



GNS Conference

Nutrition and Health: Current Developments and Challenges

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Diet, nutrition and the changing face of cancer survivorship: contemporary developments and discussions.

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Cancer is one of the biggest killers in Georgia and any new developments that will help the fight against cancer are very welcome. Thus, the chance to learn current trends from the leading scientists in the field are very important. The presentation reviews the NS London Winter Conference 2017 on Diet, Nutrition and Changing Face of Cancer Survivorship. There is a growing body of evidence supporting the role in cancer aetiology factors such as diet composition, anthropometric characteristics, physical activity, glycaemia, hyperinsulinemia, high blood pressure and obesity. As obesity rates are increasing with alarming rates in Georgia, highlighting the adverse effects of the condition is very beneficial. Obesity is in correlation with some types of cancer and is linked with triggering the inflammation, the deregulation of cell cycle control and the alteration of various growth factors. At the same time there is evidence on potential effects of body composition on systemic therapy toxicity and outcomes. The influence of obesity on breast cancer pathology and treatment is also an interesting link and deserves attention. Growing evidence suggest that patients will benefit from advice before, during and after chemotherapy. Particularly important is the role of nutrition on preventing secondary cancer and on improving the outcome from comorbidities that most of cancer patients will develop. It will be very desirable to have consistent evidence based advice for cancer patients as the majority of them do not get adequate nutritional advice.

Nutrient Profiling System

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Nutrient profiling is a discipline aimed at classifying foods based on their nutritional composition and is a highly topical issue as there are many areas in which nutrient profiling can play a crucial role in preventing diseases. Unfortunately, there are problems regarding nutrient profiling in Georgia as the existing data on energy intake (food consumption and related nutritional status of the population) is out of date and does not meet the current requirements. It is important the Nutrient Profiling Model reflects the most up to date dietary recommendations in order to help support healthier food choices. Currently when choosing the right model for the Georgian food industry including food categories, qualifying nutrients, thresholds or scoring systems, reference amounts of food, there are difficulties defining criteria due to a lack of data. This reality makes using scientific evidence and the experience of other countries a good option followed by testing/validation of the chosen model to implement in Georgia. The paper discusses two models of nutrient profiling by the World Health Organisation from the Regional office for Europe and from the Mediterranean Region. The models from Great Britain (the UK NPM 2204/5 and approach used in the 2018 review of the UK NPM), France (Nutri-Score, 5- CNL)), USA (Americas (PAHO)), Sweden and Denmark (Green keyhole), Australia/New Zealand ((FSANZ) “Health Star Rating System”), Chile (A stop sign stating “High in <nutrient>”), South African Nutrient Profiling Models and also „Food /Drink Europe Confederation“ (GDA labelling (Guideline Daily Amounts regulation) are discussed.

Osteoporosis: The double threats of diabetes and fat to skeletal health.

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Recently, positive correlation between Diabetes Mellitus Type 2(DMT2), obesity and Osteoporosis/skeletal fractures has drawn huge attention. DMT2 and obesity have never been considered as risk factors for Osteoporosis, but recent multiple studies have shown that excess body weight may be detrimental to skeleton and higher insulin might increase intramuscular fat deposition, causing lipotoxic effects, that leads to decrease in cortical BMD (bone mass density) and decreases in periosteal circumference. The patients with DMT2, with or without obesity have other contributing factors for Osteoporosis. The patients may have high BMD, but their bone quality is unsatisfactory, because of Hypercalciuria, lower turnover and lower osteocalcin, reduced mineralizing surface. Cortical porosity is common, as well. Cortical porosity ultimately leads to bone deformities and spontaneous fractures. As for obese and overweight patients, with or without Diabetes, they are more prone to D vitamin deficiency, which is another risk factor for Osteoporosis and low skeletal quality. Fat can induce an artifact of the DXA measurement giving a falsely elevated BMD, Co-morbidities such as diabetes and vitamin D deficiency are often present. In women, an earlier menopause; in men lower testosterone levels occurred.

DMT2 and obesity should be added to risk –factors of Osteoporosis., therefore general nutritional recommendations should outline the importance of adequate intake of Calcium and Vitamin D.

Obesity – Global Problem

Prof Ketii Asatiani

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Worldwide obesity has nearly tripled since 1975. In 2016, more than 1.9 billion adults, 18 years and older, were overweight. Of these over 650 million were obese. 39% of adults aged 18 years and over were overweight in 2016, and 13% were obese. Most of the world's population live in countries where overweight and obesity kills more people than underweight. 41 million children under the age of 5 were overweight or obese in 2016. Over 340 million children and adolescents aged 5-19 were overweight or obese in 2016. Childhood obesity is strongly associated with risk factors for cardiovascular disease, type 2 diabetes, orthopaedic problems, mental disorders, under-achievement in school and lower self-esteem. It is generally accepted that obesity is a strong contributory factor in many other disease areas, including most NCDs. Excess body weight puts patients at a higher risk of hypertension, dyslipidaemia, stroke, sleep apnoea, and contributes to debilitating conditions such as osteoarthritis, respiratory difficulties, gallbladder disease, infertility, and psycho-social problems. The WHO recognises that in this century, obesity has prevalence similar or higher than that of malnutrition and infectious diseases. For this reason, if drastic measures are not taken in order to prevent and treat obesity, more than 50% of the world population will be obese in 2025. Obesity is, therefore, a chronic disease with enormous prevalence in developed countries, afflicting men and women of all races and ages. Pre-obesity or “being overweight” and obesity are important public health concerns demanding a joint strategy that includes the promotion of healthy eating habits and a more active lifestyle, as well as making available appropriate treatment and aftercare. Many lifestyle habits begin during childhood therefore parents and families should

