Abstract Code	P1011
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Country	Egypt
Abstract Title	Nutritional Experience in Bariatric Surgery Egyptian Patients

Introduction: In Egypt, nutritional difficulties & malnutrition in bariatric surgery patients do not only depend on the selected procedures but also on other factors. In this study we aimed to assess the weight loss, nutritional deficiencies & difficulties in post bariatric surgery patients & to determine the affecting factors.
Methods: This retrospective study (1997-2012) included 3500 patients, 2500 underwent restrictive procedures & 1000 underwent bypass. Preoperative data of the patients included weight, BMI, age, sex, socioeconomic class, nutritional deficiencies & behavior. In each post-operative follow up visit, the EWL was measured & patients were interrogated for the incidence of food intolerance, vomiting & dumping. Malnutrition was also monitored according to the clinical symptoms & if needed, laboratory investigations were performed. Patients were advised to follow up for a period of not less than three years.
Results: The type of performed procedures depended on age, sex, & socioeconomic class. EWL, dumping & vomiting were more associated with socio- economic class & non adherence to nutritional guidelines. Yet vomiting, dumping, & nutritional intolerance are more affected by type of procedure. Reported nutritional deficiencies included thiamin, more with vomiting & increased carbohydrate intake. Iron deficiencies were more affected by age, sex & preoperative deficiency. Protein & Vitamin B12 malnutrition were correlated to the bypass & non adherence to the protein intake. Conclusion Nutritional difficulties & deficiencies can be minimized after bariatric surgery if the determining factors are put into consideration in the pre & postoperative care.

Abstract Code	P1015
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Corresponding Author	Ashraf Abd El-Aziz Abd El-Megeid
Country	Egypt
Abstract Title	EFFECT OF SOME DRUGS AND HERBS ON RATS SUFFERING FROM OBESITY

The present study investigated the effect of some drugs (Orlistat and Chitosan) and herbs (Neopuntia and Jamu Tea) on weight, lipid profile, glucose, liver function and kidney functions of obese rats fed on high fat diet. Healthy male albino rats weighing (200±5 g) were divided into two main groups. The first group (n = 6) fed on a basal diet B.D., while the second main group 30 rat were fed for 6 weeks on high fat diet. The high-fat diet (HFD) was prepared using beef tallow 19%, soybean oil 1% to provide essential fatty acids, sucrose 10%, and casein 20% to induce the obesity in rats. After these periods, rats were divided into 5 subgroups (n =6). Subgroup (1) fed on high fat and high protein diet (20% fat and 20% protein) as a positive control. Subgroup (2) fed on high fat and high protein diet and treated daily with 5 mg orlistat/ rat. Subgroup (3) fed on high fat and high protein diet and treated daily with 5 mg chitosan/ rat. Subgroup (4) fed on high fat and high protein diet and treated daily with 5 mg Neopuntia / rat. Subgroup (5) fed on high fat and high protein diet and treated daily with 5 ml Jamu tea / rat. Body weight was decreased due to all treatments. All parameters of lipid profile (cholesterol, triglycerides, HDL-c, LDL-c and VLDL-c), liver function (AST & ALT enzymes), glucose and kidney functions improved with treated the obese rats with Orlistat , Chitosan , Neopuntia and Jamu Tea, especially when using 5 mg orlistat/ rat followed by 5 mg chitosan / rat, and other herbs (Neopuntia and Jamu Tea), respectively. It was concluded that, treating obese rats which fed on high fat and high protein diet with Orlistat , Chitosan , Neopuntia and Jamu Tea decreased the weight of obese rats and improved the body functions.
Keywords: Rats, Obese, Orlistat, Chitosan, Neopuntia and Jamu Tea, Lipid Profile, Liver Functions, Glucose and Kidney Function.

Abstract Code	P1016
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Corresponding Author	Ashraf Abd El-Aziz Abd El-Megeid
Country	Kuwait
Abstract Title	Effects of calcium and vitamin D3 supplementation or fish oil fortification on health status of rats suffering from osteoporosis

Osteoporosis is a worldwide health issue. Glucocorticoid (GC) exposure is the most common etiology of drug-induced (secondary) osteoporosis. The aim of the present investigation was to study the effects of dietary calcium (Ca) and vitamin D3 supplementation or dietary fish oil fortification on nutritional status, lipid profile, liver enzymes, calcium & phosphorus status, Bone Mineral Density (BMD) and Bone Mineral Concentration (BMC) of rats suffering from osteoporosis. Thirty six female albino rats (Sprague Dawley Strain) were divided into two main groups. The first main group was fed on basal diet (BD) as a negative control group (NC). The second main group received oral prednisone acetate (4.5 ml/kg body weight/day twice a week) to establish osteoporotic models. The group was then divided into five subgroups, subgroup (1) fed on basal diet (control positive group). Subgroup (2) fed on basal diet and treated daily with 1% calcium in drinking water, ad libitum (Ca). Subgroup (3) fed on basal diet supplemented with (250 µg vitamin D3/kg). Subgroup (4) fed on balanced diet fortified with (2% fish oil) and subgroup (5) treated with all tested materials. The results of this study indicate that, treating rats with prednisone acetate (4.5 ml/kg body weight/day twice a week) as source of GC increased liver and femur bone weight/body weight %, serum (cholesterol, triglycerides, low and very low density lipoprotein-cholesterol, aspartate amino transferase, alanine amino transferase, alkaline phosphatase), urine calcium and phosphorus, while this treatment decreased feed intake, serum (high density lipoprotein-cholesterol, calcium, phosphorus), bone mineral density BMD and bone mineral concentration BMC. Treating osteoporotic rats with calcium, vitamin D3, fish oil (alone or together) improved lipid profile, liver enzymes, and calcium & phosphorus status, as compared to non-treated osteoporotic rats (control positive group). Conclusion: The most effective treatment was observed in the group which treated with all tested materials, because this treatment achieved the best results compared to other treated groups, followed by the groups which treated with fish oil, calcium and vitamin D3, respectively.
Keywords: Osteoporosis, rats, calcium, vitamin D3, fish oil, lipid profile, liver enzymes, BMD, BMC, calcium and phosphorus status.

Abstract Code	P1024
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Corresponding Author	Siren Sezer
Country	Turkey
Abstract Title	Associations Between Clinical, Biochemical Indicators and Anthropometric Measurements with Arterial Stiffness in Renal Transplantation Patients

Purpose and Relevance: Arterial stiffness is an important characteristic of the arterial wall and can be assessed noninvasively by the measurement of carotid-femoral pulse wave velocity (PWv). Arterial stiffness plays an important role in cardiovascular diseases and is an independent predictor for cardiovascular mortality. In end stage renal disease cardiovascular risk factors such as age, hypertension and diabetes mellitus have been confirmed to be positively correlated with arterial stiffness. Although renal transplantation improves survival, cardiovascular morbidity and mortality still remain as a significant problem compared with nonrenal populations. The aim of this study is to evaluate the risk factors for arterial stiffness in kidney transplant recipients.
Participants: One hundred and forty five kidney transplant recipients from our renal transplant outpatient clinic were enrolled into the study.
Methods and Analysis: All patients were evaluated for their standard clinical (age, gender, duration of hemodialysis, post-transplant time), biochemical parameters and pre-transplantation lipid parameters. Anthropometric measurements [waist and hip circumferences (WC, HC); and sagittal abdominal diameter (SAD)] were assessed. PWv was determined from pressure tracing over carotid and femoral arteries using the SphygmoCor system.
Results: Carotid-femoral PWv was significantly related with age (p:0.001; r:0.312), systolic (p:0.039; r:0.336) and diastolic blood pressure (p:0.007; r:0.246), uric acid (p:0.0001; r:0.348), hemoglobin (p:0.02; r:0.203), pre-transplant serum total cholesterol (r:0,266, p:0,01) and LDL-C (r: 0,303, p: 0,02) levels. However duration of hemodialysis before transplantation, post-transplant time, serum albumin, pre-transplant serum triglyceride and HDL-C levels were not significantly related with PWv. Patients were divided into two groups according to PWv levels. The frequency of patients with PWv > 7 m/s was higher in patients with hypertension (SBP > 140 mmHg), age > 50 years, male gender, hyperurisemia (uric acid level > 7 mg/dl), hemoglobin level > 12 g/dl (p:0.029, 0.02, 0.005, 0.001, 0.023). Pre-transplant hyperlipidemia predicts higher PWv levels in post-transplant period (OR: 2.5, CI:1.1-5.7). PWv was significantly associated with WC and SAD (p:0.048; r:0.188, p:0.041; r:0.288). No significant association was found between BMI and PWv.
Conclusions: Pretransplant hyperlipidemia predicts arterial stiffness in post-transplant period. For cardiovascular risk reduction after renal transplantation; blood pressure, serum glucose and uric acid levels should be under strict control.
***Category: Nutrition in Renal Transplantation

Abstract Code	P1026
Authors' Names	Siren Sezer1, Emre Tutal1, Mehtap Erkmen Uyar1, Zeynep Bal1, Bahar Gürlek Demirci1, Orhan Guliyev1, Turan Çolak1, Mehmet Haberal2 1Baskent University Medical School, Department of Nephrology, Ankara, Turkey 2Baskent University Medical School, Department of General Surgery, Ankara, Turkey
Corresponding Author	Siren Sezer
Country	Turkey
Abstract Title	PRE-TRANSPLANT ADYNAMIC BONE DISEASE INCREASES POST-TRANSPLANT OSTEOPOROSIS AND ARTERIAL STIFFNESS

Purpose and Relevance: Arterial stiffness is a widely accepted early marker of arterial calcification, systemic atherosclerosis and cardiovascular risk. Interestingly, both arterial calcifications and arterial stiffening have been observed in patients with osteoporosis. Adynamic bone disease is associated with aging and microinflammation. These factors all influence pulse wave velocity and bone density. Previous studies showed strong associations between vascular calcifications and adynamic bone disease. The aim of this study is to evaluate the relationship between pre-transplant bone activity and post-transplant osteoporosis and arterial stiffness in kidney transplant recipients. Participants: Eighty three kidney transplant recipients with minimum one year post transplant period from our renal transplant outpatient clinic were enrolled into the study. Methods and Analysis: All patients' standard clinical (age, gender, duration of hemodialysis, post-transplant time) and biochemical parameters, pre-transplant PTH levels, post- transplant lumbar t-scores and pulse wave velocity (PWv) levels were cross sectionally analyzed. PWv was determined from pressure tracing over carotid and femoral arteries using the SphygmoCor system. Results: Patients were divided into two groups according to pre-transplant PTH levels; patients with adynamic bone disease (PTH100 pg/ml, n:59). Patients with lower PTH levels in pre-transplantation period had also lower PTH levels after renal transplantation. Between these two groups there was no significant difference about age, post-transplant period, pre-transplant dialysis duration, post-transplant serum PTH, calcium and phosphorus levels. In patients with adynamic bone disease post-transplant serum PTH levels were significantly lower than in patients with those pretrans PTH levels>100 (118.5±14.5 vs 178.9±17.6 pg/ml, p:0.029). In linear regression analysis of factors influencing lumbar t-score; pre-transplant and post-transplant PTH levels were associated with post-transplant osteoporosis (p:0.0049, p:0.004). Pre-transplant PTH levels were negatively correlated with lumbar t-scores (r:-0.345, p:0.005). PWv levels were significantly higher in adynamic bone disease group than in normal or hyperdynamic bone disease (7.6±2.5 vs 6.4 ±2.0 respectively, p:0.08). In regression analysis for factors influencing PWv pretransplant PTH levels (p:0.07) and age (p:0.046) were the major determinants of PWv. Conclusions: Pre-transplant serum PTH level is an important determinant of post-transplant osteoporosis and increased arterial stiffness. ***Category: Nutrition in Renal Transplant Patients

Abstract Code	P1027
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Corresponding Author	Siren Sezer
Country	Turkey
Abstract Title	BODY COMPOSITION ANALYSIS OF PERITONEAL DIALYSIS AND HEMODIALYSIS PATIENTS

Background: Bioelectrical impedance assessment (BIA) is a simple, noninvasive method of assessing body composition. Dialysis modality and selection of buffer type in terms of lactate or bicarbonate may be an impact on body composition. The aim of our study was to compare body compositions of patients in waiting list for cadaveric renal transplantation according to the dialysis modality. Methods: This study included 42 PD and 110 HD patients. For BIA, we used a Body Composition Analyzer (Tanita BC-420MA). Measurements were done for weight, height, total body water (TBW), fat mass (FM), muscle mass, bone mass, basal metabolic rate (BMR), visceral fat rate and body mass index (BMI). Last 6 months routine laboratory evaluations including CRP, albumin, and lipid profile were recorded on laboratory data. Results: Groups were similar in means of demographic characteristics, albumin and CRP levels. The BMI and degree of obesity (BMI>30 kg/m2) were significantly higher in PD patients than HD group [25.8±4.7 kg/m2 vs. 23.4±4.9 kg/m2 (p:.01); 17.3±21.5% vs. 6.7±22.4% (p:.006), respectively]. Muscle mass and bone mass were significantly higher in the PD group than HD group [48.2±8.4 kg vs. 44.1±8.3 kg (p:.005); 2.6±0.4 kg vs. 2.3±0.4 kg (p:.005), respectively]. Among PD patients, visceral fat rate, BMI and percentage of obesity were higher in patients using bicarbonate/lactate buffered PD solution (Physioneal; Baxter) compared to patients using lactate buffered conventional PD solution (Dianeal; Baxter) [8.03±5.2 vs. 4.68±2.5 (p:.02); 27.0±5 kg/m2 vs. 23.7±3.5 kg/m2(p:.02) and 23±22.7% vs. 8.06±16.2% (p:.02), respectively]. Conclusion: Despite of increased obesity rates and BMI in PD patients, these patients also tend to have increased muscle and bone masses which are possibly signs of better nutritional status. Because of better nutritional status of PD patients, we suggest PD is a more physiological treatment than HD for chronic kidney disease patients. The better nutritional status and therefore better survey of patients, increases the chance and improves the outcome of renal transplantation.
***Category: Nutrition in Dialysis Patients

