17th International Conference on

Obesity, Diet and Nutrition

August 28-29, 2018 | 2018 Paris, France

Special Session

DAY 1

Isabelle Plasmeijer, J Obes Weight Loss Ther 2018, Volume: 08
DOI: 10.4172/2165-7904-C5-069

Isabelle Plasmeijer's personal journey with dieting, nutrition and health

Isabelle Plasmeijer

ISA Power Team, Netherlands

Food is the cure and the cure is food. The body is the only thing that can heal itself. Striving for a better health our speaker Isabelle Plasmeijer got caught up in the vicious cycle of an eating disorder; Anorexia Nervosa and Bulimia Nervosa. Today's society is confused about what is healthy food. Can we trust the products in our grocery shops? After Isabelle sought treatment she wrote 3 books and set up ISA Power, an organization that helps other sufferers, family and professionals. Isabelle will not only share her own difficulties with her struggle from a mental illness, but she educates other professionals to help clients quicker, faster and better to full and lasting recovery.

She will answer questions such as:

- How do emotions influence our food choices?

- How is the brain influenced when you eat unhealthy and processed food?

- How can we treat our body as our temple?

- How can we make more conscious choices?

Isabelle believes that there is more to becoming healthy and recovery than eating 'normal' again and restoring bodyweight.

In order to get better you need to become a new and better version of yourself and integrate a healthy lifestyle with exercise, fresh air, breathing techniques and mindfulness.

Biography

Isabelle Plasmeijer set up her own organization ISA POWER Team and together with 25 coaches in her team she helps people from all over the world recover from an Eating Disorder. She educates schools, trains professionals.

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Notes:

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Scientific Tracks & Abstracts

DAY 1

Malgorzata Malodobra-Mazur et al., J Obes Weight Loss Ther 2018, Volume: 08
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Obesity induced epigenetic changes in SAT and VAT regulating adipocytes metabolism

Malgorzata Malodobra-Mazur

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co-authors: **Aneta Alama, Dorota Pawelka** and **Aneta Myszczyszyn**
Wrocław Medical University, Poland

Adipose tissue plays important role in human body, not only as the energy storage organ, but also as the endocrine organ. In obesity, the profile of secreted adipokines/cytokines and the whole metabolism of adipose tissue are changing. Metabolic disorders induced by obesity are characterized by severe aberration in expression rates of numerous genes important for metabolism regulation. It has been speculated that changes might be driven by epigenetic regulation like DNA methylation or histone modifications. Numerous data implicate obesity with DNA hypermethylation. Similarly, a body of literature documented role of histone modifications in obesity-induced metabolic disorders, thought, most results concern animal's models. In present study, we analyzed the influence of obesity on the global DNA methylation and expression of main genes encoding epigenetic modifying enzymes in human adipose tissue in two various fat depots: visceral (VAT) and subcutaneous (SAT) adipose tissues. Our preliminary results showed that the global DNA methylation was increased in obese individuals, both in SAT and VAT. Furthermore, we found differences in expression profile between SAT and VAT of numerous genes including HDAC1, SLC2A4, PTPN1, SCD-1, IL-6 and more related to insulin sensitivity, lipids profile and adipokines/cytokine secretion and what's more expression rate of numerous genes displayed correlation with obesity, glucose and/or cholesterol. Finally, we were searching for the cause of different genes expression profile, for that reason we investigated the methylation pattern of gene's promoters and histone modifications by chromatin immunoprecipitation. Obtained results suggest that obesity might influence epigenome and thus induce changes in adipocytes metabolism.

Biography

Malgorzata Malodobra-Mazur has completed her PhD in 2010 year from Wroclaw Medical University, Wroclaw, Poland and Post-doctoral studies from Nencki Institute of Experimental Biology, Warswa, Poland. Furthermore, she performed an Internship at Joslin Diabetes Center, Harvard Medical School, Boston, USA. She is a Principal Investigator of two scientific grants funed by National Science Center, Poland and Nutricia Fundation, Poland. She has published more than 10 papers in reputed journals.

