WHAT'S NEW?

A conference for health and education professionals

16th April 2019

W5, AT ODYSSEY, BELFAST

The Dairy Council for Northern Ireland

NUTRITION &
Health

WHAT'S NEW?

CONFERENCE PROGRAMME

09:30 REGISTRATION AND COFFEE

10:00 Dr Michelle McKinley
QUEEN'S UNIVERSITY BELFAST
Chairperson's introduction

10:15 Professor Luc van Loon
UNIVERSITY OF MAASTRICHT
Muscle mass maintenance in older people: protein and physical activity

10:50 Dr Sinéad Furey
ULSTER UNIVERSITY
Eating or heating? An investigation of food poverty in Northern Ireland

11:25 COFFEE

11:45 Professor Mary Ward
ULSTER UNIVERSITY
Dairy foods and blood pressure: a review of current evidence

12:20 Dr Brendan Gabriel
KAROLINSKA INSTITUTE, STOCKHOLM
Circadian rhythms: re-setting the clock in type 2 diabetes and metabolic disease

12.55 LUNCH

14:00 Dr Stephan Peters
THE DUTCH DAIRY ASSOCIATION
The challenge of healthy and sustainable diets: a place for dairy foods?

14:35 Emily Foster RD
GLOWING POTENTIAL
Drowning in 'experts': navigating nutrition communication and combatting pseudoscience in the age of innovation

15.10 CLOSE

For further information or queries please contact:
Dr Carole Lowis on 01751 430 158

Muscle mass maintenance: protein and physical activity

Professor Luc JC van Loon

PROFESSOR OF PHYSIOLOGY OF EXERCISE, NUTRIM SCHOOL OF NUTRITION AND TRANSLATIONAL RESEARCH IN METABOLISM, MAASTRICHT UNIVERSITY MEDICAL CENTRE

A period of muscle disuse due to sickness or injury can lead to substantial loss of skeletal muscle mass and strength in otherwise healthy individuals. The resulting health consequences, such as impaired functional capacity, decreased muscle strength, peripheral insulin resistance, and a decline in basal metabolic rate, are of particular concern to older individuals, who are already functionally and/or metabolically compromised. Even a few days of disuse can already result in substantial loss of muscle mass and strength. These findings are of particular clinical relevance because hospitalization of (older) individuals with acute illness generally results in a mean hospital stay of 5–7 days. Such short successive periods of muscle disuse occurring throughout the lifespan may be instrumental in the progressive loss of muscle mass with aging.

Loss of skeletal muscle mass due to disuse must be attributed to an imbalance between muscle protein synthesis and breakdown rates. A decline in basal (post-absorptive) muscle protein synthesis rates has been reported following both bed rest as well as limb immobilization. Furthermore, more recent work has shown that the muscle protein synthetic response to protein or amino acid administration becomes blunted following a period of disuse.

Though declines in both post-absorptive and postprandial muscle protein synthesis rates seem to play the biggest causal role in the loss of muscle mass during a period of disuse, there is also some indirect evidence that increases in muscle protein breakdown rates occur during the first few days of muscle disuse.

Eating or heating? An investigation of food poverty in Northern Ireland

Dr Sinéad Furey

LECTURER, DEPARTMENT FOR HOSPITALITY AND TOURISM MANAGEMENT, ULSTER UNIVERSITY BUSINESS SCHOOL*

Context - Food poverty, defined as the inability to afford or access a healthy diet, is becoming recognised as a public health emergency. In January 2019, the Environmental Audit Committee published its latest report on the Sustainable Development Goals in the UK, highlighting the need to ensure Government cross-departmental understanding and action on hunger and implement strategies for improvement and monitor progress. However, with no agreed indicator, the Government has not measured the prevalence of food poverty over time to identify those who are unable to afford sufficient food.

Methodology - In the absence of an agreed indicator, Ulster University Business School (UUBS) researchers disseminated an online survey between September and November 2018 to investigate the internal and inter-reliability of three food poverty indicators (EU Survey on Income and Living Conditions; Food Insecurity Experience Scale; and Household Food Security Survey Module). The aim was to inform evidence-based policy making for ultimate inclusion in a government-endorsed survey that may be used/adapted by all UK regions to effectively implement interventions and strategies with the purpose of alleviating food poverty and to support national efforts for food poverty measurement. Data were analysed with the use of Statistical Package for Social Science software package.

Findings - In total, 944 respondents completed the survey. The majority (78.7%) was full/part time or self-employed. One in twelve (8%) had a total household income (salary and benefits) of less than £10,000. One in 14 (7.4%) of the total sample self-evaluated their health status as poor. Two in five respondents (41.9%) had children aged under 18 years living in their households.

