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Obesity, depression and erysipelas a clinical correlation in workers

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Objective: The objective of this study is to determine the association of obesity with depression and erysipelas.

Introduction: Population based studies have found associations between obesity and depression and researchers have utilized body mass index (BMI) to establish obesity. Probable intervening factors include deprived physical health associated with depression. Erysipelas is an infectious disease of the dermis and subcutaneous tissue due to streptococci. Obesity is a well known risk factor for erysipelas.

Methods: Sample size was estimated by using the World Health Organization (W.H.O) software. BMI was assessed from the National Heart, Lung, and Blood Institute U.S. Department of Health and Human Services website. Depression was assessed from Patient Health Questionnaire (PHQ-9) scores and Erysipelas was diagnosed by dermatologist. Predictor or independent variable was obesity and response or dependent variables were depression and erysipelas. Binary logistic regression analysis was used to determine the association between dependent and independent variables with a threshold for selection of $p < 0.05$ as statistically significant.

Results: Among the sample of 100 workers, 25% were obese and among them 15% had depression and 5% had erysipelas. Binary logistic regression analysis showed depression was (OR 1.77; 95% (CI): 1.57-2.84) and erysipelas was (OR 1.14; 95% (CI): 1.05-2.69), were statistically significant ($p < 0.001$).

Conclusion: This study found an association between obesity, depression and erysipelas. Obesity was an independent risk factor for depression and erysipelas. Prospective studies should explore obesity as a possible mediator in the relationship between obesity, depression and erysipelas among workers.

Biography

Sana Ahmed is an employee of S.T International LED Lighting. She has done her Bachelor's in Arts from Punjab University. She has also done course workup from National Vocational and Technical Training, Youth Skill Development Program from Government of Pakistan. As an Assistant Manager of Marketing department, she contributed for this research in literature review, data entry and basic data analysis. She was also involved in the write up of results and conclusion for this research. Her intellectual contribution was great in this research conducted on the employees of ST Enterprises LED lighting. She worked with the medical team and showed her concerns regarding their overweight, psychological level and skin infection. She used her initiative, taking on more than her share of tasks. The health of employees was a critical concern in this research as normal weight and psychological level can decrease skin infection among workers.

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Bavachin from *Psoralea corylifolia* improves insulin-dependent glucose uptake through insulin signaling and AMPK activation in 3T3-L1 adipocytes

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The fruit of *Psoralea corylifolia* L (Fabaceae) (PC) known as “Bo-Gol-Zhee” in Korea has been used as traditional medicine. Extracts of PC have an anti-hyperglycemic effect by increasing plasma insulin levels and decreasing blood glucose and total plasma cholesterol levels in type 2 diabetic rats. In this study, we found that bavachin accumulated lipids during adipocyte differentiation. Consistently, bavachin activated gene expression of adipogenic transcriptional factors, proliferator-activated receptor (PPAR γ), and CCAAT/enhancer binding protein- α (C/EBP α). Bavachin also increased adiponectin expression and secretion in adipocytes. Moreover, bavachin increased insulin-induced glucose uptake by differentiated adipocytes and myoblasts. In differentiated adipocytes, we found that bavachin enhanced glucose uptake via GLUT4 translocation by activating the Akt and AMPK pathway in the presence or absence of insulin. These results suggest that bavachin from *Psoralea corylifolia* might have therapeutic potential for type 2 diabetes by activating insulin signaling pathways and AMPK.

Biography

Hyejin Lee has completed her PhD from Geonnam National University and Post-doctoral studies from Sookmyung Women's University. She is a Senior Researcher of College of Pharmacy and Research Center for Cell Fate Control, Sookmyung Women's University. She has published papers related to Obesity and Diabetes.