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Sigal Eilat-Adar, J Obes Weight Loss Ther 2018, Volume: 08
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Are saturated fatty acids so pure?

Sigal Eilat-Adar

The Academic College at Wingate, Israel

The history of nutritional recommendations for preventing cardiovascular diseases (CVD) and general recommendation for fat consumption have undergone a number of revisions lately. In this lecture, we will briefly review the history of fat recommendations, attempting to reach conclusions on which and how much fat do we need? The first observations on this topic were made by Anitschkow in animals and de Langen in people, at the beginning of the 20th century. The seven countries study done (1958-1983) by Ancel Kyes, led to the recommendation of a low fat and low saturated-fat diet. Several intervention studies supported these results (70s of the 20th century). However, re-analysis of the results of some of these studies after the discovery of new data that were not included in the original analysis, have led to the opposite conclusions. According to Sydney diet heart study and MCE (Minnesota Coronary Experiment) (2016) and pure study (Prospective Urban Rural Epidemiology) (2016) also supported the claim that there is no harm in saturated fats. However, this study was criticized for its interpretation of the results. In order to resolve this disagreement, a "national committee" was gathered in the USA and, in accordance with the "pyramid of scientific proof", its members choose four intervention trials in order to conduct a meta-analysis. According to their results, polyunsaturated fats were considered to be preferable over saturated fats. Has the "fat war" ended? Most likely, marketing, research and personal beliefs will remain important factors in any future recommendations.

Biography

Sigal Eilat-Adar is a registered Nutritionist and an Epidemiologist. She completed her Post-doctoral project at the MedStar Health Research Institute, Maryland, USA, studying the nutrition of minorities: Native Americans and Alaska Natives. She is the Director of a second-degree program in physical activity and healthy lifestyle education at the Academic College at Wingate, and a Lecturer at the Tel Aviv University, both in Israel. She was the Head of a committee that published a position paper on nutritional recommendations for treating and preventing cardiovascular disease, written in cooperation between the Israel Heart Society and the Israel Dietetic Association.

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Jingmei Dong et al., J Obes Weight Loss Ther 2018, Volume: 08
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The dynamic analysis of body composition and BMD based on different physical activity level for graduate students in China

Jingmei Dong

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The purpose of this study was to improve health and manage weight rational for graduate students via dynamic analyzing the correlation between fitness and daily physical activity levels. Full-time Tongji University 1305 graduate students were selected as participants by stratified randomized cluster sampling. The survey shows that the proportion of whose physical activity can reach the WHO recommendation that is 60 min/day moderate-to-vigorous physical activity (MVPA)– is 76% of males and 69.4% of females in Tongji graduate students respectively. Their physical activity levels were higher on weekdays than weekend. Females' body fat was significantly higher than males ($P<0.01$) meanwhile vigorous physical activity (VVPA) was negatively related to the rate of body fat ($r=-0.368$, $P=0.368$), and positively correlated to lean body mass ($r=0.331$, $P=0.013$) and BMD ($r=0.289$, $P=0.289$). The correlation VPA was negatively related to the body fat rate, and lean body mass, vital capacity and the handgrip, and positively correlated to BMD reminds. It is indicated that the graduates' physical fitness is developing in an imbalanced status. Most of their behavior is in inactivity and sedentary lifestyle. The fact of high fat rate and low muscle rate of body composition is not reasonable. Especially, the situation of osteopenia and osteoporosis reflecting graduates' bone health level is not optimistic. All of this analysis verifies that it is necessary to guide graduate students to do vigorous physical activity so that the graduates' physical fitness can be improved.

Biography

Jingmei Dong has completed her PhD from Shanghai Sports of University in 2011. She is a Professor and the Director of Centre of Sports and Health in Tongji University. She has published more than 60 papers in reputed journals and has been serving as an Editorial Board Member of repute. She focuses on the student's obesity and fitness that relate to physical activity and lifestyles.