Abstract Code	P1028
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Corresponding Author	Siren Sezer
Country	Turkey
Abstract Title	New- onset Diabetes and Glucose Regulation are Significant Determinants of Left Ventricular Hypertrophy in Renal Transplantation Patients

Purpose and Relevance: New-onset diabetes after solid organ transplantation is an important clinical challenge associated to increased risk of cardiovascular (CV) events. In ESRD patients, the impact of arterial stiffness on all-cause and CV mortality has been clearly documented. Arterial stiffness has a pivotal role in the genesis of high blood pressure (SBP), increased left ventricular hypertrophy (LVH), and consequently CV mortality. Both LVH and arterial stiffness are independent determinants of CVD in patients with ESRD. The aim of this study is to evaluate the relationship between post-transplant new-onset diabetes and arterial stiffness and LVMI in kidney transplant recipients. Participants: One hundred and fifty nine kidney transplant recipients (57 patients with new onset diabetes) with minimum one year post transplant period from our renal transplant outpatient clinic were enrolled into the study. Methods and Analysis: All patients' standard clinical (age, gender, duration of hemodialysis, post-transplant time) and biochemical parameters including HbA1c, pulse wave velocity (PWv) levels and echocardiographic measurements were analyzed. PWv was determined from pressure tracing over carotid and femoral arteries using the SphygmoCor system. All patients underwent echocardiographic examinations and left ventricular mass was calculated according to the Devereux formula and indexed for body surface area to give LVMI. Results: The percentage of patients with high LVMI (>130g/m2) was significantly higher in patients with post-transplant new-onset diabetes (63.2% vs 21.6%, p:0.0001). Patients with new onset diabetes were significantly older than patients without diabetes. Serum creatinine, calcium, phosphorus, PTH, hemoglobin, lipid levels and systolic and diastolic blood pressure were similar in both groups. The body mass indices of patients with new onset diabetes was significantly higher (25.0±5.5 vs 27.5±4.1, p:0.002). In patients with new onset diabetes, serum HbA1c levels are significantly correlated with LVMI (p: 0.05). Patients were divided into two groups according to LVMI: LVMI>130g/m2 (n:57) and LVMI ≤130g/m2 (n:102). In patients with high LVMI; serum HbA1c levels (7.36±1.5 vs 6.68±1.3, p:0.001), systolic and diastolic blood pressures (p:0.0001) and age (p:0.007) were significantly higher than in patients with low LVMI. Linear regression analysis revealed that HbA1c was the major determinant of LVMI (P:0.026, □:0.361)Conclusions: Post-transplant increased LVMI is associated with new-onset diabetes after renal transplantation. HbA1c is the major determinant of LVMI, so strict control of serum glucose levels is essential for preventing cardiovascular disease. Presentation
***Category: Nutrition in Renal Transplantation

Abstract Code	P1029
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Corresponding Author	Eman Mokbel Alissa
Country	Saudi Arabia
Abstract Title	CHROMIUM STATUS AND GLUCOSE TOLERANCE IN SAUDI MALES WITH AND WITHOUT CORONARY ARTERY DISEASE

Introduction: Chromium deficiency is associated with impaired glucose tolerance (IGT) and dyslipidemia. Hence, the objective of the current study was to investigate chromium status among Saudi men with and without established cardiovascular disease (CVD) and its relationship to glucose tolerance, lipid profile and other established CVD risk factors. Method: We measured serum and urine chromium concentrations, fasted lipid profile, plasma glucose, and serum lipid peroxide in 130 Saudi men with an established history of myocardial infarction and 130 age-matched controls without established CVD. Results: Patients with established CVD had higher serum triglycerides ($p< 0.0001$) and lower serum and urinary chromium concentrations ($p< 0.0001$) than controls. Serum chromium was inversely correlated with plasma glucose among cases and controls ($r=-0.189$, $p< 0.05$ and $r=-0.354$, $p< 0.00001$, respectively). Plasma glucose (OR 1.127, CI 1.0-1.269, $p< 0.05$), serum chromium (OR 0.99, CI 0.985-0.995, $p< 0.0001$), and urinary chromium (OR 0.988, CI 0.981-0.995, $p< 0.001$) were independently associated with the presence of established coronary disease applying this model.
Conclusion: While chromium metabolism appears to be altered in individuals with CVD, it is unclear whether chromium supplementation would be effective in CVD prevention among patients with IGT. This would need to be tested in long-term outcome trials. \"poster presentation\"

Abstract Code	P1039
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Corresponding Author	Vedavalli Sachithananthan
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Abstract Title	IMPACT OF NUTRITION EDUCATION ON THE NUTRITIONAL STATUS OF ADOLESCENTS AND EARLY ADULTS IN BENGHAZI, LIBYA

Abstract Purpose – Nutrition education is an important measure to improve dietary habits and food choices, since poor dietary habits are the main reason for poor nutritional status of adolescents. In this context, the purpose of this paper is to assess the impact of nutrition education on the nutritional and dietary profile of adolescents and early adults.
Design/methodology/approach – A pre-test post-test experimental design was employed and the study was a cross-sectional study. From three stratified areas of Benghazi city, two schools were selected by random sampling. From the total of six schools, all the children aged 14-21 years were selected, amounting to 111 girls and 89 boys. Nutrition education was imparted after initial nutritional (BMI, physical activity) and dietary assessment (food frequency, 24 hour recall) and repeated at weekly intervals. After three months, nutritional and dietary assessments were again repeated.
Findings – No significant changes in BMI and physical activity were observed. A significant reduction in the frequency of intakes of chocolate ($p < 0.01$), chips ($p < 0.01$), fat, bread and fast food ($p = 0.05$) in the female subjects and bread ($p < 0.01$), fat, cereals and chocolate ($p = 0.05$) in the male subjects were observed. Significant increases were observed with respect to percentage of RDA met by intake of nutrients such as energy, carbohydrate, riboflavin and niacin and a significant decrease in the intake of zinc in male subjects.
Originality/value – The paper shows that nutrition education is the need of the hour, which would help adolescents and early adults to imbibe healthy eating habits.

Keywords - Libya, Adolescents, Young adults, Nutrition, Diet, Nutrition education, Impact, Nutritional status, Dietary profile.

Abstract Code	P1046
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Corresponding Author	Asmah Rahmat
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Abstract Title	ANTIOXIDANT ACTIVITY AND ANTIPROLIFERATIVE EFFECT OF DIFFERENT PARTS OF CARICA PAPAYA AGAINST SEVERAL CANCER CELL LINES hy

This study aims to evaluate the antioxidant activity, antioxidant vitamin, total phenolic and total flavonoid content and antiproliferative activity of different parts of Carica papaya (CP) including ripe and unripe fruit, young leaves and seeds. The antioxidant activity was determined by two different assay; 1) β-Carotene bleaching assay and 2) DPPH free radical scavenging assay. The content of total phenolic was determined spectrometrically according to the Folin-Ciocalteu's method and expressed as Gallic acid equivalents (GAE). For vitamin analysis and carotenoid analysis, the amount of ascorbic acid, β-carotene, α-tocopherol and lycopene were quantified by reverse-phase high performance liquid chromatography (HPLC). The growth of viable cells was evaluated by using Microculture-tetrazolium (MTT) assay. Results showed that the unripe papaya fruit had the highest antioxidant activity (90.67%) followed by young leaves (90.01%), ripe papaya fruit (88.12%) and the least was seed (58.97%). The radical scavenging activity was in the order of leaves>unripe>ripe>seeds. The phenolic content was in the order of young leaves>unripe fruit>ripe fruit>seed. The different pattern of antioxidant activities can be observed in total flavonoids where leaves (333 mg Rutin/ 100g) still contribute to the highest flavonoids content followed by ripe fruit (92.95 mg Rutin/ 100g), seed (59.54 mg Rutin/ 100g) and the least was unripe fruit (53.44 mg Rutin/100g). A positive relationship existed between antioxidant activity and total phenolic content (r=0.86) assayed by DPPH scavenging activity. A strong positive correlation between radical scavenging activity and phenolic content of the samples was also observed (r = 0.873). Five human cancer cell lines were used to screen the antiproliferative effect which include the liver cancer cell lines (HepG2), ovarian cancer cell lines (CaOV3), cervical cancer cell lines (HeLa), hormone dependent breast cancer cell lines (MCF-7) and non-hormone dependent breast cancer cell lines (MDA-MB-231). Results obtained from MTT assay showed that MCF-7 (IC50 = 50.00 µg/ml) and MDA-MB-231 (IC50 = 75.75 µg/ml) cell cultures were significantly inhibited by the ripe papaya extract. Apoptosis occurred with the increased concentration of the extract. In conclusion, the findings of this study showed that the ripe papaya extract have great potentials in antioxidant and antiproliferative activities which could be attributed to their phytochemicals contents.

Abstract Code	P1052
Authors' Names	Results from the EPIC cohort study Vergnaud AC1, Romaguera D1, Peeters P2, Van Gils C2, Chan DSM1, Romieu I3 et al. 1 Department of Epidemiology & Biostatistics, School of Public Health, Imperial College London, London, United Kingdom. 2 Julius Center for Health Sciences and Primary Care, University Medical Center Utrecht, Utrecht, the Netherlands. 3 International Agency for Research on Cancer (IARC-WHO), Lyon, France.
Corresponding Author	Anne-Claire Vergnaud
Country	UK
Abstract Title	Adherence to the World Cancer Research Fund / American Institute for Cancer Research guidelines and risk of death in Europe

Background: In 2007, the World Cancer Research Fund (WCRF) and the American Institute for Cancer Research (AICR) issued 8 recommendations (+2 special recommendations) for cancer prevention, based on the most comprehensive collection of available evidence. We proposed to investigate if concordance with the WCRF/AICR recommendations is related to the risk of death from all leading causes in the EPIC cohort study. Methods: At recruitment (1992-1998), dietary, anthropometric, and lifestyle information was collected in 378,864 EPIC participants from 9 European countries. A WCRF/AICR score, incorporating 6 of the WCRF/AICR recommendations for men (regarding body fatness, physical activity, foods and drinks that promote weight gain, plant foods, animal foods, and alcoholic drinks - score range: 0-6) and 7 for women (plus breastfeeding - score range: 0-7) was constructed. Higher scores indicated greater concordance with the WCRF/AICR recommendations. The association between the WCRF/AICR score and risks of total and cause-specific death was estimated using Cox regression analysis. Results: After a median follow-up time of 12.8 years, 23,828 deaths were identified. Participants within the highest category of the WCRF/AICR score had a 34% lower hazard of death (95% CI=0.59,0.75) compared to those within the lowest category. The risks of death from cancer, circulatory diseases and respiratory diseases were all inversely associated with the score. The recommendations on adiposity and plant foods were the most strongly associated with the risk of death. Conclusions: Results of this study suggest that following the WCRF/AICR recommendations on diet, physical activity and body fatness for cancer prevention is likely to significantly increase longevity.

Abstract Code	P1058
Authors' Names	Benhamed, M. Mofida; Marwan, G. Aref and Dekna, O. Mohamed
Corresponding Author	Mofida Mohamed Benhamed
Country	Libya
Abstract Title	Vitamin D status and its indices among infants and their nursing mothers in Tripoli -Libya

Vitamin D was discovered in an effort to find the dietary substance that was lacking in a disease named rickets, (childhood form of osteomalacia).
Although vitamin D is commonly called a vitamin, it is not actually an essential dietary vitamin in the strict since, as it can be synthesized in adequate amounts by humans through exposure to UV light.
Objectives: - To assess the vitamin D status among healthy Libyan nursing mothers and their healthy breastfed infants in the city of Tripoli.
- To compare the vitamin D status between exclusively breast fed, mixed-fed, (breast and formula-fed) and only formula fed infants.
- To assess the subclinical risk factors of vitamin D deficiency.
- To assess vitamin D levels in the Libyan nursing mother's milk.
Materials and Methods: This study was conducted in Tripoli Libya a sample of 110 six months infants (50% female) and their 110 healthy nursing mothers; semi randomly selected from some Tripoli primary medical centers during 1st of December 2010 -10 of January 2011.
Out of 110 infants 50 were breastfed, 30 formula-fed and 30 were fed both (formula and breast milk). Data were collected through pre-designed questionnaire that included information about type of feeding, supplementation, health conditions anthropometric measurements, and socio-demographic data. Blood samples were collected from all infants and their mothers (lactating only) for; 25(OH)D, parathyroid hormone, alkaline phosphatase, calcium and phosphorous. Milk samples were collected from lactating mothers for 25(OH)D3 analysis.
All blood tests were done in Saint James Hospital Tripoli Libya; Using Cobas E 411Kit from Roche for 25(OH)D and , parathyroid hormone and Using I lab 600 Kit from Instrumentation Laboratory for alkaline phosphatase, calcium and phosphorous serum analysis. Milk analysis was done in faculty of Agriculture and Nutrition, UAEU. Alain UAE. Using UHPLC.The data were entered using Epi Info 3.5.3 and analyzed by using SPSS software.
Results: The results showed 60.9% of the infants were deficient in vitamin D (≤ 30nmol/L) with mean ±SD (22.7±8.8nmol/L) and accompanied with elevated parathyroid hormone (162.5±119.7pg/ml; p value 0 .001) and alkaline phosphatase (394.7±2 U/L; p value 0.001) while calcium and phosphorus remained at normal levels and considered negative indices. The risk increased among exclusively breastfed infants (80%) with mean 25(OH)D (21.3nmol/L) and 14% had severe deficiency of 25(OH)D were (˂ 12nmol/L) compared to formula fed infants (33.3%) were vitamin D deficient; while the infants who were fed both formula and breast milk (56.7%) of them had vitamin D deficiency.
Also there was a high prevalence of hypovitaminosis D in nursing mothers (69%) with mean serum 25(OH)D (19.8±5.5nmol/L). This also accompanied with elevated PTH and ALP while calcium and phosphorus gave negative correlations P(0.851 and 0.691). The level of 25(OH)D in 78% of mothers' milk was less than 140 IU/L IU/L.
Conclusion: Hypovitaminosis D is highly prevalent among infants, Tripoli area sample). The risk increases among exclusively breastfed infants. There is good correlation between infants and mothers serum 25(OH)D levels and their alkaline phosphatase and parathyroid hormone levels, while calcium and phosphorus levels are not related in moderate and early stages of deficiency. Lactating mothers have low serum vitamin D levels which may lead them to develop osteoporosis. Mothers milk is a poor source of vitamin D, (78% <140IU/L) .So it will not supply their nursing infants with their requirements of vitamin D.