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Transcranial direct current stimulation changes appetite and body mass in obese rats

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Transcranial direct current stimulation (tDCS) is a noninvasive intervention to modulate cortical activity. Electrical current generated by stimulator modifies neuronal activity according to the modality of the application. Anodal tDCS is assumed to increase while cathodal tDCS to inhibit cortical excitability. tDCS is effectively used in many different tasks such as learning, visual and somatosensory functions improving these skills. However, the impact of tDCS on energy balance was not clearly determined yet. The hyperphagia / obesity is characterized by restoration of the balance between brain hemispheres. Therefore we aimed in our experiment to limit appetite and therefore body weight gain by the electrical stimulation or inhibition of the selected brain hemisphere by using the tDCS method. The rats fed with diet inducing obesity were exposed to anodal or cathodal tDCS. Active stimulation (400uA, 20 minutes a day) or sham stimulation (40uA, 20 minutes a day) was applied every second day through two weeks. Body weight and food intake were measured every day during the experiment. Both anodal and cathodal tDCS reduced appetite and body weight gain. No significant difference in energy balance was observed depending on electrodes polarity; however, only in anodal tDCS the difference between body weights measured before and after stimulation was negative. We concluded that tDCS is able to change appetite behavior probably by cortical excitability modifications. Further investigations are necessary to explain central and peripheral mechanisms responsible for tDCS effects.

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Biography

Agata Ziomber has completed her PhD from Jagiellonian University and Post-doctoral studies from Jagiellonian University Medical College. She is an Assistant Professor of Department of Pathophysiology in Jagiellonian University Medical College and a medical Doctor - Endocrinologist. She has published 20 articles. In her research she is focusing on neuromodulation as a method to modulate appetite and change body weight. At present, she is a Leader of a project regarding transcranial brain stimulation and energy metabolism.

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Large protection for all Canadians

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In 1980, one in ten Canadians was obese. In 2015, nearly one in four were overweight. By the year 2020, it is projected that one in three will be considered obese. Is there discrimination against overweight people? Many airlines, such as United Airlines, Delta, and Jet Blue charge obese individuals for two plane seats instead of one. Obamacare's architect Jonahan Gruber recently stated that overweight Americans should be taxed based on their body weight. Is there anyone that treats obesity with dignity and respect? As a matter of fact, there is! The insurance world is changing as many Canadians don't have time to answer endless questions about their health or want to avoid sharp needles being poked into their arm. Now it is possible to ensure you and your loved ones are protected from bad things happening and you don't need to be in the same room as the insurance broker. The providers are not bias to overweight individuals. Merely answer 'no' to a few 'knock out questions' and you are well on your way to protect your family and estate. The process for insurance can take as little as fifteen minutes and any Canadian can be approved in as little as 48 hours!

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Association of dietary behaviors with physical activity in a nationally representative sample of children and adolescents: The CASPIAN IV study

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Nutritional health and adequate physical activity (PA), especially in childhood have a substantial role in health. This study assessed the association of dietary behaviors (main courses and snacks intake) with PA in children and adolescents as a part of a larger national study. Using multistage random cluster sampling method, a representative sample of 14880 school students were selected from urban and rural areas of 30 provinces of Iran (2011-2012). Through a validated questionnaire, daily consumption of main course (breakfast, lunch, and dinner) as well as daily consumption of different snacks and health foods (fast foods, milk, vegetables, dry fruits, fresh fruits, sweetened beverages, salty snacks and sweets) were recorded for every participants. Information of past week weekly frequency of leisure time PA was collected. Overall, 13486 out of 14880 students (response rate: 90.6%) participated in this survey. Participants consisted of 6640 (49.2%) girls and 75.6% urban residents; their mean and standard deviation (SD) age was 12.47 (3.36) years. Daily consumption of fresh fruits (OR: 1.35, 95%CI: 1.20-1.52), dried fruits (OR: 1.21; 95%CI: 1.06-1.40), vegetable (OR: 1.39; 95% CI: 1.24-1.56), and milk (OR: 1.35; 95% CI: 1.21-1.52) increased the risk of vigorous PA compare to mild PA in adjusted model. Skipping the breakfast, lunch and dinner decreased the risk of moderate and vigorous PA compare to mild PA ($P < 0.05$). Present study showed that dietary behaviors are associated with PA level in Iranian adolescents. Findings should be used for better evidence based planning of health promotional programs in these age groups.

