



5<sup>th</sup> International Conference on

# OBESITY AND DIET IMBALANCE

December 08, 2022 | Webinar

**Scientific Tracks & Abstracts**

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**New approaches towards the pharmacological treatment of obesity****Dr Marilena Vlachou***Department of Pharmaceutical Technology, School of Pharmacy, National and Kapodistrian University of Athens, Greece*

Obesity is a condition defined as excess body fat due to positive energy balance. It is often associated with metabolic diseases, such as hypertension, type 2 diabetes, and coronary heart disease. Obesity also increases the risk of several malignancies in colon, breast, pancreas, and endometrium. Treatments of obesity include lifestyle interventions (dietary interventions with hypocaloric diets that are low in fats and carbohydrates and/or exercise), pharmacotherapy, and surgery. If weight loss with lifestyle changes is only modest, pharmacotherapy might be needed. Pharmacotherapy, always adjunctively with lifestyle interventions, is also an option for any patient diagnosed with obesity (body mass index [BMI] of 30 kg/m<sup>2</sup> or greater) or with a BMI of 27 kg/m<sup>2</sup> or greater and at least one coexisting condition, including type 2 diabetes, hypertension, hyperlipidemia, and sleep apnea.

Presently, six drugs, including two peptides (liraglutide and semaglutide) are approved for weight management in adults: orlistat, phentermine, phentermine-topiramate and naltrexone-bupropion. Orlistat is approved in both Europe and USA and its mode of action is by energy waste. Phentermine, phentermine-topiramate and lorcaserin are approved only in the US and their action is related to appetite reduction. The same mode of action is followed by naltrexone-bupropion and liraglutide, which are approved in both Europe and USA.

From the aforementioned drugs some are approved for short-term management (< 6 months) whilst others are approved for long-term management (> 12 months). The drug therapy is personalized and modified for each individual patient, depending on needs, contraindications, and cost. Benefits of these drugs should be assessed regularly (every 2-3 months) and a different drug treatment should be considered if at least 5% of body weight is not lost after 3 months of therapy.

As already mentioned, one of the approved drugs in obesity management is the combination of naltrexone/bupropion, which was developed by joining these two brain regions acting agents, already approved for other indications (naltrexone for opioid and alcohol addiction and bupropion for depression and smoking cessation), in a single solid pharmaceutical formulation, which regulates food intake and body weight. This compounded drug is known as Contrave® in the US or Mysimba® in Europe (Orexigen Therapeutics, Inc.). However, there are concerns regarding cardiovascular-related side effects of these naltrexone/bupropion carriers. Due to these serious health adverse effects, there is an urgent need to develop more effective and less hazardous naltrexone/bupropion sustained/controlled release systems, by employing biopolymeric excipients with stereoelectronic characteristics that would favor chemical interactions with the pharmacophoric groups of both naltrexone and bupropion. These inter- and supra-molecular interactions will allow for maximum therapeutic potential and substantially less side effects.

To conclude, obesity is a multifactorial disease, which poses serious health risks. Its timely and correct treatment is a panacea for the course of mental and physical health. A cornerstone for the treatment of obesity is the healthy dietary/exercise interventions and possible the inclusion of preparations with satisfactory effectiveness and safety. Still, research and development should continue the effort to develop new agents and drug combinations.

**Importance of Research:** As previously stated, obesity, which affects about 13% of the world population, results in significant deterioration of health and serious clinical, mainly metabolic and cardiovascular complications. Regarding the current alarming epidemiological data there is a need for intensive prevention and treatment of obesity and the development of new forms of pharmacotherapy (new treatment regimens) to develop effective, safe, long-term effective therapy for the treatment of obesity, and above all, to individualize therapy. However, the formulation development and the excipient selection are time consuming processes that delay the release of the drug to the market.