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Maysa Mariana Cruz et al., J Obes Weight Loss Ther 2018, Volume: 08
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Effects of palmitoleic acid on the expression of obesogenic genes in adipose tissue of mice submitted to a high fat diet

Maysa Mariana Cruz

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co-authors: **Farias T M, De Sá R D C, Batini F, Barbosa N** and **Alonso-Vale M I C**
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White adipose tissue (WAT) is specialized in storing energy in the form of triacylglycerols, providing fatty acids (FA) according to the energy demand of the individual, being expanded in obesity. Obesity is associated with the onset of metabolic syndrome, which in turn correlates with WAT dysfunction that includes changes in mitochondrial, metabolic and adipogenic genes expression in adipocytes. We recently demonstrated that palmitoleic acid (C16:1n7), a monounsaturated FA, increases the metabolic and oxidative capacity of 3T3-L1 adipocytes, modifying some bioenergetic parameters related to mitochondrial and metabolic functions. However, there are no data about its effects on the expression of WAT obesogenic genes from animals submitted to obesity by a high fat diet (HFD). Thus, in the present work, male C57BL/6 mice were submitted to the control diet (CO) or HFD for eight weeks. From the 5th week, the animals received C16:1n7 (300 mg/kg/day) or water for 30 days, by gavage. After euthanasia, the inguinal WAT was removed for analysis of ATGL, HSL, Perilipin, LPL, FABP4, Lipin, GLUT-4, Adiponectin, Leptin, CEBP-alpha and PPAR-gamma by real time RT-PCR gene expression. The following genes showed increased expression in the HFD group: ATGL, HSL, LPL, Lipin, GLUT-4, Leptin, PPAR-gamma and CEBP-alpha, all of which were partially or completely reversed by the C16:1n7 treatment. FABP4 expression was positively modulated in both the HFD and HFD+C16:1n7 groups, as well as the adiponectin. Accordingly, we suggest that palmitoleic acid is modulating and/or adapting the mice WAT helping them to deal with the energy demand from HFD. Thus, the animals treated with palmitoleic acid respond differently from the obese group, and therefore, the imposed condition of obesity by HFD.

Biography

Maysa Mariana Cruz is pursuing her PhD from Federal University of São Paulo. She is a Pharmacist. She has completed her Master of Science and has published one paper as first author and seven papers as coauthor.

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Ellie Abdi et al., J Obes Weight Loss Ther 2018, Volume: 08
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Interventions for preventing childhood obesity in African-American children: A critical review

Ellie Abdi

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Université de Reims, France
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Report suggested that the dramatic increases in childhood and adolescent obesity that occurred between 1980 and 2000 may have plateaued in the United States. The descriptions are conflicting but to confirm the decease of obesity, evidence has emerged from nine countries including the United States. Statements recommended that the rise in the prevalence ofchildhood obesity has slowed appreciably or even plateaued. However, the research is vague among ethnic minorities and the economically disadvantaged. The results continue to draw attention to the increased risk of becoming obese and need for interventions of prevention in childhood obesity in African-American children of the United States.

The purpose of thisstudy was to examine interventions for preventing childhood obesity in

African American children. The efficiency of interventions need to be designed to prevent obesity in childhood through lifestyle and social support by considering obesity intervention strategies. To examine the gap of the interventions for preventing childhood obesity in African-American children in the literature, obesity prevention interventions specifically targeted at preventing overweight and obesity in African-American children is necessary.

Biography

Ellie Abdi is a Faculty and Researcher at a School District in the US, and also in two French and two American Universities. She is an Elected VP of Physical Education in New Jersey and now is an Elect-Chair of Diversity for SHAPE-America, who advocates before congress in DC. She is an Editorial Board Member of International journal, a Review Editor for a Swiss Journal in addition to Elsevier and an Invitee Member of Scientific Committees. She is a Presenter of many papers, keynotes and workshops, who has published many research, interviews and articles in various journals and sites. She is an Author of two books and contributed several chapters in few books.