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Biochemical and hematological factors in obsess addicted men with focus on the triglyceride and cholesterol homeostasis in obsess addicted hamsters

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This experiment was planned to study the effect of opium on biochemical and hematological factors in human and hamsters with focus on cholesterol and triglyceride hemostasis via LXR alpha. Normal and high cholesterol diet (HCD) addicted Syrian golden hamsters were used in this study. Biochemical and hematological factors were measured after one month. The mRNA and protein levels of LXR were determined by RT-PCR and western blotting, respectively. Histological changes of liver and intestine were examined by a light microscope. For human study, biochemical and hematological parameters were determined for 500 male (250 addicts and 250 controls). GC-Mass spectrometry of opium showed presence of about 30% alkaloids (morphine 16%, thebaine 4.4%, papaverine 3.2%, and codeine 5.5%) and the rest was non-alkaloidal agents, inorganic material and 13.5% water. Opium changed some biochemical, hematological and antioxidant test in human and hamsters ($P < 0.05$). The mRNA and protein levels of intestinal LXR were significantly increased in addicted animals in comparison with non-addicted ($P < 0.05$). The mRNA and protein levels of liver LXR were significantly increased in HCD and HCD+ opium group ($P < 0.05$). Opium consumption also, produced severe injuries in the intestine and liver of hamsters. Our findings indicated that opium reduced total cholesterol, probably via LXR expression in hamster. However, opium also increased the level of malondialdehyde, triglyceride, platelet, and reduced total antioxidant capacity and white blood cell.

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Anthropometric measures are associated with cardio-metabolic risk factors in rural, but not urban Kenyans

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This cross-sectional study aimed to investigate the association between anthropometric variables and cardio-metabolic risk factors in a population of Sub-Saharan Africa (SSA). A total of 1,405 (1,158 rural and 247 urban) Kenyans were examined. Anthropometric measurements were carried out, such as weight, body mass index, waist and hip circumference, visceral and subcutaneous adipose tissues (VAT and SAT). Visceral-to-subcutaneous fat ratio (VSR) and waist-to-hip ratio (WHR) were derived. Fasting blood glucose (FBG), serum insulin (SI) and plasma lipids were taken. A 2-h oral glucose tolerance test was performed; homeostatic model assessment of insulin resistance (HOMA -IR) was calculated and blood pressure (BP) was measured. Dietary intake, physical activity energy expenditure, cardio-respiratory fitness and socio-demographic characteristics were measured. Linear regression analyses were carried out. Urban Kenyans had significantly higher anthropometric features and presented higher cardio-metabolic risk factors. In rural Kenyans, anthropometrics were significantly correlated to all cardio-metabolic risk indicators ($p < 0.05$), except plasma HDL-C level, FBG and SI in women. WHR was the best anthropometric variable to predict cardio-metabolic risk. In urban Kenyans, anthropometrics were not significantly associated with cardio-metabolic indicators except for SI and systolic BP in men. In urban women, the correlation only remained significant between WC and plasma lipids, VSR and FBG, SAT and systolic BP. Anthropometrics were significantly correlated to cardio-metabolic risk factors among rural but not urban Kenyans. Further investigations are needed in order to elucidate the role of environmental factors and urbanization when it comes to the correlation between anthropometric variables and cardio-metabolic risk factors in SSA populations.

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Effects of water extract of garlic on cholesterol transporter in the intestine of obese mice