Recommendations: Vitamin D supplementation should be considered to all breast-fed, formula-breastfed infants and nursing mothers. It is necessary to evaluate vitamin D status among Libyan infants and nursing mothers in other parts of Libya plus long term strategies for prevention of hypovitaminosis D. Measures should include; public education, fortification of foods with vitamin D and modification of food habits.

Keywords: Breast-feeding- Vitamin D- Mothers milk-Tripoli

Abstract Code	P1060
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Country	Saudi Arabia
Abstract Title	Interest of the hydrolyzed rice formulae in the coverage of the cow's milk allergy

Introduction: These last years a new preparation with hydrolyzed rice proteins was marketed and could establish a useful alternative in the cases of cow\'s milk allergy. The objective of our work is to verify the consequences of a diet with hydrolyzed rice proteins on the structure of the intestinal epithelium, particularly at the level of the villi architecture as well as on the composition in intra-epithelial lymphocytes.
Materials and methods: For the histological study, we used 62 female mice Balb /c, 4 weeks old, weighting on average 19.50 ± 0.25 g and distributed as follow: Group 1 is made of 20 female mice immunized with native ß-Lg. This group is then divided into 2 groups, 10 female mice Balb /c receiving hydrolyzed rice milk during 28 days and 10 female mice Balb /c receiving a standard food during 28 days. Group 2 is made of 20 female mice Balb /c immunized with l'α-Lac protein. This group is then divided into 2 groups, 10 female mice Balb /c receiving hydrolyzed rice milk during 28 days and 10 mice receiving a standard food during 28 days. Group 3 is made of 22 female mice Balb /c receiving no treatment. This group constitutes the witness group.
Results: The obtained results show that: • The weight growth of all the experimental groups\' increases gradually with time, but the consumption of the hydrolyzed rice proteins causes a decrease of the degree of evolution of the physical weight to mice fed with this infantile formula compared with witness mice. • The intestinal villi height increases at the level of the structure of the intestinal mucous membrane of mice having been on a diet with hydrolyzed rice proteins compared to the positive witness group, and the lymphocytic infiltration is similar to the witness group.
Conclusion: The hydrolyzed rice protein preparations seem to be an interesting alternative in case of cow\'s milk allergy but as all the vegetable proteins, they are poor in essential amino acids and must be supplemented.

Abstract Code	P1061
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Corresponding Author	Farzad Berahmandpour
Country	Iran
Abstract Title	The serious health problem of obesity in Iran

Obesity is a chronic problem which is observed in many populations. Melanson and colleagues (2003) believe that obesity should be classified as a chronic disease, because many health professionals have serious challenges with growing obesity in societies. The aim of this study is to investigate the serious problems and effects of obesity on health in Iran and it is to find some solutions and make recommendations to the Ministry of Health and Medical Education of Iran to manage and reduces obesity prevention in Iran. Much more research has shown that obesity is an epidemic problem in some areas of Iran. However, obesity is seen in both of rural and urban areas of Iran, but Esmaeliy and colleagues (2009) claims that obesity is seen more in urban areas of Iran. Unhealthy lifestyles habits are basic reasons of obesity in Iran (Kelishadi et al. 2008). Moreover Amini (2007) argues that the most common reasons of obesity in Iran are increased fat intake, unhealthy eating habits and social eating. Rezaeian and Salem (2007) argue changing dietary habits in recent decades has a negative effect and caused obesity to increase in Iran. Another study shows that the average consumption of fast foods and carbonated drinks is high in Iran. Iranians consume 40% more carbohydrate and 30% more fat than needed and these factors can create obesity as an epidemic in Iran (Malekzadeh, et al 2005). Dastgiri and colleagues (2006) claim that socio-economic situations like income, education and occupational status can also affect the prevalence of obesity. Challenges such as lack of motivation, physiological risks and negative media effects can always be problems for the prevention and treatment of obesity in Iran. In fact, one of the most difficult tasks in obesity treatment is education people about dietary intake (St.Jeor et al 2003). Powers argues that Yo-Yo Dieting and binge eating for treatment have negative health effects. Moreover, some advertising and Media programs can make possible problems in preventing obesity. Therefore, the obesity prevention is not easy and it is needed some practical approaches for control of obesity and in this case, some recommendations for control of obesity in Iran can include the below points: 1. Preparing a protocol for the obesity prevention by the Ministry of Health and Medical Education of Iran. 2. Design a healthy lifestyle protocol for people until they encourage having physical activity and healthy eating habits by the Ministry of Health and Medical Education of Iran 3. Increasing public knowledge about obesity prevention in society by the Ministry of Health and Medical Education of Iran and the national mass media.

Abstract Code	P1070
Authors' Names	Kimberly Y.Z. Forrest, Ph.D. & Wendy L. Stuhldreher, Ph.D. Slippery Rock University of Pennsylvania, USA
Corresponding Author	Kimberly Y.Z. Forrest & Wendy L. Stuhldreher
Country	USA
Abstract Title	Protein, Calcium and Vitamin D Intake Patterns among Older Americans

Objectives: Osteoporosis and sarcopenia are common health problems among older adults and lead to physical disability. Protein, calcium and vitamin D are key nutrients needed to avert these conditions. This study evaluated if the intakes of these nutrients were adequate among an older American population.
Methods: We analyzed the data from the 2009-2010 National Health and Nutrition Examination Survey (NHANES). The NHANES collects data from interviews and physical and laboratory examinations. Nutrient intakes, demographics and other health-related variables were analyzed using the statistical software SUDAAN, which can account for the complex multistage sample design.
Results: The current analysis included 1,460 individuals (≥65 years old), representing 13.9% of the NHANES sample. Sex distribution was almost equal. Nearly 40% of the participants were from a minority ethnic background. The total energy intake (means±SD) was 1920±716 and 1524±624 kilocalories, males and females respectively. Protein was 16% of the total energy intake in both genders. The ratio of protein to ideal body weight (g/kg) was 1.12±0.03 and 1.16±0.02, males and females respectively. This ratio decreased as age increased. The intake of calcium (mg) was 925±34 and 824±12, and vitamin D (IU), 604±36 and 481±18, males and females respectively. As age increased, calcium and vitamin D intakes decreased significantly in both genders.
Conclusion: Despite adequate protein intake, calcium and vitamin D intakes were significantly lower than the recommended amount for older adults. These findings underscore the needs for interventions to improve calcium and vitamin D consumption as a cost-effective primary prevention for osteoporosis and sarcopenia.

Abstract Code	P1079
Authors' Names	Hend Alharbi, Manchester Metropolitan University, UK
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Country	UK
Abstract Title	The Association Between Vitamin D and Type 2 Diabetes Mellitus - Meta-analysis

Abstract Background: Vitamin D has been reported to be a vital nutrient for a wide range of body functions. Similarly, many reports are available suggesting the correlation between levels of vitamin D in the body and its relationship to type 2 diabetes. Aim: The objective of this study was to examine the association between vitamin D intake and the risk of developing type 2 diabetes mellitus.
Method: This study on the association between vitamin D and type 2 diabetes mellitus is a systematic review of the published literature on the methods and reports of meta-analyses in observational studies using electronic databases. In addition, it is presented as a summary of odds ratios (ORs). The publication bias involves studies that use forest plots and in which ORs are reported. Additionally, funnel plots are developed to analyze heterogeneity in the selected literature.
Result: The results from forest-plot analyses showed that 64% of people with a deficiency in vitamin D were more likely to develop type 2 diabetes (OR 0.64) and the confidence interval (CI) was in the range of 0.42 to 0.89. The calculated P value for this was highly significant ($P < 0.0001$). As the results from forest-plot analyses implied a 64% chance of developing type 2 diabetes in people with a deficiency in vitamin D, it was clear that most of the studies selected have shown favourable effects in experimental groups, as compared to control groups.
Conclusion: There is evidence from observational studies that vitamin D supplementation in adults might be protective against the development of type 2 diabetes. Further research should focus on the effect of vitamin D supplementation on both insulin secretion and sensitivity, and on optimum serum levels of vitamin D, above which type 2 diabetes is likely to develop.
Keywords: vitamin D, calcium, type 2 diabetes, 25(OH) D, deficiency, nutrition and health.

Abstract Code	P1083
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Corresponding Author	Doaa Zakaria Zaky
Country	Egypt
Abstract Title	Nutritional knowledge and Attitude among Egyptian Hepatology Residents

Introduction Chronic liver diseases represent a major health problem in Egypt. The value of nutritional management in dealing with chronic liver diseases is unquestionable. However the current malpractice of nutritional management of these disorders results in increased morbidity and mortality, augmenting the burden on the whole community. Aim of the Work This work aims to assess both knowledge and attitude of the resident physicians as regard the nutritional management in the settings of chronic liver diseases. Material & Methods One hundred hepatology residents from different centers were included in this survey. They were asked to answer a written questionnaire. The questionnaire was designed to measure the attitude and knowledge of residents relaying on ESPEN nutritional guidelines for management of liver diseases. As regards the attitude; questions were designed to assess the awareness of the importance of clinical nutrition in the field of hepatology. As regard the knowledge; questions covered different aspects including; the proper nutritional assessment, nutritional management of different complications of liver diseases, and nutritional considerations in liver transplantation. Results The mean age of the participating residents was 28.8±3years, 60% of them were working in university hospitals. They examine around 40 hepatic patients per week, with an experience of about 3 years in practicing hepatology. Almost all of participating residences approved they didn't receive any effectual undergraduate nutritional education, Only nine of them were aware of the updated international nutritional guidelines for treatment of liver disease. Although the positive attitude towards the importance of clinical nutrition was as high as 82%, it did not correlate with their nutritional knowledge (43± 13%) which showed major deficiency. Furthermore, neither the residence confidence and skills, nor the number of patients seen per week showed significant correlation with the knowledge of clinical nutrition aspects of liver diseases. On contrary, a significant positive correlation was recorded between working in university hospitals or attending nutritional education sessions on one side, and degree of the nutritional knowledge on the other side. Conclusion: The majority of physicians actually understand the importance of the nutritional management of liver diseases. But, unfortunately, they lack many of the fundamental information necessary for proper management of these disorders. This raises the necessity for establishment of nutritional education programs for both under and post graduate candidates.

Abstract Code	P1085
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Country	Turkey
Abstract Title	SHORT-TERM EFFECTS OF THE TRANSTHEORETICAL MODEL OF WEIGHT CONTROL ON UNIVERSITY STUDENTS IN EASTERN TURKEY

Background: Obesity has reached epidemic proportions globally. Obese people are at increased risk for morbidity and mortality associated with multiple acute and chronic medical conditions. Overweight and obese young people are also at risk for these factors. Aim: The purpose of this study was to determine to effectiveness of the Transtheoretical Model of obesity control on üniversity students. Setting: This study was conducted in eastern Turkey. Participants: The sample size was calculated with post hoc power analysis. Randomization was achieved by a random-numbers table and participants were randomly assigned to the intervention (n=52) and control groups (n=51). Participants were selected from overweight and obese patients based on a BMI greater than 25 and with at least one risk factor from the following: family history relating to high blood pressure; high cholesterol and triglycerides; high blood glucose; and heart disease at an early age. The intervention and control groups were similar in age, weight, gender and stage of change. Data Collection: This experimental design was conducted between March 1st and June 1, 2010. Data were collected with a socio-demographic characteristics form, the form of Health Promotion Lifestyle Profile, the Self-Efficacy Scale, and the Exercise Self-efficacy Scale. Data from the study were evaluated using the Chi-square and independent t-test. Results: Results for the intervention group showed that the Health Promotion Lifestyle Profile, Self-Efficacy Scale, Exercise Self-efficacy Scale scores of the participants had statistically increased. Conclusion: The study found an association between the Stages of Change model and obesity control. We suggest that more studies of obesity control in young people be conducted and over a longer period of time.
Keywords: Weight Loss, Diet, Exercise, Stage of Change, Transtheoretical Model [1] Assoc.Prof, Rn, M.SC., PHD, Tunceli Üniversity, Tunceli Health High School, Public Health Nursing, Turkey. 2 Assist. Prof, Rn, M.SC., PHD, Kafkas University, Kars Health High School, Internal Medicine Nursing, Turkey. 3 Assist. Prof., M.SC., PHD, Kafkas University, Department of Physical Education, Turkey. 4 Assist. Prof., M.SC., PHD, Eastern Mediterranean Univeristy, Faculty of Health Science, Cyrprus. 5 Assist. Prof, Rn, M.SC., PHD, Tunceli Üniversity, Tunceli Health High School, Internal Medicine Nursing, Turkey.