Between one in five and one in three respondents experienced at least one symptom of food poverty in respect of reporting missing or worrying about skipping a meal. Overall, there was good 'agreement' between the measures with each scale identifying (generally) the same people as experiencing 'mild', 'moderate' or 'severe' food poverty.

Conclusion and recommendations - Food poverty requires a long-term, sustainable solution that addresses the policy issues under focus: low income, under/unemployment, rising food prices and Welfare Reform, informed by routine, Government-supported monitoring and reporting of the extent of food poverty among our citizens.

In unison with End Hunger UK, Church Action on Poverty, Independent Food Aid Network, Food Foundation and others, we sought to have a collective voice on so substantive an issue as food poverty to form the critical mass to lend additional authority, credibility and reach to the results and recommendations. Our data have been shared with the Office of National Statistics re: planning to measure household and child food insecurity for the UK. The recent development that the UK/NI Government(s) will monitor food insecurity with results available from March 2021 will enable annual monitoring, allowing for more focused strategies and targeted interventions to tackle diet-related health inequalities in society.

* RESEARCH TEAM COMPRISED: DR S FUREY, MS E BEACOM, DR C MCLAUGHLIN, MS U QUINN AND DR D SURGENOR

Dairy foods and blood pressure: a review of current evidence

Professor Mary Ward

PROFESSOR OF NUTRITION AND DIETETICS,
NUTRITION INNOVATION CENTRE FOR FOOD AND HEALTH (NICHE), ULSTER UNIVERSITY

High blood pressure (BP) or hypertension affects over 1 billion people globally and an estimated 12.5 million or 1 in 4 adults in the UK. It is the leading global contributor to premature death, accounting for almost 10 million deaths in 2015 from heart disease and stroke and is also a major risk factor for cognitive decline. Several highly effective lifestyle and drug treatment strategies are recommended for the treatment of BP and based on current evidence it has been estimated that a 10mmHg reduction in BP results in a 17% reduction in coronary heart disease and a 27% reduction in stroke as well as a 13% reduction in all-cause mortality. Despite this however, hypertension remains under-diagnosed, under-treated and poorly controlled in the population.

In 2017 the American Heart Association published new guidelines for the prevention, detection and management of elevated BP in adults, which revised the threshold for hypertension from 140/90mmHg to 130/80mmHg (systolic/diastolic BP). These changes were introduced primarily in response to compelling findings from a large multi-centre trial, namely the SPRINT trial, which reported lower rates of fatal and nonfatal major cardiovascular events and death from any cause, in response to intensive versus standard BP-lowering treatment. Similar proposed changes to clinical guidelines are currently under consideration in the UK thus, there is an urgent need to consider novel public health strategies that will help to achieve optimal BP at a population level.

Lifestyle interventions such as restricting salt, alcohol moderation, healthy eating, regular exercise, weight control, and smoking cessation are important because they can delay the need for drug treatment while also having health benefits beyond their impact on BP. A diet low in saturated and total fat and rich in fruit, vegetables, and low-fat dairy products has also been shown to substantially lower blood pressure (BP) in the Dietary Approaches to Stop Hypertension (DASH) trial, effects which are likely explained by dairy-rich nutrients including phosphorus and calcium, taken individually or in combination. Further evidence of a benefit of dairy foods comes from the recently published INTERnational study on MAcro/micronutrients and blood Pressure (INTERMAP) conducted in the UK and USA which confirmed that low-fat dairy consumption is associated with lower BP in 2,694 participants aged 40-59 years. Dairy foods also represent the most important source of Riboflavin (vitamin B2) in our diet and work at our centre, the Nutrition Innovation Centre for Food and Health (NICHE) at Ulster University, has shown that optimal riboflavin status is associated with lower BP in adults with a common genetic factor, affecting 12% of the population on the Island of Ireland. Furthermore, we have demonstrated that supplementation with riboflavin results in significant blood pressure lowering in these genetically at-risk adults.

This presentation will review current evidence linking dairy foods and their nutrients with blood pressure. Furthermore, the effectiveness of dietary strategies aimed at lowering BP will be considered, given the current consultations in the UK and across Europe recommending lower cut-offs for hypertension and a call for more ambitious, innovative thinking to create sustainable solutions for managing blood pressure, one of the most important yet preventable disease risk factors affecting the population.

Circadian rhythms: re-setting the clock in Type 2 diabetes and metabolic disease

Dr Brendan Gabriel

RESEARCH FELLOW, DEPARTMENT OF PHYSIOLOGY AND PHARMACOLOGY,
KAROLINSKA INSTITUTE, STOCKHOLM

Perturbed diurnal rhythms are becoming increasingly evident as deleterious events in the pathology of metabolic diseases. Exercise and nutrition strategies are well characterized as crucial interventions in the prevention and treatment of individuals with metabolic diseases. Little is known, however, regarding optimizing the timing of exercise bouts, in particular, to maximize health benefits. Furthermore, exercise is a potent modulator of skeletal muscle metabolism, and it is clear that skeletal muscle has a strong circadian profile. In humans, mitochondrial function peaks in the late afternoon, and the circadian clock might be inherently impaired in myotubes from patients with metabolic disease.