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Garlic is one of the famous herbal plants which have showed beneficial properties on atherosclerosis risk factors. Some components of garlic suppress cholesterol and triglyceride biosynthesis and its absorptin, resulting in lowering of serum cholesterol and triglycerides and increase in HDL level. However, the mechanism of these specific properties is not fully understood. In the small intestine, ATP-binding cassette transporters G5, G8 and A1 (ABCG5, ABCG8 and ABCA1), as well as Niemann-Pick C1 like 1 (NPC1L1) protein has important roles in cholesterol metabolism. In this study, we evaluated the beneficial effect of aqueous extract of garlic on lipid profile and also expression of npc1l1, abca1, abcg5 and abcg8 genes in the intestine of N-Marry mice fed a high cholesterol diet as a possible mechanism of garlic effect. Mice were randomly divided into three groups (n=8): Group 1: high cholesterol diet (HCD, or obese) (received chow + 2% cholesterol + 0.5% cholic acid); Group 2: garlic (received chow + 4% (w/w) garlic extract + 2% cholesterol + 0.5% cholic acid); and Group 3: received chow only. After 30 days, mice were anesthetized and blood was collected. The small intestine of mouse was removed, washed and enterocytes were scraped and used for the experiments. Blood factors were measured enzymatically and expression of mRNA levels for the above-mentioned proteins was determined by RT-PCR. Water extract of garlic markedly declined blood lipids ($p<0.05$), compared with the obese group. Expression of the intestinal npc1l1 was significantly decreased ($p<0.01$) in the garlic group, compared with the chow group, while abcg5 ($p<0.01$), abcg8 ($p<0.01$) and abca1 ($p<0.05$) expressions were significantly increased. In conclusion, this experiment showed a possible mechanism for the beneficial effects of the garlic in declining blood lipids by decreasing the intestinal lipid absorption and increasing excretion of cholesterol back into the intestinal lumen.

fmirzaei90@yahoo.com**Obesity in the resource poor countries: A call for a return to traditional diet**

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Obesity is a state of positive energy balance which has become a global problem of major current concern. Obesity occurs when calorie intake exceeds energy requirement. Until recently, it was thought confined to the economically advanced western nations. Recent reports indicate that it is an emerging disorder in the resource poor countries as well. It is almost unanimously accepted that this upsurge in the developing countries is as a result of the shift from traditional diet to western diet. Though many strategies are currently employed to control the disorder, the need to return to indigenous diet has only received measured attention. This condition became paralleled affluence; increases with rising economic progress. Obesity is important because of the serious health consequences; mainly metabolic syndrome which may progress to type 2 diabetes mellitus, cardiovascular disease, arthritis, skin disease and cancer. One of the ways of reversing metabolic events that culminate initially in overweight (BMI > 25Kg/m²) and obesity (BMI > 30kg/m²) is a diet based essentially on plant-based foods; fruit and vegetables. This is the original indigenous diet in most developing or resource poor countries. The diseases associated with obesity are very expensive to treat; though abundant in the affluent western nations, they have adequate resources to manage the non-communicable diseases (NCDs) whereas the resource poor countries cannot cope because they have lean and fragile economies. It is therefore expedient to admonish these resource poor countries to return to their indigenous largely plant based diet to avoid the burden of the expense to treat NCDs. The return to this traditional diet may also serve as a template for the global community to manage this spreading pandemic.

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The effect of health promotion program on anthropometric indices in overweight and obese students of Shiraz elementary schools

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Background & Objectives: The prevalence of obesity and overweight among children and adolescents is significantly increasing in industrialized and developing countries. It has been estimated that 10% of the world's school-age children are overweight. In the present study, we aimed to evaluate the effect of health promotion program on anthropometric indices in overweight and obese children of Shiraz elementary schools.

Method: In this interventional study, we recruited 145 elementary school children. Two schools from each educational district were selected using random simple sampling method. 20 first- to fifth-grade students who were obese or overweight were selected from each school and were randomly assigned into intervention and control groups. Weight and height of the selected students were measured and their body mass index (BMI) was calculated as well. Afterwards, the students of the intervention groups, accompanied by their parents, participated in a health promotion program consisted of two 30-to 45-minute sessions per week for 2 consecutive weeks. The students' height, weight and BMI were measured again three months after the intervention.

Results: There was a statistically significant difference in the mean change scores between the intervention and control groups in terms of birth order, educational districts, and the number of hours spent on computers per day, access to sport and recreation facilities and the frequency of canned and prepared food consumption.

Conclusion: It can be concluded that health promotion program plays effective role in controlling weight and preventing obesity in elementary school children.

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Frequency and persistence of psychiatric disorders among severely obese patients: Co-morbidity between affective, anxiety and eating disorders

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Background: Non-standardized assessment and small size of the sample hamper conclusions of the investigations on relationship between severe obesity and psychiatric disorders.

Methods: 393 treatment-seeking patients (79.1% women; mean age 43.0 years, mean BMI: 47.8 kg/m²) were consecutively recruited from a bariatric center and trained clinicians ascertained the psychiatric diagnosis of the participants through SCID-I. We determined the frequency, persistence and co-morbidity pattern of psychiatric disorders in the sample.