Abstract Code	P1086
Authors' Names	Gülnaz Karatay[1], Ezgi Karadağ[2]
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Country	Turkey
Abstract Title	THE ASSESMENT OF NUTRITIONAL STATUS OF ELDERLY LIVING IN EASTERN TURKEY

Objective: This study planned with the aim of assesment nutritional status of individuals over the age of 65 admitted a state hospital clinic of internal medicine in Eastern Turkey. Method: The data of this cross-sectional study collected by using face to face method with 100 elderly people in November 2011 - February 2012. The data of study were collected with Socio-demographic Characteristics Form and the Mini Nutritional Assessment Test. The Mini Nutritional Assessment test consists of 30 questions in total, 15 of which were verbal questions and 3 were anthropometric measurements. And all the nutritional scoring carries out 30 points. In total, between 23.5-30 points indicates the normal nutritional status,17-23 points the risk of malnutrition, 30. When food consumption habits of the elderly were examined, it was seen that 47.0% percent and less took two meals a day, % 64.0 percent at least a dish of dairy products (milk, cheese, yoghurt), 68% consumed two dishes or more of legumes or eggs per week, 66% a dish or less of meat, fish or poultry a day. 26.0% of elderly consumed two or less servings of vegetables and fruits a day. While 39% of them consumed 3-5 cups of fluid, 27% were found to be consuming less than 3 cups. Mini Nutritional Assessment Scale total score was 23.62 ± 5.77, 26.0% have a higher risk of malnutrition as I with a score range of 17-23.5 points, 18.0% have malnutrition with under 17 points. Result: In this study, the important part of elderly have nutritional problems aspect of number of meals eaten per day, balanced diet and nutritional content. [1] Assoc.Prof, Rn, PHD, Tunceli Üniversity, Tunceli Health High School, Public Health Nursing, Turkey [2] Assist. Prof, Rn, PHD, Tunceli Üniversity, Tunceli Health High School, Internal Medicine Nursing, Turkey

Abstract Code	P1090
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Country	Egypt
Abstract Title	Role of vitamin D supplement in improvement of virological response to antiviral therapy and it\'s relation with severity of liver fibrosis in chronic hepatitis C patients

HCV has been encountered worldwide with WHO estimates of more than 170 million infected patients worldwide. Vitamin D is a potent immune modulator that is related to severity of hepatic fibrosis and responsiveness to antiviral therapy. Aim: To study the effect of vitamin D supplement to the conventional peg. Interferon / ribavirin regimen on the virological response in Egyptian patients infected with HCV and its relation with degree of hepatic fibrosis. Patients and Methods: This study was conducted on 101 patients with chronic hepatitis C who have not been treated with any form of interferon, and fulfill the criteria of receiving interferon/ribavirin therapy. All studied patients were subjected to complete history taking, clinical examination, laboratory investigations including serum vitamin D, abdominal ultrasonography and Liver biopsy. Results: Patients were classified into two groups: group A: 49 patients received vitamin D supplement for 3 months beside the usual regimen of interferon and ribavirin, group B: 52 patients received the usual regimen only. In group A the response of treatment was significantly improved in the 3rd and 6th months of treatment, as from 49 patients ; 45 (91.8 %) were negative PCR at 3rd month and 44 (89.8%) were negative at 6th month) compared to group B: 52 patients ; 40 (76.9%) were negative at 3rd month while 38 (73.1%) were negative at 6th month , with statistically significance difference between both groups. Also low levels of serum vitamin D were associated with Advanced degree of fibrosis. Conclusion: Vitamin D supplementation with the antiviral treatment improves the probability of achieving a good viral response.

Abstract Code	P1091
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Corresponding Author	Wesam A. Ibrahim
Country	Egypt
Abstract Title	Role of Green Tea in Protection of Influenza

Green tea extract exerted an inhibitory effect on the acidification of intracellular compartments such as endosomes and lysosomes, resulting in inhibition of growth of influenza virus in cell culture. Aim: Evaluation of the role of green tea in protection from the symptoms of influenza. Patients and Methods: included eighty (80) healthy students. They were divided into two groups, group A : (40) healthy students and group B (40) healthy students. Both groups were matching regarding age and sex. Group A were supplied with 150 ml (2 gm. tea packet in 150 ml. of boiled water) of green tea 3 times daily during the attendance hours in school; this was continued through the whole 3 months. All students were subjected to: Full history taking,Clinical examination,Follow up for symptoms of influenza throughout the whole 3 months from the first of January to the end of March. The symptoms assessed were: runny nose, bone aches, headache, cough, sore throat, fever, nausea/vomiting, and diarrhea. This was accomplished through a questionnaire filled monthly.Students suspected to have swine or avian influenza will be subjected to routine investigations including: CBC, Throat swab, Liver function tests, Kidney function tests and chest x-ray. If there were referred cases, they would be followed in the fever hospital for detection of avian flu or swine flu. Results: the Green Tea group although the difference was not significant statistically. Meanwhile the Odds Ratio was 0.5 which indicates that students who drink green tea were less commonly affected by influenza symptoms and the number of influenza symptoms are fewer in the green tea group. The analysis of the symptoms reveals significant decrease in the incidence of having rhinnorhea, sore throat, coughing and fever. It also reveals that duration of some symptoms is lower among green tea group. Conclusion: Drinking 2-3 cups of green tea daily doesn't affect the incidence rate of influenza infection significantly; inspite of this, the number of influenza symptoms is significantly lower and there is a significant decrease in the incidence rate of rhinnorhea, sore throat, cough and fever.

Abstract Code	P1092
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Country	Egypt
Abstract Title	Role of Liquorice in Protection of Influenza and Similar Diseases

Licorice Root Extract is being studied for its anti-viral effects. In laboratory studies on cells, hen eggs and animals it has a protective effect against Influenza A (Avian Influenza or Bird Flu) and SARS. It is active against a variety of other DNA and RNA viri. Aim: Evaluation of the role of liquorice in protection from the symptoms of influenza and similar diseases.Patients and Methods: The present study included eighty (80) healthy students. All of them were volunteers from a secondary school in Delengat center (beheira government) after the consent of their parents .They were divided into two groups, group A (40) healthy students and group B (40) healthy students. Group A were supplied with 150 ml licorice drenched (10-12 gm. licorice root in 150 ml. of boiled or cold water) 2 times daily during the attendance hours in home; four students were drinking double the dose or 300 ml. per day, following them each week in terms of flu symptoms and measurement of blood pressure and temperature and record all in the questionnaire for each student; this was continued through the whole 3 months. All students were subjected to: Full history taking, Clinical examination, Follow up for symptoms of influenza throughout the whole 3 months from the first of January to the end of March. The symptoms assessed were: runny nose, bone aches, headache, cough, sore throat, fever, nausea/vomiting, and diarrhea. This was accomplished through a questionnaire filled monthly.Students suspected to have swine or avian influenza will be subjected to routine investigations including: CBC, Throat swab, Liver function tests, Kidney function tests and chest x-ray. If there were referred cases, they would be followed in the fever hospital for detection of avian flu or swine flu. Results: The incidence of symptoms of influenza in the two studied groups, in control group it was found that the rate of influenza infection was 55% comparing with 31.6% in study group, there was a significant increase in the influenza symptoms in control group in comparing with study group (p

Abstract Code	P1093
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Abstract Title	The Value Of Serum Retinol Binding Protein 4 Levels For Determining Insulin Sensitivity In Patients With Chronic Hepatitis C Patients

Serum retinol binding protein4 is identified as novel adipokines mediating systemic insulin resistance also hyperinsulinemia and glucose intolerance are present in nearly all patients with liver cirrhosis, and insulin resistance is an established risk factor for disease progression and survival in patients with chronic liver diseases. Aim: to investigate the role of serum retinol-binding protein 4 in insulin resistance in patients with chronic hepatitis C infection.Patients and Methods: This study was conducted on 60 patient with chronic HCV and 20 healthy individual. All studied patients were subjected to complete history taking, thorough clinical examination, laboratory investigations, abdominal ultrasonography and diagnostic upper GIT endoscopy. Results: Patient were divided into 2 groups: Group (I) consists of 60 pt complaining of chronic hepatitis Cinfection which were divided into 3 subgroups, group (IA) consists of hepatitis C infected pt with liver cirrhosis, group (IB) consists of hepatitis c infected pt with hepatic steatosis, and group (IC) consists of chronic hepatitis C infected pt without hepatic steatosis nor cirrhosis. Group (II): 20 healthy individual. There were 9 patient (22.5%) child A,18(40%) child B, and 13(32.5%) child C. there was a highly significant difference between case and control regarding HOMA –IR (2.378±1.360, 1.245±0.45 respectively).There was a highly significant difference between cases and controls regarding RBP4 as RBP4 was significantly lower in patients compared with controls (24.29±5.48 and 40.43±1.928 µg/ml respectively). regarding serum level of RBP4 in the 3 subgroups there were highly significant difference as in group (IA) it was (18.77µg/dl), group (IBµg/dl) it was (26.620µg/dl), and group (IC) it was (27.5µg/dl). In this study there was significant positive correlation between level of RBP4and patients insulin resistance by HOMA-IR in HCV infected patient. Roc curves was done showed that the RBP have a sensitivity of 98.3% and specificity of 100.0% in hepatitis C virus infected patient with NPV of 95.2% and PPV of 100% and accuracy of 99.7% at the cut off point of < 32. Conclusion: Serum RBP4 may be used in the future as a marker for disease severity in cirrhotic patient.

Abstract Code	P1096
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Country	Oman
Abstract Title	Discovery of genes that underpin a combination of six phytochemicals-induced

	clearance of breast cancer cells

Background: Conventional Medicine faces serious challenges in cancer treatment such as drug resistance and lack of specificity for the target. Hence, Complementary Alternative Medicine is increasingly being practiced worldwide due to its safety and beneficial therapeutic effects. Our preliminary studies revealed that a combination of Indole-3-Carbinol and Resveratrol synergized and inhibited ovarian cancer cell growth. Therefore, we hypothesized that a super combination (SC) of additional known phytochemicals used at bioavailable levels could synergize to induce 100% clearance of breast cancer (BC) cells in vitro and microarray analysis would identify potential genes for targeted therapy of cancer. Methods: Mesenchymal Stems cells (MSC control) and MCF-7 and MDA-231 breast cancer cell lines were treated with various combinations of 10 phytochemicals at bioavailable levels. Alamar Blue and Flow Cytometry assays were used to determine cell proliferation and cell death. Wound healing and invasion assays were used to examine cell migration/invasion through Matrigel. Western Blot analysis was used to examine the expression of genes associated with cell cycle, apoptosis and cell motility. Microarray was performed to identify the SC-target genes. Results: A combination of 6 compounds (SC) synergized and induced 100% BC cell death. The SC down-regulated the expression of PCNA, Rb, CDK4, Bcl-2, SVV, and CD44 in the BC cell lines. Microarray analysis identified unique genes to the SC, including Bcl-2, SVV, CD44, mutant p53, CDK4 and Rb, as well as the SC- up-regulated genes, ARC, GADD45B, MYLIP and CDKN1C. Conclusion: The present study identified a SC of phytochemicals that induced 100% BC cell death and determined key genes that underpin SC-mediated cell death and cell motility. Our ongoing experiments aim to validate this data in in-vivo mouse models.

Abstract Code	P1097
Authors' Names	Allal Ouhtit1*, Mohammed F Ismail2, Amira Osman2, Ishita Gupta1, Somya Shanmuganathan1, Hamad Al-Riyami1, Yahya Al-Farsi3, Madhwa HG. Raj4 1Department of Genetics, 3Department of Family Medicine and Public Health, College of Medicine & Health Sciences, 2Department of Zoology, Faculty of Science, Mansoura University, Egypt; 4Biochemistry and Ob JYN, Stanley S. Scott Cancer; Louisiana State University Health Science Center, New Orleans, Louisiana, USA
Corresponding Author	Allal Ouhtit, PhD, MPh
Country	Oman
Abstract Title	Chemoprevention of Rat Mammary Carcinogenesis by Spirulina

Spirulina platensis (SP) is a filamentous cyanobacterium microalga with potent dietary phyto-antioxidant and anti-cancerous properties. We investigated the chemo-preventive effect of SP against DMBA-induced rat breast carcinogenesis, and further studied its underlying mechanisms of action in vitro. Remarkably, SP cleared DMBA-induced rat mammary tumors, which was clearly confirmed by morphological and histological methods. SP supplementation reduced the incidence of breast tumors from 87% to 13%. At molecular level, immunohistochemical analysis showed that SP supplementation reduced both Ki-67 and estrogen α expression. More interestingly, in the in vitro experiments, molecular analysis indicated that SP treatment inhibited cell proliferation by 24 hrs, which was accompanied by increased p53 expression, followed by an increase of its downstream target gene, p21Waf1/Cip1. In addition, SP increased Bax and decreased Bcl-2 expression, indicating induction of apoptosis by 48hrs post-SP treatment. This is the first report of in vivo chemo-preventive effect of SP against DMBA-induced rat breast carcinogenesis, supporting its potential use in chemoprevention of cancer. This work is dedicated to Prof. Mohammed F. Ismail who recently passed away.

Abstract Code	P1098
Authors' Names	Lubna J.Abdelmalek Assistant professor – family &community medicine Faculty of medicine – Benghazi University - Libya
Corresponding Author	Lubna Jamal Abdelmalek
Country	Libya
Abstract Title	Factors Affecting Mother\'s Choices and Decisions Related to Breast Feeding Practices

Abstract Breast feeding is ideally suited to the physiological & psychological needs of infants everywhere. WHO recommends exclusive breast feeding during the first 4-6 months of baby's life. This study aims to provide information about factors affecting mother's choices and decisions related to breast feeding practices.
Method: - A descriptive study (cross – sectional study) was conducted on 122 mothers in (23rd July clinic) in Benghazi during the period from 1-12- 2011 to 15-4-2012 Results:- 43% of mothers were exclusive breast feeding their babies during the first four months of life. 52% of mothers choose artificial feeding their babies because of insufficiency of breast feeding. Increase length of stay in maternity hospitals negatively affects mother's choices of exclusive breast feeding. Usage of pacifier negatively affects continuity of breast feeding for 2 years. 11% of mothers have no information about benefits of breast feeding.
Conclusion and recommendations: Early starting of breast feeding will affect positively the continuity of breast feeding. Choosing of exclusive breast feeding for the baby during the first four months have positive effect on the duration of breast feeding. Nutritional care for pregnant and lactating women is recommended in order to ensure sufficient milk supply to the baby. This study recommends baby friendly hospitals to be established in Libya.

Abstract Code	P1099
Authors' Names	Lubna J.Abdelmalek Assistant professor – family &community medicine Faculty of medicine – Benghazi University - Libya
Corresponding Author	Lubna Jamal Abdelmamek
Country	Libya
Abstract Title	Profile of rickets among children in Benghazi pediatrics hospital- for the year 2010

Abstract In most developing countries, nutritional rickets is a major health problem. The aim of this study was to address the possible risk factors behind the disease, as well as to explore the various clinical presentation. We carried out a retrospective case – series study at pediatric hospital – Benghazi. The record of all rachitic children admitted to the hospital in the year 2010 were reviewed. Information collected included age, sex, nutritional history ,exposure to sun light ,clinical presentations ,radiological findings and biochemical investigations. There were 70 children diagnosed with rickets (56% male). Among the total 66% were exclusively breast-fed. The most frequent clinical presentation was chest infections (54%) followed by gastroenteritis (49%) and hypo- calcemic convulsions (27%). In conclusion, nutritional rickets is still prevalent with the primary etiology being vitamin D deficiency. Therefore we recommend that every infant, who is exclusively on breast-feeding, has routine supplement of vitamin D, started soon after birth until the time of weaning.

