bachelor

### Are there specific competences?

- Evaluation methods
- Epidemiology/EBP
- Theory of behavioural change
- Communication
- Empowerment
- Marketing
- Lifecycle stage (target groups)
- Global health
- Applied nutrition
- Multi-disciplinary/partnership
- Synthesis of ideas/proposals for funding
- Knowledge of food system/sustainability

### Are there any specific criteria?

- Not explicit in any group...
- No special requirements (other than skills outlined above)
- Lack of clarity across countries

### Professional Development needs?

1. Evidence database/library of the effectiveness of interventions
2. Need for a clear profile/definition of PHN vs PHD
3. Monitoring/evaluation of interventions
4. What do you need to specialise? Standards? Training? LLL?
5. Consultation with industry
6. Advocacy of the profession within political circles?

### Research Priorities

1. Effective interventions at different levels and in different settings (behavioural and environmental)
2. Link with industry, eg product design, reformulation
3. Cross-country/cultural collaborations across Europe (and beyond)
4. Methodological items, evaluation, validation etc

### Summary

1. There should be a formation of a new European Public Health Dietetic network
2. Potential for sharing best practice
3. Collaborating for professional and research development
4. Advocacy and lobbying in political circles
5. Representation within other professional groups
6. New innovations and creative ideas, eg how to work better with industry

## Workshop Special Theme: Renal

**Theme Leader:** Barbara Gillman *Clinical Specialist Renal Dietitian, Mater Misericordiae University Hospital, Dublin, Ireland*

The prevalence of risk factors for Chronic Kidney Disease (CKD) is increasing. Risk factors include increasing age, hypertension, obesity and diabetes. It is also well documented that the risk of cardiovascular death far outweighs the risk of renal disease progression. Numbers of people with end stage renal disease requiring dialysis are just the tip of the iceberg. Whilst there are multiple guidelines available on the different aspects of nutritional management of CKD, many of these recommendations are based on a relatively poor evidence base or are opinion based.

Numbers at this workshop were small and mostly were from an academic background. Key points discussed were:

- Currently in most European countries, dietitians are competent to see all patient types on completion of undergraduate theory and practical training. However, there are different scopes of practice and also some countries require further education and mentorship to work within specialised areas.
- It was generally agreed that there is a lifelong requirement for education and training to increase skill base and overall competence within practice. This can be achieved by active participation in continuous professional development activities such as national teaching courses, self-directed learning (reading journals, attending education meetings, reflective practice) and mentoring. A set of disease-specific competencies would provide a framework for this ongoing learning.
- It was agreed that, as a profession, we need to actively seek to have specialised dietitians. A framework for postgraduate education and specialist competencies is required. It was suggested that liaison with the American Dietetic Association where this grade is established would provide a valuable insight into what is required.
- As there are gaps in research for evidence-based practice, it was felt that a collaborative approach would facilitate ability to collectively address specific questions.





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