Results: The rate of current psychiatric disorders was 57.8%, being anxiety disorders the most frequent diagnosis (46.3%). The rate of lifetime disorders was 80.9%, being affective disorders the most frequent diagnosis (64.9%). Psychiatric disorders showed to be a persistent feature (SR 71.4). Anxiety disorders were significantly the most persistent class (SR 84.7). Subsequently, eating disorders (SR 57.2) stood out as a salient class of disorders. Affective disorders and substance use disorders appeared to be unstable across lifetime, being 33.3 and 17.4 respectively. Bipolar disorders were significantly correlated with all classes of disorders ($p < 0.0001$). Worth noting, depressive disorders did not correlated with eating disorders in this sample of severe obese patients and anxiety was not correlated with substance use.

Conclusions: Psychiatric disorders are frequent and persistent conditions among obese patients before bariatric surgery. Anxiety, mood, and eating disorders stand out as the most related with severe obesity. Implications of recognition and treatment of psychiatric disorders on surgery outcome should be demonstrated in follow-up and intervention studies.

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Evaluation of the effect of moderate intensity physical activity on glycemic variability in sedentary individuals with normal weight or obesity without alterations in the oral glucose tolerance

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It is recognized that physical activity has influence on plasma glucose concentrations, mainly due to increased insulin sensitivity and described the effect can persist for up to 48 hours after performing the physical activity; however, so far its effect is not known on glycemic variability. A quasi-experimental study was carry out in 23 sedentary subjects of 30 to 40 years with a normal or obesity body mass index with normal glucose tolerance was. After signing the written informed consent, we perform a continuous ambulatory monitoring of glucose every 5 minutes for 96 hours using a monitor iPro2 (Medtronic, Northridge, CA). The first two days of the study all participants were instructed to follow the normal sedentary life style and for the next two days to perform 30 minutes of moderate intensity physical activity (60 to 70% of maximum heart rate). The glycemic variability was calculated by the mean amplitude of glycemic excursions (MAGE), mean of daily differences (MODD) and area under the curve of glucose (AUCG). Statistical significance: $p < 0.05$. Ethics committee approval: CEI/172/2015. Clinical trials registration: NCT02620670. All participants signed the informed consent. Preliminary results: the mean for age of normal and obesity group was 32.5 ± 3.1 and 34.4 ± 3.4 years respectively. The AUC of glucose for the first day in the normal group was 7468.80 ± 806.54 and 8097.19 ± 722.82 mmol*h/l for obesity group; the AUC in the second day of physical activity was 7047.18 ± 2304.47 and 7215.24 ± 2036.60 mmol*h/l respectively. We observed differences between groups, and comparing before and after activity.

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High prevalence of overweight and obesity in Asians and Arabs living in United Arab Emirates: UAEDIAB study

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Background: Obesity is a major public health problem worldwide and represents a significant risk factor for non-communicable diseases (NCD) including diabetes and heart diseases. The Prevalence of overweight and obesity is increasing in both males and females in countries of the Gulf Cooperation Council (GCC) including the UAE. This paper describes obesity prevalence and related NCD in expatriates living in UAE during 2013/2014.

Methods: The study is part of Large National UAE Diabetes and Lifestyle Study- a cross-sectional survey designed to investigate the prevalence of diabetes and associated risk factors in Expatriates living in UAE for at least four. The study was conducted during 2013 and 2014 using innovative, cost effective, random, representative sample of residents in Dubai, Sharjah and Northern Emirates. In summary a sample was drawn by the UAE National Bureau of Statistics based on actual data of expatriates visiting the preventive medicine clinics and fitness centers for visa renewal the year before the survey. Medical check-up for visa renewal every 2-3 years is a legal requirement in UAE. A systematic random sample of every 10th visitor was recruited for face-to-face interview, measurements of weight, height, waist and hip circumference and blood pressure. A sample of blood was collected and sent to one reference laboratory to test for blood glucose, cholesterol, lipids as well as insulin.