Abstract Code	P1100
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Country	Iran
Abstract Title	The relationship between breakfast eating and BMI of nurses in the central hospital of Iranian oil industry

Introduction: Increasing obesity prevalence is a major health problem in worldwide and there are many reasons for this problem. One reason is associated with breakfast skipping and high BMI. However many young people skip breakfast for lose weight, but the results of one study shows that breakfast skipping is related to increase BMI. Another study in University of California shows that consuming whole breakfast is associated with losing weight. Therefore, the purpose of this study is to discover relationship between the quantity and quality of breakfast on BMI of nurses in the central hospital of Iranian oil industry. Methods: This study was conducted by using a valid and standard questionnaire at the central hospital of Iranian oil industry to evaluate the breakfast and dietary habits and BMI of nurses. In fact, the participants of this study were the nurses who worked in the central hospital of Iranian oil industry in autumn 2012. The sampling method was purpose sampling and the collection data was completing questionnaires by the participants. Results: The findings of this study show that the half of participants with BMI more than 25 (overweight and obese) had skipping breakfast and meanwhile 18 percent of overweight and obese participants of the study did not pay attention to eat any foods in the breakfast. On the other hands, the majority of participants with normal BMI had regular breakfast eating. Moreover, these persons considered to have a whole breakfast in the first meal of day. Conclusion: According to the result of the study, the regular breakfast eating can be one of the reasons for having normal BMI; moreover, the quality of breakfast and eating whole breakfast is also associated with normal weight.

Abstract Code	P1102
Authors' Names	Dr Raheleh Sadegh1 Dr K.Najafizade1 Dr R.Sami1 Dr M.Rezaei Diba Tabatabaei1
Corresponding Author	Raheleh Sadegh
Country	Iran
Abstract Title	Assessment of nutritional status in patients on lung transplant waiting list, national research institute of tuberculosis&lung disease- Iran

Object: Malnutrition is one of the prognostic factors in patients with a variety of chronic lung diseases. Recently, the impact of malnutrition on lung disease and transplant outcome has been evaluated. The aim of this study was to evaluate the characteristics of nutritional status in end stage respiratory patients waiting for lung transplant by anthropometric parameters and Fat Free Mass Index (FFMI). Method: Eighty-six patients who were visited in lung transplant clinic of Masih Daneshvari hospital were studied from October 2011to January 2012. Nutritional status was evaluated using anthropometric measurements and FFMI. The data used for this study included the height, weight, Body Mass Index (BMI), Triceps Skinfold (TSF), mid-arm muscle circumference (MAMC) and FFMI. Results: Mean recipients age was 37.59± 13.73. Mean of BMI, TSF, MAMC and FFMI were 21.1± 5.12 kg/m2, 11.76± 7.79 mm, 21.41± 3.93 cm2 and 16.69±2.35 kg/m2 respectively. There were significant difference between in the COPD, Interstitial Lung Disease (ILD), Cystic Fibrosis (CF) and non CF bronchectatic patients. The highest and the lowest mean of the anthropometric measures were in the ILD and CF group respectively. ROC analysis shows that there are sensitivity of 0.844; specificity of 0.842, Youden Index of 0.686 and Shortest of 0.0493 for cut-off 19.4 in BMI of patients with chronic lung disease. Conclusion: Many of patients, who are candidate for lung transplant, suffer from malnutrition. Its prevalence is dependent to the type of lung disease. CF patients are at the highest risk. Results show that the cutoff point 19.4 kg/m2 of BMI to predispose malnutrition in Chronic pulmonary disease.
Keywords: Chronic pulmonary disease; Body mass index; Nutritional status

Abstract Code	P1105
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Abstract Title	Project of Amended Norms of physiological energy and nutrient requirements for the Ukrainian population

Analysis of the structure of mortality and morbidity in Ukraine demonstrates undisputed dominance of non-communicable diseases (NCD). In recent years they were the cause of more than 80% of deaths in Ukraine with dominance of cardiovascular disease (60% in the structure of mortality). Of particular concern is the fact that NCD increasingly occur in young people of working age. In 2008, nearly 30% of men and 10% of women died due to NCD at the age of 60 years.

Unfortunately, the possibility of a thorough analysis of the impact of major risk factors of NCD limited due to lack of national studies on the prevalence of the factors except tobacco smoking. However, some of the available data suggest that there is a significant prevalence of metabolic and behavioral factors in Ukraine:

- Overweight is observed in more than half of the adult population;
- 16% and 26% of men and women, respectively, are obese;
- Over 50% of the adult population of Ukraine have elevated blood pressure.

The demographic situation in the country is estimated as critical. Catastrophic reduction in life expectancy, increasing mortality, mortality exceeding fertility by 7%, the sharp decline in the quality of life and the index of health of the nation as a whole with considerable violation of nutritional status of the population necessitates raising the issue of nutrition in Ukraine at the state level.

Steady violation of nutrition has been observed in most children and adults of Ukraine in recent years. Research and statistics show a sharp decline in consumption of biologically valuable products: meat by 37%, milk and dairy products by 34.8%, eggs 37.5%, fish by 81%, fruits and vegetables by 49% with simultaneously consistently high level of consumption of bakeries, animal fat, legumes, potato products. There is also observed the so-called "hidden hunger" due to a deficiency in the diet of vitamins, especially antioxidants (A, E, C), macro- and micronutrients (iodine, iron, calcium, fluoride, selenium) in the Ukrainian population. The disturbances in the structure of nutrition are caused not only by lack of nutrients but their improper ratio.

In order to prevent the formation and growth of potential risk of nutritional and alimentary diseases the World Health Organization recommends constantly review the requirements of energy and nutrients to reflect current international scientific research.

The Ukrainian legislation on healthcare needs improvement with regard to current scientific research and harmonization with international standards. The "Norms of physiological energy and nutrient requirements for the Ukrainian population", approved by the Order of the Ministry of Health of Ukraine (1999), have not been reviewed any time at their recommended updates every five years.

Scientifically justified revision of the norms of physiological needs of nutrients and energy of the population allows to develop the new "Norms of subsistence level for able-bodied and disabled people" (operating since 2000) and a food bundle for working and non-working groups of population (operating since 1999).

Therefore, the State Food Hygiene Research Center of Ministry of Health of Ukraine held the research work on the "Project of amended norms of physiological energy and nutrient requirements for the Ukrainian population". Updating the old norms and creating the new national regulations were performed on the basis of analysis and calculations.

These factors have been taken into account:

- Results of comparative analysis of physiological needs in nutrients and energy of the population of Ukraine, Russia, Belarus, the WHO and the EU;
- Direction of the country's development for the integration with the European Standards;
- Climatic conditions of Ukraine;
- Slavic roots of the people of Ukraine, Russia and Belarus;
- Gradual steady decline in physical activity of the population;
- Changes in the structure of diets and appearance of new food products.

The main proposed recommendations are as following:

- to lower the energy value of diets;
- to review protein daily requirements for children and old people;
- to include rationing of daily intake for biotin, pantothenic acid, copper, manganese, chromium, molybdenum;
- to set norms for minor and biologically active substances in accordance with WHO recommendations.

Implementation of new standards will promote the concept of public policy in nutrition. National standards are built on the basis of constant surveillance of nutrition and health, forecasts of science and technology in the production of agricultural raw materials and food products, the expansion of medical knowledge about human needs in the nutrients and energy. They take into account the adequacy of dietary pattern, magnitude of use of products and physiological needs of human; morbidity associated with disruption of the diet; quality and safety of food; peculiarities of the environment; economic and technological expediency of the production and usage of new types of food.
The Project will be important part of modern national strategies, models and technologies promoting healthy lifestyles and combating risk factors. This corresponds to the concept of the National program "Health 2020: Ukrainian dimension " of public policy on improving the quality of nutrition in Ukraine and prevention from nutritional and alimentary-caused diseases as well as to the Action plan for implementation of the European Strategy for Prevention and Control of Non-communicable Diseases 2012-2016.

Abstract Code	P1111
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Country	Iran
Abstract Title	Intestinal microflora, probiotics and diabetes mellitus prevention: Is there a linkage?

Abstract: Probiotics refer to living microorganisms or any part of their cells shown to be beneficial to health if regularly consumed in proper amounts. They can insert beneficial effects on host through changes in metabolism, organ function, immune system, etc. Therefore, they can be used in prevention of a number of (non) communicable diseases. Type2 Diabetes is one of the most prevalent chronic diseases and the most common form of diabetes. Millions of people are being diagnosed with type2 diabetes in each year while many affected patients remain undiagnosed. Short- and long-term complications of diabetes have made it a major component of burden of diseases in almost all countries around the globe. The aim of this article is to review available evidence on possible link(s) between intestinal microflora, probiotics intake and diabetes prevention. A quick search on the topic shows that there have been hundreds of articles published in recent years on the issue. Many researchers could reveal promising effects of probiotics exerted on different biochemical parameters as well as on long-term complications among diabetes

patients. Experimental and clinical studies have demonstrated that supplementation with probiotics may reduce insulin resistance with all its positive outcomes in diabetes and related disorders. Decreased hyperglycaemia and dyslipidemia have been major targets in studies. Different mechanisms, both intralumunal and systemic, have been postulated to justify probiotics action on better glycemic control. Other researchers have found that the well-known anti-inflammatory effects through probiotics administration can improve the efficacy of classical diabetes management protocols among diabetic patients. Needless to add that factors such as probiotics strains, number of active microorganisms, concurrent provision of prebiotics, duration of intervention, etc have all profound effects on the beneficial result. In brief, it seems that probiotics can offer a new are for diabetes prevention. More well-designed research however is needed.
Keywords: Diabetes mellitus, probiotics, intestinal microflora

Abstract Code	P1113
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Abstract Title	ENTERAL PROTEIN SPARING MODIFIED FASTING (EMF): A PILOT RCT ON CLINICAL SAFETY AND EFFICACY ON BODY COMPOSITION, RESPIRATORY FUNCTION TEST AND MUSCLE STRENGTH

Background: in the last few years some anecdotal data suggest that protein sparing modified diet (PSMF) delivered by naso-gastric tube enteral (with continuously feeding) for 10 days could obtain an important weight loss and control of appetite Vs oral feeding but no controlled studies have demonstrated that this kind of treatment could be safer or more efficient than protein sparing by mouth. Aims: to verify the effect of a protein sparing modified fast (PSMF)administered by naso-gastric tube for 10 days alternating with 20 days of a normal-calorie diet, for 6 months in patients with morbid obesity compared with patients undergoing the same regimen by oral route without the naso-gastric tube to compare EMF with oral PSMF clinically (appetite control, fat free mass mantainance, polmonary function tests and metabolic pattern) Methods: Study Type: Interventional Study Design: Allocation: Randomized Endpoint Classification: Safety/Efficacy Study Intervention Model: Parallel Assignment Masking: Open Label Primary Purpose: Treatment Patients (BMI ≥30 kg/mq with co-morbidity or a BMI ≥ 35 kg/mq) have been selected as follows: 20 patients as cases (enteral feeding 24h/day: EG) and 10 as controls (oral : OG) according to the randomized list generated by a computer (a ratio of 2:1 in favour of treatment with EG since a considerable higher drop-out rate was expected for this group and to increase patients' acceptability of the treatment). Nutritional regimen for 10 days was: protein intake 0,8-1 g/kg/day with carbohydrate intake

Abstract Code	P1114
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Country	Iran
Abstract Title	Comparison of obesity prevalence and dietary patterns between male students of the first grade of secondary school in 1st and 16th regions of Tehran, Iran 2010-2011

Background: Obesity in adolescence increases the risk of diseases such as heart disease - cardiovascular, diabetes and depression in adulthood and its incidence is increasing in many communities. This study compared the prevalence of obesity and food consumption patterns between male students of regions 1 and 16 in Tehran, Iran. Methods: The present research is a cross – sectional study. Sample size was 1500 students of 1st grade of secondary school, that 600 people were from 1st region and 900 people were from 16th which all selected by cluster samplings. Boys Weight and height were measured using standard methods and food record forms were delivered them for 3 consecutive days. The prevalence of obesity was statically analyzed by chi-square test and the t-test was used to compare the average consumption of milk and dairy, fruits and vegetables in both regions. Results: The prevalence of boys obesity was estimated 23.2% in 1st region and 22.7% in 16th and it was determined that there is not a significant statistical difference in prevalence of obesity between two regions ($p = 0.83$).Consumption of milk and dairy in 1st region was significantly more than 16th ($p = 0.001$), while vegetable and fruit consumption between two regions did not have a statistically significant difference ($p = 0.656$). Conclusion: According to the results, some necessary steps should be taken in order to reduce obesity levels in both areas, since consumption of dairy products in 16th region is less than 1st, the training-interventional plans should be done in this region. Keywords: obesity, adolescence, boy

Abstract Code	P1117
Authors' Names	Vladić Jelena, Vidović Senka, Zeković Zoran, Šumić Zdravko, Ljiljana Popović, Žužana Vaštag, Radojković Marija Faculty of Technology, University Novi Sad, Bulevar Cara Lazara 1, Novi Sad, Republic of Serbia
Corresponding Author	Vladić Jelena
Country	Serbia
Abstract Title	SPRAY DRY WINTER SAVORY EXTRACTS: POSSIBILITI FOR APPLICATIONS IN DIETETIC SUPLEMENTS