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Effects of treatment with fish oil on subcutaneous and visceral adipocytes dysfunction triggered by obesity in mice

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The efforts dedicated to finding the cure for obesity and associated disorders lead to an intense interest in adipocyte metabolism. The consumption of ω-3 fatty acids (FA) presents beneficial effects on changes caused by obesity. The aim of this study was to investigate the adipokines secretion of isolated adipocytes from obese mice induced by high fat (HF) diet, supplemented or not with fish oil (FO) [rich in ω-3 FA (EPA/DHA, 5:1)] with emphasis on the differential response of subcutaneous and visceral adipose deposits, inguinal (ING) and retroperitoneal (RP) regions, respectively. C57BL/6J mice received control (CO) or HF diet for eight weeks. Supplementation with FO (2 g/Kg p.c., 3 times/week) was initiated eight weeks after the induction of obesity, remaining until the end; totaling 16 weeks of experimental protocol. The white adipose tissue ING and RP were removed for isolation of adipocytes that were subjected to D'MEM/10% FBS culture for 30 hours. At the end, adipokines concentrations in the culture supernatant were determined using specific ELISA kits. The adipocytes of the HF group showed a significant hypertrophy followed by an increase in the secretion of proinflammatory cytokines TNF-α and IL-6 compared to the CO group, whereas the HF+FO group presented total reversion of this effect, in both ING and RP adipocytes. There was no difference in secretion of adiponectin. The relevance of isolated adipocytes in the secretion of these cytokines is highlighted here. The adipocytes are affected by the HF diet and the FO has a protective effect on these parameters.

Biography

Roberta Dourado Cavalcante da Cunha de Sá has completed her PhD from Federal University of São Paulo. She is a Pharmacist, Master of Science and has published one paper as first author and three papers as co-author.

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Changes in epigenetic marks during adipogenesis and in mature adipocytes induced by excess of palmitic, stearic and oleic acids

Malgorzata Malodobra-Mazur

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Wrocław Medical University, Poland

Preadipocytes develop from mesenchymal stem cells, and stimulated by specific agents, differentiate into mature adipocytes. Adipogenesis is characterized by changes in cell morphology and well documented changes in expression of complex transcription factors. Adipogenesis is highly controlled process by numerous mechanisms, including epigenetic regulation. The influence of dietary factors on the adipogenesis is very well documented as well as that some dietary factors modulate epigenome. A question requiring an answer is whether the nutrition factors modulated adipogenesis via DNA methylation. We analyzed the influence of the palmitic, stearic and oleic acids excess on global and site-specific DNA methylation during adipogenesis and in mature adipocytes. 3T3-L1 fibroblasts were used as the cell model, five time points during adipogenesis were chosen. First, we analyzed the influence of fatty acids excess on adipogenesis at chosen time points. The expression rate of transcription factors, DNA methyltransferases and global DNA methylation were measured at specific time point of cells differentiation. Second, the phonotype of mature adipocytes was analyzed. For that reason, the expression rate of genes belonging to insulin signaling pathway, lipids metabolism, adipokines and cytokines were analyzed. Additionally, the insulin sensitivity and the secretion of adipokines and cytokines were determined. Finally, the site-specific methylation pattern of genes promoters that showed divergences in gene expression was established. We showed that all fatty acids might influence in different manners global and site specific DNA methylation pattern in mature adipocytes leading to changes in adipocytes phenotype. No differences were seen at earlier stage of adipogenesis.

Biography

Malgorzata Malodobra-Mazur has completed her PhD in 2010 year from Wroclaw Medical University, Wroclaw, Poland and Post-doctoral studies from Nencki Institute of Experimental Biology, Warswa, Poland. Furthermore, she performed an Internship at Joslin Diabetes Center, Harvard Medical School, Boston, USA. She is a Principal Investigator of two scientific grants funed by National Science Center, Poland and Nutricia Fundation, Poland. She has published more than 10 papers in reputed journals.

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The maintenance of a well-balanced diet necessary to promote growth at various stages of a child's development: A case study in Ashanti region, Ghana

Richard Essel Mensah

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Nutrition is important for providing energy for our daily activities, maintaining body functions, growth and development and therapeutic benefits including healing and prevention. Right nutrition in early days of life is very important and nutritional requirements are different for infants, children, adolescent and adults in the family (WHO, 2006). The main objective of this study was to understand, recognize and appreciate ideal nutrition to promote growth at various stages of child's development in Ashanti region, Ghana.