Our research team is currently working on the production of multilayered tablets of naltrexone/bupropion, which can offer anti-obesity treatment. This is envisioned to take place by using, for the preparation of the proposed tablets, combinations of biopolymers with physicochemical properties compatible with the stereoelectronic features of both naltrexone and bupropion. This will lead to the release of the compounded two drugs by an overlapping sustained/controlled mechanism. This combined release mechanistic model, which will be used for the first time, in the case of the naltrexone/bupropion system, is expected to result to effective anti-obesity therapy with less adverse effects.

**Biography**

Marilena Vlachou is an Associate Professor at the National and Kapodistrian University of Athens (NKUoA), Greece. She obtained her Pharmacy and PhD (Pharmaceutical Technology) degrees from the NKUoA. Just prior to obtaining her PhD degree she moved to the University of Rhode Island, U.S.A., as a Visiting Research Scientist, to conduct state of the art research related to Pharmaceutical Technology techniques. In NKUoA, she teaches, at both undergraduate and postgraduate level, courses related to the fields of Pharmaceutical Technology, Physical Pharmacy and Nanotechnology. She has co-authored the textbook entitled "Pharmaceutical Technology I: Principles of Physical Pharmacy and Nanotechnology", and many book chapters. She has presented her research work in more than sixty (60) International Scientific Conferences and she has published more than fifty (50) articles in peer-reviewed Journals..

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## **The contribution of mindful eating interventions on food behaviour, overweight and obese populations**

**Maria Mason**

*Mindful Eating Nutritionist, France*

Our ethic is to deliver courses and tools that are scientifically proven to provide an effective change in eating behavior through a mindfulness approach: love and kindness, self-compassion, inner wisdom and outer wisdom, awareness, acceptance and letting go... are cultivated in our courses and philosophy. We put a big effort into letting each participant find their own way as they enrich themselves with Mindful Eating tools that can be integrated into daily life..

### **Biography**

Maria Mason is an Irish Nutritionist working through English and French, specialised in Mindful Eating and Weight Management in a kind and loving manner. She help people to find their unique path to peace and choice in their relationship with food and life on line and in my practise. She is also a HTSMA practitioner and accompany people to get over psychotraumatism on an individual level.

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**Energy restriction dieting and weight loss: Comparing Intermittent energy restriction versus continuous energy restriction and intermittent fasting, on benefit and harm, between overweight and normal weight subject, review of evidence****Dr. Ling Sien Ngan***Master of Social Sciences (Diplomacy, Security, International Relations), Malaysia*

**Statement of the Problem:** Obesity pandemic and the lifestyle diseases it carry with connotation, has spurred many into dieting for not just body image conscious but health benefit. Dieting is a form of energy restriction (ER) which has different forms. This does not offer blanket benefit but risk like loss of fat free mass (FFM). A wide array of pattern of dieting is available but which is most suitable and risk free? Not just obese subject has interest but the normal weight subject as well hoping to gain some extra edge on health/beauty benefit.

**Methodology & Theoretical Orientation:** A Medline search from 1945-2015 using terms "intermittent" or "fasting" or "diet" or "energy restriction" linking with "body fat", "body weight", "hepatic fat", "fat free mass", "insulin sensitivity", "insulin resistance", "metabolic flexibility". Trials included have at least 50% energy restriction. To compare weight loss and adherence, we include on RCTs where diets had been matched, for total energy intake. Theoretically is by using a commonly used qualitative & quantitative analysis through reviewing literature, clinical history, interview & observation, and forming focus group to gather data. Using the security framework & lenses of analysis of the social science/behaviour to understand the fasting trend in our health conscious society.