Satureja montana L. (Winter Savory) is widespread medicinal plant in the Balkan region. The genus Satureja montana L. belongs to the Lamiaceae family, and comprises around 30 species. S. montana has been marked a as source of bioactive compounds, primarily antioxidants (e.g. rosmarinic acid). It has been recognized as an aromatic plant with spicy flavor. The flavor originates from essential oil rich in monoterpenes such as carvacrol. Beside carvacrol some other aromatic components such as phenolic monoterpene thymol have been detected in significant amount. Antibacterial, antiseptic and antifungal characteristic have been linked to these two compounds. Beside antioxidant compounds and essential oil S. montana has been recognized as an excellent source of minerals and vitamins that are essential for optimum health. In folk medicine it has been used for gastrointestinal disorders. In this research Satureja montana L, of Serbian origin, has been investigated. Liquid extracts of S. montant were prepared using 50% ethanol as extraction solvent and process of maceration as extraction technique (according to Ph. Yug IV). Dry extract of S. montana were prepared by spray drying process using Anhydro laboratory spray dryer. Process inlet temperature was in the range from 120ºC to 125ºC. Outlet temperature was in the range from 60ºC to 70ºC. During the production of dry extract atomizer speed ranged from 20,000 to 21,000 rpm. Dry extract were prepared using Maltodextrin, as a drying agens, in different concetration (50%, 30% and 10%). Prepared extracts showed high content of antioxidant compounds: total phenols and total flavonoids. Content of essential oil has been determined. Content of vitamins was defined. Antioxidant capacity of extracts was analyzed using DPPH test. Possibility of applications for regulation of high blood pressure was investigated using investigation on ACE inhibitory properties. To investigate the extract properties, important for preparation of dietetic supplements on industrial level bulk, density, hygroscopy, caking of extracts and moister content of extracts were measured. Using "Sniffing test" sensor evaluation of dry extract has been provided, showing less appropriate characteristic than for example dry extracts of Basil or Mulberry.
Keywords: Satureja montana, spray drying, antioxidants, ACE inhibitory

Abstract Code	P1118
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Corresponding Author	Senka Vidovic
Country	Serbia
Abstract Title	Potential of herbal waste material from the tea factory for dietetic supplements production

Balkan region has been recognized as a territory with significant quantities of medicinal plants resources. Many of these herbs, available on local markets, are collected from the wild, but there is an increasing number of species obtained by commercial cultivation. Resources of medicinal plants and awareness of modern consumers on medicinal plants health benefits compounds and benefit in diseases prevention, impacted significantly on the increased development of tea factories all across Serbia and Croatia. The capacity of this development can be described on production level increase of 10% annually. The export of locally produced bulk herbs, filter and instant tea, to the markets of EU and North America, was also increased significantly over the last decade. During the filter tea production, which includes mostly mechanical operations (cutting, grinding, sifting, fractionating etc.), so called "herbal dust" is created in significant quantities. Herbal dust can be defined as the herbal material of particle size lower than the size of filter packaging material pores. As the particles of herbal dust are lower than that of filter packaging pores, herbal dust cannot be used in the production of final product-filter tea bag, and, actually, it is rejected from the production process as the herbal waste material. The growing number of tea producers and the increased production of filter teas implicating the significantly increase in quantities of herbal waste. In most cases the "herbal dust" is created from the finest parts of the herb-the herbal leaves. Usually the amount of this kind processed material with undesirable particle is from 10% to 15%. The amount of this way obtained herbal waste during the processing of different fruits is even higher, from 10% to 35%. Significant part of the herbal waste represent Rosa canina seeds, around 35%. As the production of filter tea in the states Serbia and Croatia includes, among others, processing of scientifically proven valuable herbs such as Mentha piperita, Ginkgo biloba, Melissa officinalis, Uvaursi, Thymus serphyllum, Hypericum perforatum and Achillea millefolium, and valuable fruits and roots such as Glycyrrhiza glabra, Malus silvestris, Prunus spinosa, Aronia melanocarpa and Rosa canina, the obtained herbal waste, with no doubt, represent the great potential for secondary usage and exploitation of significant bioactive ingredients for further application in production of highly valuated products, potentially dietetic supplements. Compounds that could be expected in this way obtained waste are: aromatic compounds present mostly in essential oils, manifesting very strong antibacterial, antiviral and antioxidant properties, and for that used in antimicrobial, analgesic, sedative, anti-inflammatory and spasmolytic preparations; Phenolic and flavonoid compounds-health promoters highly valuated mainly for theirs strong antioxidant characteristics; Vitamins, especially C and E, whose importance is linked primarily to theirs powerful antioxidant and cardioprotective properties.

Keywords: filter tea, waste, vitamins, aromatic compounds, phenols

Abstract Code	P1119
Authors' Names	Z. Tabatabaian Nimavard a, M. Doorsian b, S. Sadrejahani b, A.Ghadim Khani c Young Researchers and Elites Club, Science and Research Branch, Islamic Azad University, Tehran, Iran.
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Country	Iran
Abstract Title	Study the Eating Disorders in female Athletes and Non-Athlete Students with Different Body Composition

a. Academic member of the collage of Food science and Technology, Science and Research Branch, Islamic Azad University, Tehran, Iran. b B.Sc. Student of the collage of Food Science and Technology, science and Research Branch, Islamic Azad University, Tehran, Iran. c M.D. Tehran university of medical sciences ,medical school, Tehran ,Iran. Introduction: Eating disorders are problems which are in a tight relation with life style, socio-economic status and anxiety disorders. Various subgroups will be discussed in our study but the two most important disorders are “Bulimia nervosa” and “Anorexia nervosa”. The aim of our study is to determine the difference of “Eating-disorders” prevalence in two groups including Athletes and non-Athletes students with different body composition. Material and methods: 160 female students with an age of 18-22 were enrolled in this study. The “EAT-26” questionnaire was used for evaluation of eating disorders. for statistical analysis the man-Whitney, kruskal-wallis and ANOVA tests were used, also Cronbach’s alpha was used for determining interclass reliability of questionnaires. Results: The difference of prevalence of Eating disorders among female Athletes with various body composition was not significant (p=0.9), but it’s prevalence among the non athlete students (obese and overweight students) have had the highest rate (p=0.001). Among non athlete female eating concern (obese and overweight students) have had the highest rate (p=0.0001).Among non-Athletes, the social pressure for eating (thin student) have had the highest rate (p=0.0001).Comparison between Athletes and non-Athletes shown that eating disorder in athletes is more than non athlete (p=0.002). Discussion and Conclusion: In this study we concluded that the prevalence of Eating-disorders is with a meaningful difference among Athletes and non-Athletes students. These disorders were observed mostly in female Athletes. The prevalence of “Eating-disorders” among female Athletes with various body composition is with a non-meaningful difference in contrast to non-Athletes with a significant prevalence in obese and overweight participants. The highest rate of “Eating-disorders” were seen among non-athletes obese students. We also recommend further studies to determine the etiology of these differences.
Keywords: Eating Disorders, Female Athlete`s, Body Composition, Anorexia nervosa, Bulimia nervosa.

Abstract Code	P1120
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Corresponding Author	Jorge Gustavo Melendez
Country	Brazil
Abstract Title	POLYMORPHISM OF LEPTIN RECEPTOR Gln223Arg AND ADIPOSITY: POPULATION-BASE STUDY

The overweight is responsible for high morbidity and mortality beyond of the complications such as insulin and leptin resistance, dyslipidemia and atherogenesis. Genetic predisposition may contribute to an increased risk of overweight, and consequently increasing its prevalence. The leptin receptor gene plays a critical role in the regulation of body weight. Therefore, the aim of the study was to investigate associations of the polymorphism of the leptin receptor (LEPR Gln223Arg) with different adiposity measures: body mass index (BMI), waist circumference (WC) and body fat percentage (%BF). Cross-sectional study with probabilistic sample was carried-out in individuals aged 18 years in uban area of Montes Claros, Brazil. Preliminary data of the 273 participants studied showed high frequency of overweight (BMI ≥ 25kg/m2) 54.58% (149), obesity (BMI ≥ 30kg/m2) 26.37% (72), with abdominal obesity (WC ≥ 94cm in men and WC ≥ 80 cm in women) and high %BF (%BF≥ 20% in men and %BF≥ 30% in women) 53.14% (144). The frequency of GG polimorfism variant was 6.96% (19), 40.29% AG (110) and 53.75% AA (144), there were no prevalence differences between sexes (P=0.45). Bivariate and multivariate adjusted models showed that there is not relationship between the polymorphism LEPR Gln223Arg and any of indexes of obesity in this population. Aditionally was shown that participants with GG polimorfism have high prevalence of altered levels of glucose. In conclusion the GG variant were potencially associated with elevated blood glucose, but not with adiposity measures in this population. Funding: FAPEMIG

Abstract Code	P1123
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Abstract Title	Pilot Infant and Young Child Feeding (IYCF) Intervention Improves Young Child Growth in the Kathmandu Valley

National studies over the last 50 years in Nepal, a developing country with more than 80% of the population surviving on less than US$2 per day, show the persistence of under-5 malnutrition at rates of 50%. An uncontrolled pilot intervention was carried out in the Kathmandu valley in summer 2012 aiming to improve the caregiver complementary and responsive feeding behaviors and child growth among 110 caregivers of 8- to 13-month-old young children—56% from urban and small town areas and 44% from rural areas.

The intervention involved two almost identical pre- and post-intervention surveys, querying pregnancy, lactation and focusing on feeding habits, infant and young child diets and responsive feeding behaviors. Lengths and weights of the young children were also measured. The first interview was followed by suggestions from local educators to caregivers about improving their complementary feeding behaviors for healthy brain and body growth. Key outcome variables were feeding behaviors, responsive feeding practices and growth.

The post-intervention survey, conducted after an average of 37(±14) days of intervention, showed significant increases in WAZ, HAZ, and WHZ from pre- to post-intervention, by 0.3(±1.05) ($p=0.004$), 0.26(±0.98) ($p=0.006$), and 0.31(±1.36) ($p=0.019$), respectively. The mean WAZ, HAZ, and WHZ were, however, increased by 0.48 (±1.18) ($p=0.007$), 0.41 (±1.08) ($p=0.01$), and 0.47 (±1.65) ($p=0.05$) only for the mothers residing in rural areas ($n=49$). Similarly, there were increases in WAZ by 0.29(±0.83) ($p=0.009$) and HAZ by 0.32(±1.11) ($p=0.031$) only for the infants of the 60 less educated (≤ class 10) mothers, and increase in WHZ by 0.46(± 1.1) ($p=0.005$) only for the infants of the 49 more educated (>class 10) mothers.

Food frequency inquiries also showed significant ($p<0.001$) increases in the number of infants consuming wheat (by 9%), beans (by 12%), and sugar (by 27%) at least daily after intervention. Finally, the intervention also showed significant ($p<0.001$) improvement in the WHO minimum dietary diversity indicator from 93.6% to 96.4%. Some responsive behaviors such as encouraging children to eat with their fingers, encouraging them to eat when they refused and creating positive mealtime environments were also improved. This intervention showed that local educators can improve caregivers' infant feeding and growth.

Abstract Code	P1124
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Corresponding Author	Theodora Psaltopoulou
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Abstract Title	Metabolic syndrome is associated with colorectal cancer: a case-control study

Background: Metabolic syndrome may represent a meaningful risk factor for various cancer types. This study aims to evaluate whether metabolic syndrome is associated with colorectal cancer.
Methods: The association of metabolic syndrome with colorectal cancer, was evaluated in 250 patients with first developed colorectal cancer (63±12 years, 59% males) and 250 age-gender matched controls. Assessment of the metabolic syndrome (MetS) was based on the ATP III (National Cholesterol Education Program) criteria. Various socio-demographic, clinical, lifestyle, smoking and dietary characteristics were measured. Results: Presence of the MetS (1.66, 95%CI 1.02, 2.69), age (4.25, 95%CI 2.33, 7.77), smoking (1.85, 95%CI 1.27, 2.70), and family history of colorectal cancer (3.37, 95%CI 1.69, 6.75) had a detrimental effect, whereas adherence to the Mediterranean diet (0.88, 95%CI 0.84, 0.92), and body mass index (0.93, 95%CI 0.89, 0.98) had a protective role regarding colorectal cancer. Mediterranean diet had the same effect in relation to colorectal cancer, in both subjects with (0.84, 95%CI 0.76, 0.93) and without MetS (0.89, 95%CI 0.85, 0.94).
Conclusions: This finding is of great value taking into account that prevention strategies against colorectal cancer, could include small and feasible non-pharmacological, i.e. lifestyle, changes such as adherence to the Mediterranean diet, with an emphasis on moderate alcohol intake and exclusive intake of olive oil as an added fat. Studies revealing the benefits of Mediterranean diet on cardiovascular diseases and some types of cancer around the world make the generalization of our results feasible to the general public.

Abstract Code	P1127
Authors' Names	Sreymom Eng, Sreymom Pol, Endear Van, Aswathy V, Georgia S Guldan, Asian University for Women, Bangladesh
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Abstract Title	Energy and Nutrient Intakes from Complementary Foods among Infants and Young Children in Cambodia

Complementary feeding in Cambodia is problematic and not improving as rapidly as breastfeeding among infants and young children (IYC) under two years of age. Prior to conducting an intervention to improve the complementary feeding and growth among the IYCs in Cambodia, the current detailed IYC diets and feeding practices must be understood. However, to date, no such information is available.

In this research we aimed to explore in detail IYC feeding in Cambodia to inform effective IYC feeding interventions through a cross-sectional survey consisting of questionnaire-based interviews with caregivers of 130 infants and young children up to 24 months that included 24-hr recall dietary intakes. Dietary intakes were analyzed using Nutritionist Pro dietary analysis software version 5.0.0, while overall data was analyzed using the PASW/SPSS package version 19.0 (SPSS Inc., Chicago, IL, USA).
Although 86% of the 51 infants <6m were exclusively breastfeeding, only 27% (n=8) of the 30 6-8-month-olds were getting adequate Kcal from their complementary feeding, a proportion which decreased to <3% (n=1) among the 35 12-23 month-olds. Only 14%, 3%, and 11% were getting the amounts of, respectively, iron, calcium and Vitamin A required from complementary foods. From the food frequency interviews, rice, fed to 100% of the young children, and fish and cookies, each fed to 54%, were the most common three foods fed to those young children aged 12-23 m. Additionally, more than half of the caregivers responded inappropriately to each of four responsive feeding questions queried in the survey.
Generally, suboptimal energy and nutrient intakes as well as suboptimal responsive feeding practices were found. This information can be used to help inform future complementary feeding interventions among this high-risk group.