Results: A total of 2722 expatriates were recruited and has full set of data. Expatriates were mainly from South East Asia (70.7%), non-local Arabs (25.9%) and (European/ Africans 3.4%). The mean Body Mass Index (BMI) was 27 ($\pm$ SE =5.383). Only 1% was underweight. The prevalence of overweight and obesity was 41.9% and 22.3% respectively. The prevalence of Obesity (BMI 30+) was more in females (30.9%) than males (20.3%) ($p < 0.001$). The highest prevalence of obesity was amongst 51-60 years in both males (32.7%) and females (53.3%) and in those doing moderate and vigorous physical activity in both males and females. Diabetes (FBS ≥ 7 mmol/L) is more common in obese females (22%) than obese males (16.6%), similarly high cholesterol (≥ 5 mmol/L) is more in females (64.8%) than males (60.2). However hypertension ($\geq 140/90$ mm Hg) is more prevalent in obese males (37.8%) than obese females (26.8%). Also triglycerides (≥ 1.7 mmol/L) are more in males (50.2%) than females (39.6%). Snoring and sleep apnea was more in males (36.9%, 6.6%) than females (32.3%, 3.8%) respectively.

Conclusions: Overweight and Obesity is a major health problem in expatriates living in UAE, it is associated with diabetes, hypertension, high lipids and cholesterol as well as snoring and sleep apnea. A longitudinal follow-up study with individual, household and community-level information is needed to determine the trends in obesity and associated factors and to measure impact of health interventions.

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Interesting shapes of vegetables: Is it a strategy to promote consumption among preschool children?

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Objectives: This study highlighted the low intake of vegetables among preschool children and determined whether changing the shape of vegetables increased their level of consumption. Vegetables are less desirable compared to more attractive unhealthy choices available to children, and discovering a strategy to promote vegetables is important. The aim of the study was to explore the effect of repeated exposure to interesting-shaped vegetables on consumption. The other aim was to determine the level of accessibility of vegetables at home and its influence on children's consumption.

Methods: This quasi-experiment compared the amount of consumption between different days and different vegetable shapes. Forty-two preschool children aged 2-5 years attending four different day care centers in London, Ontario, Canada were provided on the 1st day with natural-shaped vegetables (carrot, cucumber, sweet red pepper) to determine their baseline consumption of uncut vegetables. They were provided later with the same vegetables cut in interesting shapes (flower, star and owl/bat) with and without a preferred dip. On the 8th day of the experiment, the natural-shaped vegetables were provided again to determine how the interesting shapes influenced their consumption of the natural-shaped vegetables.

Results: The preschool children's consumption of natural-shaped vegetables increased by 10.5% on the final day of the experiment. Providing preferred dips with the vegetables did not increase their consumption of vegetables. Repeated exposure to interesting-shaped vegetables seemed to increase the preschool children's liking and consumption of vegetables and improved their eating experiences. Accessibility of vegetables at home did not have any effect.

Implications & Conclusions: With no recommended best approach to increase children's intake of vegetables, caregivers/parents or dietitians must find ways or adopt methods to influence positively children's consumption. There is a need to understand children's perception of vegetables and factors in their social and physical environments that influence their eating behavior.

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Current dietetic referral practices of primary care physicians – A literature review

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Obesity is multi-factorial and an important individual and population health issue as it contributes to a wide variety of chronic diseases, increases health care costs, and decreases productivity. Individualized nutrition counseling has been shown to be effective in aiding patients with weight loss. This literature review provides an insight on current dietetic referral practices of family physicians to prevent and manage obesity in primary health care settings. Databases searched include Scopus, Cochrane (Wiley), EMBASE, Science Direct, and PubMed. The search retrieved 302 articles among which 18 met inclusion criteria. Thirteen out of 18 articles stated that despite the need for nutrition counseling to reduce weight, there was no associated increase in dietetic referrals from family physicians (FP). Factors enabling dietetic referrals are: 1) working in a rural clinic ($P < 0.0005$), 2) being a female physician ($P < 0.05$), 3) patient having a higher body mass index (BMI), 4) patient who graduated college, 5) having more than 100 patients as these physicians were more likely to have a dietitian on site. Factors that disable dietetic referrals are: 1) not feasible due to limited access to a dietitian and cost of service, 2) not considered or not perceived as important by FP, 3) patient refusal, and 4) not required to record weight management interventions in the quality and outcomes framework. Minor disablers are 1) past treatment failed, and 2) contraindicated. Poor eating habits did not increase dietetic referrals as higher BMI did.