The target populations for this study were infants, children, adolescents and nursing mothers. The sample size was 700 consisting of 200 infants, 200 children, 200 adolescents and 100 nursing mother's in Ashanti region of Ghana. Purposive sampling was used to identify out target population. The respondents were interviewed by the use of questionnaires.

Some of the data taken on nursing mothers were: underweight: BMI <18.50; normal weight: 18.50 - 24.99; overweight: BMI 25.00 - 29.99 and obesity: BMI ≥30 using the WHO (2011) body mass index (BMI); background information such as woman's household situation and living conditions; information of the anthropometrical measurements of both nursing mothers and children. Also, background and intake of foods and drinks among the infants, children and adolescents were recorded. The children's z-scores were calculated using Smart for Emergency Nutrition Assessment (ENA) ("ENA software", 2009)

The results suggest that the women and children are facing several nutritional and health challenges. Again, the studies revealed that relatively many children were malnourished in some way, stunted, wasted and/or underweight. The prevalence of exclusive (and predominant) breastfeeding was low and many children were given complimentary feeds.

Biography

Richard Essel Mensah is a graduate from the University of Ghana Medical School with MB ChB Doctorate Degree. He is an Anaesthesia Physician working at the Anaesthesia and Intensive Care Unit of Komfo Anokye Teaching Hospital under the Ghana Health Service.

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Efficacy of beta-glucans from barley and maintenance of normal blood LDL-cholesterol concentrations: A study case study in Ghana

Kennedy Adu-Twum

Kwame Nkrumah University of Science and Technology, Ghana

co-authors: **Denis Dekugmen Yar** and **Rose Adjei**
University of Education Winneba, Ghana

A claim on beta-glucans and maintenance of normal blood cholesterol concentrations has already been assessed with a favourable outcome (*AbuMweis et al., 2010, Keogh et al., 2003*). The main objective of this study was to assess the claim of beta-glucan from barley grain products lowering effect on low-density lipoprotein (LDL) and cholesterol among Ghanaian population. Total cholesterol and LDL-cholesterol are the endpoints measures for this study. Participants with elevated blood LDL-cholesterol concentration (≥ 3.8mmol/L) were eligible for the intervention phase. The main study parameters were LDL-cholesterol and total cholesterol. Out of a total of 343 participants recruited, 20.7% (71/343) were diabetic while 8.75% (30/343) were pre-diabetic. Also, 63.64% (217/343) had high total cholesterol levels, 32.46% (111/343) had high levels of LDL and 27.57% (94/343) had high triglyceride. However, only participants with high LDL (111) were selected for the intervention phase.

Many (43.59%) of the study participants were within the age range of 31-60 years. During the baseline survey, 16.16% of the participants were diabetic, during the 2 weeks follow up, 12.12% were diabetic and 7.46% during the 4 weeks follow up of daily administration of beta-glucan supplement. Also, the proportion of participants with high TCHOL dropped from 95.96% to 78.79% and slightly increased to 83.58% by follow-ups I and II respectively. The proportion of participants with high LDL dropped from a baseline of value of 95.96% to 60.61% and increased to 79.1% by follow-ups I and II respectively. Also, the proportion of participants with desirable HDL dropped from 95.96% at baseline to 71.72% and 37.31% by follow-ups I and II respectively. The proportion of participants with high TG at baseline was 34.34% and this has declined to 34.34% and increased slightly to 32.84% by follow-ups I and II respectively. Beta-glucans has significantly lowered blood cholesterol concentrations among Ghanaians.

Biography

Kennedy Adu-Twum has completed his MB ChB program at the age of 26 years from the Kwame Nkrumah University, Ghana, Faculty of Medicine. He is a Junior Physician Health Staff at the Kumasi South Hospital of the Diagnosis Directorate of the hospital and has served for 2 years. He has published 13 papers in reputed journals and has been serving as an editorial member for many heaths editorial programs in the country.

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