Abstract Code	P1128
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Country	Iran
Abstract Title	Changes in insulin resistance after bariatric surgery

Introduction: The prevalence of obesity is increasing in many parts of the world. Impaired glucose metabolism is strongly associated with body weight. The aim of this study was to compare effect of two methods of bariatric surgery (gastric bypass and non-gastric bypass) on insulin resistance in patients with morbid obesity. Methods: This intervention study was performed on patients with morbid obesity referred to obesity surgery clinic of Razi Hospital in Ahvaz 2011-12. Patients according to type of surgery (gastric bypass or other procedures) enrolled in two groups. Insulin levels, fasting glucose, glycosylated hemoglobin, and insulin resistance [HOMA-IR (mg/dL×μU/ml) = fasting glucose (mg/dL) ×fasting insulin (μU/ml) / 405] were compared between groups before, 1 and 2 months after surgery. Data were analyzed by ANOVA and repeated measures test of SPSS #18 software. Results: In total, 15 patients (2 male, 13 female) were enrolled. patients in the gastric bypass group showed a greater reduction in insulin resistance (before: 2.4±1.2, 1month:2.02±1.04 and 2months:0.86±0.64) compared to the other group (before:3.13±1.2, 1month:3.01±1.12 and 2months:2.91±1.07) (p0.05), before:61.26±3.8, 1month:58.23±3.68 and 2months:43.1±2.64 for gastric bypass and before:45.7±6.5, 1month:44.12±5.81 and 2months:38.9±5.78 for other group. Discussion: Mechanisms of short-term reduction in insulin resistance in patients undergoing gastric bypass surgery are not only related to weight loss and other factors are maybe involved. Keywords: Insulin resistance, gastric bypass, adjustable gastric banding, sleeve gastrectomy

Abstract Code	P1129
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Country	Bangladesh
Abstract Title	The status of infant and young child feeding counseling in national programs and policies in Bangladesh

Appropriate exclusive and complementary feeding is essential for the nutrition of infant and young child. Counseling is selected as one of the best practice intervention to support infant and young child feeding (IYCF). For the best result at national level, effective intervention such as counseling needs to be supported by policies. This study focuses on national policies in Bangladesh to support counseling for good infant feeding practices, in relation to both breastfeeding and complementary feeding. We manually reviewed the content of policies which incorporate IYCF and as well as support counseling. A matrix was developed on the basis of the following criteria which were policies that support correct information to mother and training of health workers to counsel mothers. It also identified job responsibilities of health staff on IYCF counseling and monitoring guideline. The data were collected from government websites and government archives. A total of 8 policy documents were selected for assessment of IYCF counseling. The overall national policies, strategies and action plans of Bangladesh are supportive of IYCF counseling. The Operation Plan for National Nutrition Services (2011-2016) mentions the responsible Health Workers for implementation of IYCF counseling. They are: medical officers nurses, medical assistants (in district and upazila and union health facilities), health assistants, community health care providers (in Community Clinic and community). The core activities of these health workers are counseling IYCF during antenatal care, postnatal care and implementation of community-based nutrition activities. Counselors for urban setting are not mentioned, though 28% of population of the country resides in the urban area. National Communication Framework and Plan for IYCF in Bangladesh has targeted 40 districts for training and orientation of government health staff, NGO, private community workers and skilled birth attendants on counseling. Recruitment policies for IYCF counseling and incentives or reward for counselor has not been considered in any policy or action plan. How the NGO and private workers will be incorporated in the programs that is not clear in the strategy. Community monitoring and evaluation is not developed in MIS system. Responsibilities and time allocation of public, private and NGO health workers for IYCF need to be well defined in the policies. Community health workers capacity development and monitoring and evaluation require extensive attention in national policies and programs.

Abstract Code	P1138
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Country	Australia
Abstract Title	Dietary fatty acid intake in relation to type 2 diabetes risk

Background: The long-term relationship between specific types of dietary fat and risk of type 2 diabetes remain uncertain. Objective: to examine the relationship between dietary fat intakes and type 2 diabetes risk. Method: The analysis included 8,921 Australian women from the Australian Longitudinal Study on Women's Health (ALSWH) aged 45-50 years without diabetes at baseline. Dietary intake was assessed with a validated food frequency questionnaire. Relative risks (RR) with 95% confidence intervals (CI) were used to examine risk associations. Results: During 6 years of follow-up, 311 incident cases of type 2 diabetes were documented. After adjusting for socio-demographic, lifestyle, and other dietary risk factors, monounsaturated fatty acids, omega-3 polyunsaturated fatty acid and omega-6 polyunsaturated fatty acids intakes were significantly associated with type 2 diabetes risk. Conclusions: These data suggest that dietary monounsaturated, omega-3 polyunsaturated fat, and omega-6 polyunsaturated fat may influence type 2 diabetes risk in women.

Abstract Code	P1144
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Corresponding Author	Sidiga Washi
Country	UK
Abstract Title	Childhood obesity prevention in UAE: a school-based intervention study

Background: Childhood obesity has been attributed to unhealthy lifestyle behavior, resulting from unbalanced diet, sedentary lifestyle and inconsistent knowledge, attitude and behavior. This cluster-randomized intervention was designed to address childhood obesity and its related risk factors through implementing public health nutrition strategies and employing a selected behavior modification approach.
Methods: Eight public primary schools were randomly selected in Al-Ain city, UAE. Validated questionnaires, base line anthropometric, dietary and physical activity behavior data were collected from 1054 children (male and female 6-9 years) prior to the intervention. Trained teachers from four selected schools applied the school-based nutrition and physical education intervention among 503 pupils. The study outcome measures were the positive deviation in dietary and physical activity knowledge, attitudes and practices after a 2-month intervention period.
Results: Baseline anthropometric measurements showed normal BMI-for-age among the majority of the sample in both intervention and control schools (82.8% male, 79.6% female). However, 10.9 and 10.7 % of the girls and 6.5% and 9.6% of the boys in all intervened schools were overweight and obese respectively. After eight-week intervention, no significant change in BMI was observed among both intervention and control school-children. However, a significant positive change has occurred in knowledge, attitude and practice and decreased sedentary activities among intervention school children (95% CI - 00.02).
Conclusion: This pilot school-based intervention study has proven to be effective and its framework could be tested at larger scale in UAE to prevent and manage childhood obesity.

Abstract Code	P1146
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Abstract Title	Effects of stevioside in type 2 diabetic subjects and its complicatons: a review

Background and objectives: Diabetes mellitus, a metabolic disorder, is becoming a serious threat to mankind health. Type 2 diabetes (T2DM) is one of the most challenging health problems in the 21st century. T2DM is a global epidemic with an estimated worldwide prevalence of 6% (246 million people) in 2007, and forecast to rise to 7.3% (380 million) by 2025. The treatment goals for T2DM patients, are effective control of blood glucose, blood pressure and lipids. Medicinal plants play an important role in the treatment of diabetes mellitus, especially in the developing countries due to their cost effectiveness. Stevia rebaudiana is a valuable medicinal plant species and it is being used for the treatment of diabetes. Stevioside, an ent-kaurene type of diterpenoid glycoside, is a natural sweetener extracted from leaves of Stevia rebaudiana (Bertoni) Bertoni. There are now known to be more than 150 Stevia species but this is the only one with significant sweetening properties; other species do contain other biochemicals of interest. Leaves contain approximately 4–15% of steviosides, which are intensely sweet compounds (150–300 times sweeter than sugar). The objective of this study is to conduct a systematic review to summarize the effect of stevioside on blood glucose, insulin level and antioxidant effect in T2DM. Methods: This systematic review was conducted by using Pubmed, Google scholar and Science direct data bases. \"stevia\", \"stevoiside\", \"diabetes\", \"antidiabetic\", \" antioxidant\" were used as the keywords and among 221 articles, 56 articles were compatible with the study protocol. These different aspects are discussed in consideration of the scientific literature of the last 5years. Results: in 56 articles, 51 studies showed that it has an antidiabetic effect and 5 study indicated that stevia doesn't have any effect on diabet. Conclusion: Stevioside exerts beneficial effects in T2DM including antihyperglycaemic, insulinotropic and antioxidant actions and it can improve the hyperglycemic condition. Finally we believe that stevioside maybe advantages in the treatment of T2DM. Further research is needed to determine use of stevia, as a supplement and as apart of healthy diet for diabetic patients. Keywords: diabetes, antidiabetic, stevia, stevioside, antioxidant.

Abstract Code	P1149
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Abstract Title	The diabetes epidemic in Arabian Gulf States: implications for computerised disease registers, systematic review

Background: The prevalence of type 2 diabetes mellitus (T2DM) is increasing worldwide, particularly in the Middle East, where obesity may be an important contributory cause. Purpose: To review published studies regarding the prevalence of T2DM in Arabian Gulf states, from 1981 to 2012. Data source: Medline, Embase, and the reference list from studies identified. Study selection: Studies were selected which reported the prevalence of T2DM and obesity in Youth and Adolescents, in Arabian Gulf states. We, used World Health Organization (WHO) criteria for the diagnosis of diabetes, and included studies giving the date of the data extraction. From 1,497 studies screened, a total of 62 studies met the inclusion criteria. Data extraction: We extracted data to identify the country, the number of participants, age group, the number of cases, the prevalence, and the diagnostic criteria used. Data synthesis: T2DM prevalence in the Arabian Gulf States increased from 1.5% to 33.2% between 1993 and 2007. While obesity prevalence in the Arabian Gulf States increased from 8.7% to 44% between 1981 and 2007. (Detailed age-sex prevalence by year and by country will be illustrate in tables and figures) Conclusion: There is a high prevalence of T2DM and obesity in Arabian Gulf countries. Policy makers monitor this trend and implement a diabetes prevention program in KSA.

Abstract Code	P1153
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Country	Lebanon
Abstract Title	An ecohealth approach to nutritional and environmental problems in the 21st century: A case-study from Lebanon

According to the FAO, more than 800 million people around the world and particularly in developing countries are not meeting their basic nutritional needs. In the Middle East and North Africa (MENA), the prevalence of stunting is 24%, indicative of undernutrition. On the other hand, problems of overnutrition are also on the rise. More than 1 billion adults around the world are overweight and at least 300 million of them are clinically obese. Obesity rates have risen three-fold since 1980 in several areas including the Middle East. This nutritional situation is accompanied with delocalization of resources and environmental degradation, particularly in the MENA region. Programs to address the worrying trend in the health of the environment and the degradation in human diet and subsequently health have remained fragmentary in nature and little positive impact has been measured. It is believed that programs that tackle the various aspects of the problem (political, social, environmental, economic, metabolic, etc.) and do so through a transdiciplinary and participative approach have a better chance of grasping the complexity of the worrying degradation, particularly in terms of emergence of chronic disease. An Ecohealth approach to human health focusing on both food and the environment has been applied in Lebanon through the project Food and Health in Rural Lebanon: Options to Improve Dietary Diversity, Food Security, Livelihoods and Ecosystem Management. We provide evidence that such programs, when well designed, are better equipped to find solutions to the escalating problems of inadequate nutrition and its consequences, both human and environmental.

Abstract Code	P1157
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Country	Pakistan
Abstract Title	Assessment of Dietary Compliance among Patients with Type 2 Diabetes Mellitus Receiving Text Message (SMS) Reminders: A Randomized Control Trial

Background: It has been estimated that 285 million people are suffering from Diabetes Mellitus (DM)

worldwide. Furthermore, 80% of deaths attributable to DM take place in developing countries. Compliance to a healthy diet is very important for effective management of type 2 DM. Use of electronic devices in the field of health care has been successful in motivating patients to improve their health behaviors. We can send text messages to improve compliance to healthy diet for management of type 2 DM. Studies have proved that by motivating patients with reminders through SMS, compliance to healthy diet can be improved which can lead to better diabetes control. However such studies have not been conducted in Pakistan.
Objective: To assess the difference in dietary compliance in patients with type-II diabetes, who were reminded through text message (SMS) vs. those provided standard care. Methods A block randomized control trial is being conducted at Aga Khan University and Hospital in Karachi, Pakistan. Diabetic patients age 30 to 70 years, who have been diagnosed and conformed as a known cases of type 2 DM in the last 2 to 15 years, have a cell phone are being invited to participate in the study. In the intervention arm three text message reminders are being sent per week using Frontline SMS software for 3 months. Compliance to diet is being assessed in 2 ways. Firstly, overall compliance to dietary guideline is being measured by assigning score to the dietary intake assessed by Food Frequency Questionnaire (FFQ). Secondly, compliance is being measured by assessing responses to fortnightly two-item (fruits and vegetables) questionnaire that was sent to all participants via cell phone. Interim analysis was conducted after follow-up of 1.5 on 30 participants from each arm.
Results: There were no significant differences in distribution of variables in both the study arms at the baseline. The mean dietary compliance score (assessed by FFQ) in the intervention arm at the baseline was 7.90 and after follow-up was 7.80 while in control arm, the mean compliance score at the baseline was 7.77 while after follow-up it was 7.87. There was no significant difference between the two arms (F (group) = 0.065; p-value= 0.79) as well as within the arms (F (time) = 0; p-value>0.99). Marginal interaction was observed between group variable (intervention and control arm) and factor variable (mean dietary compliance score by time) (F (interaction) = 3.702; p-value= 0.059). No significant difference was found in dietary compliance between the two arms assessed by response to fortnightly two-item questionnaire (p-value=0.22). There was no significant effect of the intervention status as well as response to fortnightly two-item questionnaire on the mean dietary compliance score assessed with FFQ (p-value (Intervention status)= 0.65; p-value (Response status)= 0.29). Interaction between the intervention status and response status was also insignificant (p-value =0.85).
Conclusion: Findings of the interim analysis suggest that there is no effect of text messages on dietary compliance of diabetic patients. We are unable to make conclusion about the relationship of dietary text message reminders and dietary compliance in type 2 diabetic patients with the available data. The reason might be the time period to observe the behavioral change is short.