Timing exercise bouts or nutrition strategies to coordinate with an individual's circadian rhythms might be an efficacious strategy to optimize health. The role of exercise and feeding as Zeitgebers can also be used as a tool in combating metabolic disease. Shift work is known to induce acute insulin resistance, and appropriately timed exercise or nutritional interventions might improve health markers in shift workers who are at risk of metabolic disease.

This presentation will review diurnal skeletal muscle metabolism and the interaction with exercise bouts and nutrition at different times of the day. These topics will also be discussed in terms of their role in combatting metabolic disease.

The challenge of healthy and sustainable diets: a place for dairy foods?

Dr Stephan Peters

MANAGER NUTRITION AND HEALTH, NZO DUTCH DAIRY ASSOCIATION

Changing to a more sustainable diet or lifestyle is not as easy as it seems on first sight. “Eat less animal products and eat local” is not always the optimal advice to decrease the CO2-footprint of your diet. In contrary, sometimes it might even increase the CO-footprint.

In this presentation more insight will be given on the environmental impact of our diet and lifestyle. The environmental impact of different diets, including with and without dairy foods, will be demonstrated by a model (Optimeal®) that combines nutritional quality with environmental impact: CO2 emissions. CO2 emissions of products are determined by LCAs (Life Cycle Assessments). In LCAs all stages of production are considered though raw materials, production, distribution and disposal. Your environmental footprint goes, of course, beyond nutrition only.

The second part of the presentation will zoom out from nutrition to lifestyle. We have mobile phones, buy clothes, shoes (how many pairs do you have?), travel to work, have hobbies etcetera. All of these have their own environmental impact too. After the presentation you will have gained more insight in what actions you can undertake to decrease your environmental impact. Some of the conclusions are logical, some of them are surprising and some of them might even be shocking.

Drowning in ‘experts’: navigating nutrition communication and combatting pseudoscience in the age of innovation

Emily C Foster, RD

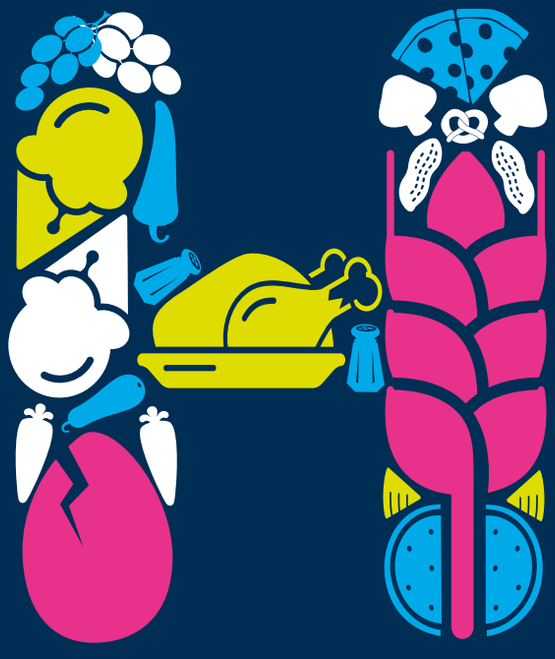
DIETITIAN AND FOUNDER, NUTRITION AND MARKETING CONSULTING, GLOWING POTENTIAL

Expert, specialist, influencer, thought leader – the list goes on. In 2019 there is no shortage of marketing jargon within self-selected job titles in the nutrition and wellness space that leaves even those of us most informed feeling completely clueless. This leaves us with the question; if bona fide nutrition and health experts are left scratching their heads – how does the general public feel?

Increasingly the role of the nutrition and healthcare professional is to help individuals navigate information they find online and in the media – to discern fact from fiction, the harmless from the potentially dangerous. As we move out of the age of information into the era of what some would call the “age of innovation” – companies and individuals, experts in a particular field or not, take advantage of the plethora information we have available, collaborate and aim to make something useful for others.

A reality we must face as nutrition and health educators is that in order to help others and take an active part in this “age of innovation”, we must be more visible and supportive of other credible professionals and organisations. There’s no denying that a quick and practical communications tool is social media – free and relatively simple to use, a fast way to contribute credibility to conversations online.

N&



The Dairy Council for Northern Ireland

Shaftesbury House
Edgewater Office Park
Edgewater Road
Belfast, BT3 9JQ

Tel. 028 9077 0113

nutrition@dairycouncil.co.uk
www.dairycouncil.co.uk
www.milknutritiousbynature.eu
twitter @DairyCouncilNI