encourage their children to make healthy choices, such as following a healthy diet and being physically active. Eating a well-balanced diet and limiting intake of processed and sugar-sweetened products are important as are portion sizes, especially when eating out, as the portions served in restaurants are often large enough for more than one adult. Although much of the day for most people consists of sedentary time at work or school, they should be encouraged to do regular exercise and be physically active. Whilst preventing obesity should be a priority, it is important that people who are already overweight or have obesity, seek treatment for it. Obesity is not incurable and it is possible to take small steps to a healthier future. It is often a change in behaviour that contributes to weight gain. Modifying that behaviour is one important way to treat the disease. Despite the fact that obesity is a chronic disease, it is still preventable, curable and we have to do our best to fight the epidemic of the 21st century.

Malnutrition – the Modern Approach

Mari Malazonia

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There are three main models of nutrition: under, optimal and over nutrition, considering quantitative standards for nutrient intake (DRIs: EAR for population, RDAs, AIs and ULs for individuals). According to A.S.P.E.N. Clinical Guidelines, malnutrition should be considered as an acutely or chronically developed condition, as a nutrition state with different “degree of over-nutrition or under-nutrition with or without inflammatory activity”, with physical and functional changes. Based on ESPEN guidelines, malnutrition is considered as a synonym of under-nutrition and can be defined as a lack of intake or uptake of nutrition that leads to “diminished physical and mental function and impaired clinical outcome from disease”. Malnutrition is a diagnosis. The physician needs to know coding for malnutrition (e.g. ICD-9 and ICD-10). It is necessary to determine who is at risk of malnutrition using validated risk screening tools. Weight loss, reduced BMI and reduced FFMI are the most valuable diagnostic criteria (ESPEN Consensus Statement). According to A.S.P.E.N. Consensus, diagnosis is based on 2 or more criteria from six characteristics. Exactly the modern approach to malnutrition was used in our research - the first study of the elderly nutrition in Georgia (Study group ≥ 60 y (n=75) - men (n=14) and women (n=61); Subgroup <75 y (n=64) - men (n=9) and women (n=55); Subgroup 75+ y (n=11) - men (n=5) and women (n=6)). According to our research results, although there is the under-nutrition of protein and energy in certain groups of participants, neither malnutrition screening tool nor BMI and FFMI do not reflect real condition. The findings of our research suggest that, predicatively significant malnutrition can be left unattended, overlooked and undiagnosed without of energy intake assessment in practically healthy elderly.

Nutrition as a part of health education

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The presentation discussed the importance of health education in children and for the population in general. Nowadays there are many diet related diseases, among them heart disease, diabetes, obesity, high blood pressure, stroke, osteoporosis and cancer. These diseases can be prevented by a healthy lifestyle, which includes healthy eating and physical activity. One of the best ways to prevent diet related disease is education and healthy lifestyle promotion. The presentation reviewed some successful programs and promotion ideas successful in the UK. The "Health for life" program is an effective way to make children eat healthier with fun and move about more, on a daily basis. Statistics show that that "Health for life" is great plan for increasing a balanced diet consumption in children. The program has interesting parts for both children and parents, including providing information for parents on children's balanced diet with apps to help them easily find recommended products and information about sugar, salt and fat content in particular foods. The presentation reviewed how nutritional information can be presented in a way which is easiest to understand for the wider population, for example using the healthy eating plate model and traffic light labelling, which informs the consumer how recommended a chosen food is. Similarly, the "5 a day" is a useful campaign with a very accessible message promoting eating fruit and vegetables, thereby preventing later health issues. Such campaigns and programs contribute to making a healthy lifestyle a more popular option and "the shaping up" of a healthier population. It is my professional aim to share all the positive ideas and experiences gained from my education in the UK to develop similar programs in Georgia, especially for Primary school children.

The Role of Nutrition in Sport

As. Prof. Ketevan Beridze

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The main problem facing Sports Nutrition in Georgia is a lack of advice on nutrition for athletes at both an organised and individual level. Officially provided data, as well as independently provided data, on the individual energy intake of high performing sportsmen were studied. The energy intake of the athletes was assessed together with nutritional behaviour and nutritional attitudes, in order to define the sportsmen's attitude towards existing diets and determine their knowledge of nutrition. The diets of two teams were analysed.

An analysis of diets revealed that only certain sportsmen in both teams had a balanced diet and it was in correlation with the athletes weight; diets did not consider the type of sport and seasonality. On an individual level, diet was frequently not balanced, consumption of high protein and dairy products were high, whereas consumption of vegetables was limited, the excess quantity of simple carbohydrates was consumed; food was selected only by taste, and the amount of food varied according to individual sportsmen's decision. The level of knowledge on adequate nutrition in both research groups was very low.

Results: energy intake of Georgian athletes should be studied further in order to establish the macro-nutrient guidelines according to age, training etc. The diets for high performing athletes should be individually developed by experts in sports nutrition. It is necessary to develop and implement educational programs in sports nutrition for athletes, coaches and sports doctors.



Endorsed by the Nutrition Society