**Finding:** Commonest dieting studied were the intermittent energy restriction (IER) which include: including two days consecutive 60-70% energy restriction, (with no or voluntary carry over 20% restriction for next five days cycle, translating into overall 35% per week); alternate day energy restriction of 60-70%(ADER); and alternate day total intermittent fasting (IF). The benefit for the obese subject in terms of weight loss, ability of preserving the weight loss (meaning at least 10% weight loss maintained at 12th month is much depending on level of support given) were comparable between IER and isoenergetic continuous energy restriction (CER). The compliance with IER is better than CER. The adiposity reduction was readily mobilised from the hepatic and abdominal over subcutaneous and intramyocellular lipid store by 30% was comparable between the two. This bring about reduced insulin resistance for the obese subjects. In the normal weight subject IER cause lipolysis with free fatty acid flux by 3 times of normal over night fast causing increased skeletal muscle insulin resistance, arterial sclerosis and blood pressure is harmful. Loss of FFM is detected from all the ER program in obese subject; lowest in IER of 10-20% of total weight loss, to 30% in IF & ADER, to highest of 50% in the normal weight subject. In order not to loss FFM, exercise is a must and add sufficient protein (1.2g/kg body weight) in their diet while under ER. Resting energy expenditure (REE) is much reduced in all ER, with exception of minor initial increase due to fatty acid recycling & gluconeogenesis. All ER bring down insulin resistance except normal weight subject; IER perform better than CER in 35% Vs 20% reduction. ER brings about metabolic flexibility by switching readily from glucose oxidation into fat and amino acid oxidation, and back quickly post-prandial. Metabolic inflexibility is seen in all obese subject. IER & IF does not cause hyperphagia/bing eating during non restricted day, mood disturbance like depression, perturbation of thalamus-pituitary-gonadal axis, or ability to exercise, and thus is a relatively safe program except for muscle mass. Coming to the optimality of regiment, IER is preferable over IF due to better compliance. Timing of ER does not affect weight loss performance nor compliance. Given one meal a day, or spread that same amount out into 3 smaller meals achieve similar result. Weight loss through ER also helps to reduce general cancer risk especially for the obese.

**Conclusion & Significance:** This review theme is to compare benefit/risk of IER & CER. IER is preferable for better compliance although both give comparable benefit. To preserve muscle mass, all ER diet must have protein of over 1.2g/kg body weight and exercise simultaneously, especially for normal weight subject.

**Recommendation:** ER is not the recommended normal lifestyle but invaluable for the obese subject to loss weight, maintain it, compliance with the program in long term and stay healthy. For the normal weight subject it is not recommended to go for energy restricted dieting. Policy maker, NGO and health educator has a duty to inform public on balanced energy living with regular exercise is the best lifestyle to pursue even before been overweight.

**Biography**

Dr David Ling Sien Ngan, is the member of KL Academy of Social Sciences, has his expertise and passion in improving healthcare delivery and health security of the individual, community & national economic wellbeing, especially through financial planning. He analyse not just as a doctor but through the lens of social scientist from the security perspective as a strategist and policy planner, where much work is done through qualitative analysis via very extensive literature review, augmented by clinical interview and physical assessment. Ageing challenges face more security dimension than just medical and, a constructivist society has a better security provision.

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**Central obesity and associated factors among urban adults in dire dawa administrative city, Eastern Ethiopia****Ephrem Israel***Senior public Health Expert, Dire Dawa, Ethiopia*

**Background:** Central obesity (CO) is a medical problem in which extra fat is accumulated in the abdomen and stomach extent that it may harm health. Furthermore, previous studies in Ethiopia predominantly relied on body mass index used to measure obesity and do not show distribution of fat. However, there is a paucity of information on the measurement of central obesity using waist circumference and associated factors in Ethiopia particularly in the study area. Hence, the purpose of this study is to assess the prevalence of central obesity and associated factors among urban adults in Dire Dawa, administrative city, Eastern Ethiopia.

**Methods:** A community-based cross-sectional study was conducted among 633 adults in selected kebeles of administrative city from October 15 to November 15, 2020. A multistage and systematic sampling procedure was used to select study participants. Central obesity is defined as a condition with waist circumference  $\geq 83.7$  cm for men and  $\geq 78$  cm for women with or without general obesity (GO). Odds ratio along with 95% confidence interval was estimated to identify factors associated with central obesity using multiple logistic regression analysis.