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Contribution of prepregnancy weight and gestational weight gain to adverse pregnancy outcomes in Canada

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Prepregnancy body mass index (BMI) and gestational weight gain (GWG) are associated with adverse pregnancy outcomes such as caesarean birth, preterm birth (PTB), small-for-gestational age (SGA) and large-for-gestational age (LGA) birth. Overweight and obese women, in particular, are known to be at increased risk of adverse pregnancy outcomes. Data from the Canadian Maternity Experiences Survey – a nationally representative sample of women who had a singleton live birth in 2005-2006 were used to estimate the contribution of prepregnancy BMI and GWG to selected adverse pregnancy outcomes in Canada. From adjusted odds ratios, we calculated population attributable fractions to estimate the contribution of BMI and GWG to caesarean birth, PTB, SGA and LGA births. Prior to pregnancy, 5.9%, 20.9% and 13.3% of women were underweight, overweight and obese respectively; and during pregnancy 18.1% gained below the recommended weight while almost one-half (48.8%) gained above the recommended weight. Among women, overweight or obese BMI or excess GWG contributed to one in five (20.2%) caesarean births. Among newborns, above recommended GWG contributed to 18.2% of PTB, while underweight BMI and below recommended GWG each contributed to less than 5% of PTB. Below recommended GWG contributed more (9.2%) to SGA births than underweight BMI (5.3%). And, above recommended GWG contributed more (15.9%) to LGA births than being overweight (6.5%) or obese (8.9%). In conclusion, maternal weight contributes significantly to the occurrence of adverse pregnancy outcomes in Canada. Strategies aimed at reducing adverse pregnancy outcomes must include promoting healthy BMI prior to conception and recommended weight gain throughout pregnancy.

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How did an albino patient lose 148 lbs of weight? A case report

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Introduction: Obesity is a highly prevalent and yet the most neglected disease. The number of overweight and obese people reached 2.3 billion and 700 million worldwide respectively, by the year 2015. Obesity is not a social disgrace but an actual disease with a major genetic component to its etiology. Obesity treatment is a lifelong task. Weight reduction medications should be used as an adjunct to diet restriction, exercise and behavioral modifications, when these measures alone have not resulted in adequate weight loss. We hereby present a case of a morbidly obese male patient with oculocutaneous albinism who has lost 148 lbs of weight. Furthermore, the report highlights the genetic link between oculocutaneous albinism and obesity.

Case Presentation: 28-year-old male with oculocutaneous albinism presented with 361.8 lbs of weight (BMI: 62.1) and complaint of difficulty in losing weight. Physical examination revealed hypertension, low intelligence, gynecomastia and infantile testicles. Lab investigations showed unregulated hyperlipidemia and hypotestosteronemia. The patient was prescribed Xenical (Orlistat) 120 mg. Over the period of five years, he lost 83.8 lbs. After this time, Xenical's effectiveness was significantly reduced. Consequently, the patient was started on Victoza (Liraglutide) on which he lost 64 lbs in three years. Thus, a sum of 147.8 lbs of weight was lost without any side effects of the drugs.

Discussion: Obesity needs to be treated within the healthcare system as any other complex disease. We observed Xenical and Victoza to be safe and effective in reducing obesity. Substantial literature has emerged to show that in both Oculocutaneous albinism and Prader-Willi syndrome (the most common genetic cause of obesity) the P-gene is mutated on Chromosome 15. This highlights the genetic susceptibility of our albino patient for developing morbid obesity.

Conclusion: Obesity develops from the interplay of both genetic and environmental factors. This case clearly illustrates that Xenical and Victoza can be safe and efficient for weight loss in a morbidly obese patient. Furthermore, scientific research in the genetic aspects of obesity can help develop new strategies towards its prevention and treatment.

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