**Result:** The overall prevalence of central obesity was 76.1%; at 95% CI (73%, 80%). Associated factors of central obesity were age 45 years and above [AOR = 3.75, 95% CI (1.86, 7.55)], being female [AOR = 2.52, 95% CI: (1.62, 3.94)], alcohol consumption [AOR = 2.61, 95%CI: (1.69, 4.05)], physical inactivity [AOR = 2.05, 95% CI: (1.23, 3.42)], and two hour and more time spent on watching television [AOR = 3.30, 95% CI: (1.59, 6.82)].

**Conclusion:** The study shows central obesity was high in the study area. Age 45 years and above, being females, married, physically inactive, alcohol consumption, and spending a long time watching television was associated with central obesity. Having regular physical activity, limiting alcohol drinking, and limiting time spent watching television were recommended to prevent central obesity and associated risk among adults.

**Keywords:** Central obesity, Prevalence, Associated factors, Eastern Ethiopia.

**Biography**

I was born in 1986 G.Cinkokosa District, East Arsi, Oromia regional state of Ethiopia. I have completed my elementary School in Gutu primary school, kokosa (GPS). I have attended my Secondary school in kokosa senior secondary School (KSS) and Preparatory school in Dodola School (DPS). After completion of my Preparatory School I have joined Haramaya University by the year 2006 G.C. At Haramaya University. I have studied Public Health officer. I got my first BSC degree in Public Health from Haramaya University on oct, 2009. My cumulative CGPA was 3.0 in Degree and Graduated from Dire Dawa University by Master of Public Health in Nutrition with CGPA was 3.78 with A+ Excellent research thesis. Currently I am serving as clinicians at Dire Dawa Administration and senior public Health Expert, Dire Dawa, Ethiopia.

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## **C-section and midwifery in Nigeria**

**Aysha Abdulkadir Haruna**  
*Health Economist, Nigeria*

In 2019 and at the start of this year, the team from Nigeria Health Watch carrying out the #GivingBirthInNigeria project set out to three states to understand attitudes and opinions about caesarean sections in Nigeria. A caesarean section (C-Section) refers to the operation of delivering a baby through incisions made in the mother's abdominal wall and uterus. We carried out focus group discussions (FGDs) with pregnant women, nursing mothers and women who had recently undergone C-Sections to talk about their opinions on the subject. In-depth interviews were carried out with medical doctors, nurses and midwives who explained the attitudes of women and their families to C-sections. Finally, we took to the streets of Lagos, Bayelsa and Bauchi to hear what Nigerians thought about C-Sections. Midwives are health professionals specifically trained to provide care for women during pregnancy, labour and childbirth. Most people are familiar with these functions, but less aware that they also have expanded roles to provide care before pregnancy and beyond childbirth. A critical factor in the fight against maternal and child mortality, the unique nature of midwifery care means that midwives can practice in a hospital setting, at the community level or at home. The World Health Organisation (WHO) has declared 2020 the Year of the Nurse and Midwife. Midwifery in Nigeria is largely dominated by women and faces issues of lack of recognition and adequate remuneration when compared to the entire health workforce. If Nigeria is to make adequate progress towards reducing maternal and child mortality, the role of the midwife must be given adequate attention.

### **Biography**

Aysha Abdulkadir Haruna is a health economist, freelance proofreader and digital marketer (social media marketing and advertisement), though hoping to take on new challenges and learn more on the job. Currently living and working remotely in Abuja, Nigeria. Aysha likes attending webinars in order to gain new inspiration and inspire others. Team-oriented with proven ability to create positive rapport with people. Fluent in English and Hausa (and speak a little Arabic and French). Have a BSc in microbiology and MSc in health economics all from Bayero University Kano, Nigeria.

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