Abstract Code	P1158
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Country	Korea
Abstract Title	Intake and food sources of folate in Korean women of child-bearing age based on 2008-2009 Korea National Health and Nutrition Examination Survey

There have been no data for dietary folate intake in a representative population in Korea mainly because of the limitations in the folate database. In 2011, the Korean Nutrition Society upgraded a nutrient analysis software (CAN-Pro 4.0) using a new folate database that included the most current laboratory values. In order to estimate folate intake and determine food sources in women of child-bearing age between 19-45 y, dietary data from 24-h recalls of 3,092 women collected in the 2008-2009 Korea National Health and

Nutrition Examination Survey (KNHANES) were analyzed. A folate value was assigned to each of 2,580 food items consumed by women in KNHANES using the database in CAN-Pro 4.0. The statistical analyses were performed by survey procedure using SAS (ver 9.2). Median intakes of folate in 19-29 y and 30-45 y were 385 and 443 μg/day, respectively. The proportions of women whose intake was less than Estimated Average Requirements (EAR, 320 μg) were 37.0% and 25.4% in 19-29 y and 30-45 y, respectively. Kimchi was the major food source of folate, contributing 17.5% and 22.7% of the total folate intake. Approximately 20% of women reported the use of vitamin or mineral supplements without any information on specific vitamin use such as folic acid. Our results show that only small portion of Korean women of child-bearing age use folic acid supplements and about one third does not meet EAR. Since Korea does not have mandatory folic acid fortification policy, maintaining traditional food pattern with rice and Kimchi, and taking folic acid supplements might be recommended to increase folate intake of women of child-bearing age.

Abstract Code	P1160
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Country	Germany
Abstract Title	Influence of different vinegar varieties on demineralization of human enamel in vitro study

Background: Among health-conscious individuals, including vegetarians, salads dressed with vinegar are frequently consumed. Dental erosion can also be caused by an acidic diet, and occurs with increasing tendency. The aim of this study was to analyse the erosive potential of vinegar varieties on human enamel samples. Methods: A total of 100 vinegar varieties (light and dark) were selected, and pH and transmission were determined. Enamel samples were prepared from human wisdom teeth, and the specially prepared enamel slices were incubated with 5 selected vinegars (Bio Vinegar, pH = 3.1; Raspberry vinegar pH=2.7; Condimento Balsamico pH=3.9; Bianco Modena pH= 2.7 Vinaigre de Jerez pH=2.9) for up to 8 h. Controls were incubated with a 0.9% sodium chloride solution under the same conditions. The quantitative analysis of Ca, P, F, Mg, Cl and O in the enamel samples (incubation: 4, 8h) in various depths ranging from 5-50 µm was carried out using an electron probe micro-analyser (Jeol JXA 8900RL). The surfaces of the enamel samples were also visually examined by a digital microscope (VHX, Keyence, Neu-Isenburg, Germany). Results: The pH-values of the different vinegar varieties ranged from 2.4 to 3.9 and the transmission ranged from 5.8 to 100%. Incubating the enamel slices with the selected vinegars caused a time dependant release of the different minerals. After 8h of incubation, a loss of calcium, phosphorus and oxygen was observed for all vinegars; while for Condimento Balsamico erosive damage was found only to a depth of 20µm, for Bio Vinegar a loss of minerals down to a depth of 45µm could be determined. The digital microscope shows structural changes on all surfaces when compared to the controls. Conclusions: In this in-vitro study, the erosive potential of different vinegar varieties on human enamel samples could be demonstrated. However, it must be considered that numerous modifying factors influence the enamel surface in vivo; therefore a direct translation to in-vitro conditions can only be done with caution.

Abstract Code	P1161
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Abstract Title	Influence of BMI on carious frequency in 4552 primary school pupils

Background: Within the last 20 years an increase in overweight adults as well as children could be observed. Besides well-known risk factors, it can be discussed that carious lesions may occur in overweight or obese people in a higher frequency. The objective of this study was to examine a possible relationship between the presence of carious lesions and the Body Mass Index (BMI) in children of elementary schools. Methods: In this study a total of 4552 elementary school children (51% boys, 49 % girls) aged 6 to 11 years from different social backgrounds were examined. The dental examination included the determination of caries frequency (DF-T-/ df-t-values). The medical evaluation assessed the pupils' general health and the body mass index (BMI). This study was conducted in cooperation between the Dental Hospital and the Department of Pediatrics of the Johannes Gutenberg University of Mainz as well as with the Association of Dental Health of the State of Rhineland Palatinate. Results: The study showed that 4% of the elementary school children were underweight, 76% had a normal weight, and 12 % were overweight and 8% obese. Underweight children showed healthy teeth in 50%, those with normal weight showed naturally healthy teeth in 47%, while children with high weight and obese children showed naturally healthy teeth in 38% resp. 35%. A low BMI correlated with the absence of carious lesions ($p < 0.0001$), and a high BMI was linked to a high number carious lesions. The significant correlation between the BMI and carious frequency persisted even after adjustment to the age of the children. Conclusion: This study demonstrated a significant association between dental caries and weight in children of elementary schools. In future preventive programs the importance of nutrition should not only be emphasized with respect to general diseases but also with regard to carious lesions.

Abstract Code	P1162
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Abstract Title	Vitamin B12 status and its impact on neural function across life cycle of healthy human subjects

Background: Vitamin B12 deficiency can lead to a wide spectrum of hematological, neuropsychiatry and cardiovascular disorders that can often be reversed by early diagnosis and prompt treatment. Prevalence in India is at least as high, if not higher, on account of vegetarianism, tropical sprue and intestinal parasite infections, which may impair absorption of vitamin B12. Objective: Study 1: To compare cardiac autonomic (using heart rate variability), peripheral neural activity and cognitive functions in elderly (>60 yrs) stratified by vitamin B12 status and following vitamin B12 supplementation in those with low vitamin B12 status. Study 2: To assess heart rate variability in children born to women with vitamin B12 deficiency during pregnancy as compared vitamin B12 pregnant replete women. Study 3: To compare cardiac autonomic (using heart rate variability), peripheral neural activity and cognitive function in vitamin B12 deficient and replete young adults (18-35 yrs). To assess the role of sensitive indices methylmalonic acid (MMA) and homocysteine (Hcy) in uncovering neural changes in young adults. Results: study 1: 140 elderly were screened; 47 healthy subjects were assessed. Low frequency (LF) heart rate variability (HRV) in absolute units was significantly lower in the low vitamin B12 group. Following supplementation, LF HRV in absolute units and total power rose significantly as compared to pre-supplementation group Study 2: Seventy nine healthy children between 3 and 8 years of age were evaluated. LF HRV in absolute units was reduced significantly in children of the lower vitamin B12 status group (P=0.03) and was 53 % that of the higher vitamin B12 status group. There was a significant association between LF and total power HRV with cord blood vitamin B12 levels. Study 3: 34 young adults were recruited. There was no difference in LF HRV when grouped based on vitamin B12 levels. However, in a subgroup analysis using MMA levels there was a strong negative association between MMA and LF HRV (r=-0.80, P=0.01). Conclusions: Cardiac autonomic nervous activity is reduced in subclinical vitamin B12 deficient subjects across the entire life cycle. Cardiac autonomic nervous changes in vitamin B12 deficient subjects occur in the absence of peripheral neural and cognitive deficits. Plasma MMA is more strongly associated with HRV measures than plasma vitamin B12. Vitamin B12 supplementation in elderly vitamin B12 deficient subjects is associated with a significant improvement in cardiac autonomic activity.

Abstract Code	P1164
Authors' Names	Hala Hazam Al Otaibi Department of Food Sciences and Nutrition, King Faisal University
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Abstract Title	The relationship between food insecurity and weight status, socioeconomic status and dietary factors among rural women in Saudi Arabia

Background: Obesity affects low income individuals and has been linked with food insecurity particularly among women in developed and developing countries. Objectives: to measure the prevalence of food insecurity among low income rural women in Saudi Arabia and to determine factors associated with food insecurity such as weight status, socioeconomic status and dietary intakes. Study design and Methods: Across sectional study conducted in rural community (6 villages) in Al-Ahsa area included 147 women with mean aged 41 years, women were interviewed and measured for socioeconomic, food insecurity, anthropometric measurement, and dietary intake. Results: Fifty seven percent of the women reported as food insecure (21% household food insecure, 12% individual food insecure and 24% child hunger), majority of them were married and housewife. Women in child hunger group reported the lowest mean years of education (4.64 years) with significantly higher mean of weight, and BMI (P = 0.03, P = 0.024 respectively) compared to other groups. The recommended daily serving intakes of all food groups were adequate only fruit and vegetable group was inadequate (two serving). While women in the food insecure groups had higher mean intakes of energy, fat, protein and carbohydrate. The multinomial regression models shows overweight women were significantly more likely to be housewife (odds ratio= 1.43, P = 0.05) and food insecure (odds ratio=2.19, P = 0.02). However women who at risk waist circumference significantly more likely to be age over 40 years (odds ratio=2.75, P = 0.05), housewife (odds ratio=0.8, P = 0.004) and food insecure (odds ratio=2.28, P = 0.01). Conclusion: This study demonstrated that problem of food insecurity is present in Saudi Arabia and associated with weight status and some socioeconomic factor, more effort should be directed to decreasing the level of food insecurity in the community.
Keywords: Food insecurity, obesity, overweight, socioeconomic status, diet, Saudi Arabia

Abstract Code	P1166
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Abstract Title	Dietary habits in patients with ulcerative colitis - cause of nutrient deficiency?

Rationale: Up to 60% of patients with ulcerative colitis are seen with nutrient deficiency, although no specific diet is recommended. The aim of this study was to investigate whether restriction or adding specific food items, might contribute to malnutrition in these patients. Methods: A qualitative semi structured interview study including ambulatory patients with ulcerative colitis, regarding preference for or avoidance of specific food items related to abdominal symptoms. Patients with different extent and disease activity, were included in the study until data saturation was reached. Results: The study included 25 patients (12 M, 13 F), mean age 46.7 (SD 15.6). Duration of disease ranged 1-35 years, mean 15.0 (SD 13.0). Generally patients seemed to have a good and healthy diet, and most patients seemed quite conscious about their choice of food. Restriction of food items were mainly due to discomfort to bowel symptoms, i.e. diarrhoea caused by sugar, dairies, alcohol, spices, red meat and bread. These food items were totally or partly omitted by many patients. These restrictions were based mainly on personal experience, rather than professional guidance or knowledge search. Adding specific food items most often included vitamin supplements (about half of the patients), while only 20% took supplementary calcium, although many had restricted dairies from their diet. Only a few had experience with alternative treatment, and none had specific choices of food items as coping strategies. Conclusion: Overall most patients seemed to have a good and healthy diet. However, many patients with ulcerative colitis restrict diary products from their diet. This may lead to calcium deficiency. No other restrictions in the diet which could explain specific nutritient deficiencies were identified.

Abstract Code	P1167
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Corresponding Author	Tawfeeq F. R. Al-Auqbi, head of Nutrition dept. / National Diabetes Centre / Al-Mustansiryia Uneversity. Bagdad- Iraq
Country	Iraq
Abstract Title	Obesity and Metabolic Syndrome in Iraqi children and Adolescents

OBJECTIVES: to study the relevance of childhood obesity to the metabolic syndrome criteria in a sample of Iraqi obese children and adolescents.
PATIENTS AND METHOD: A cohort study on 57 Iraqi obese children and adolescents (26 boys and 31 girls), aged 2-16 years, was conducted from 1st July to 30th September 2012, in the National Diabetes Center (NDC) / Al-Mustansiriyah University, Baghdad – Iraq. All these children and adolescents attended the NDC with their familes seeking medical advice for their cildhood obesity; they were thoroughly interviewed, examined and investigated by a team formed of consultant pediatrician and clinical nutritionist according to the standard medical and laboratory work up which is adopted in the NDC. Participants were examined physically and their height, weight, BMI, waist circumference (WC) and blood pressure were measured. Fasting blood samples were taken from all patients during their visit to laboratory to measure the fasting plasma glucose (FPG), Triglyceride (TG), HDL and LDL.
RESULTS: The children and adolescents BMI was 33.51±8.27 kg/m^2, all were above the 97th centiles; Waist circumference was 95.03±19.95 cm, above the 90th centiles; systolic and diastolic BP were 127.12±16.94 and 72.78±13.84 mmHg, 43participants (75.4%) above the 90th centiles, fasting plasma glucose (FPG) was 110.7±14.5 mg/dl, 40 (70.1%) participants exceed 100mg/dl level; Triglyceride (TG) was 110.74±39.45 mg/dl, 32 (56.1%) above the 90th centiles; HDL was 46.68±7.61mg/dl, 5 (8.7%) were less than 40 mg/dl; LDL was 88.20±40.56mg/dl,16 (28.07%) above the 90th centiles.
children and adolescents who had only obesity 2 (3.5%), those who had 2components of metabolic syndrome were 6 (10.5%), who had 3components and fulfill the criteria of metabolic syndrome were 39 (68.4%) and those who had 4 components and fulfill the criteria of metabolic syndrome were 10 (17.5).
CONCLUSIONS: Childhood obesity was relevant to metabolic syndrome which is highly prevalent among obese children and adolescents.
KEYWORDS: Childhood obesity, metabolic syndrome.

Abstract Code	P1168
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Abstract Title	SUPPLEMENTATION OF WHY PROTEIN-CHITOSAN NANOPARTICLES IMPROVES THE BIOAVAILABILITY OF IRON

Nanoparticles of whey protein concentrate-chitosan (CS-WPC) complex were prepared with the aim of developing a biocompatible carrier for the oral administration of iron as a nutraceuticals. Effects of pH, concentration of native CS-WPC and iron on the nanoparticles with sodium tripolyphosphate (TPP) prepared by ionic gelation were investigated. CS-WPC were loading with different iron concentration namely; ferrous sulphate. The surface charge of the particles was positive and negative that strongly pH dependent and showed positive charge after iron loading at low protein concentration and was negative at 8 and 12 % when the pH increased to 5.5. The association efficiency (AE) and loading efficiency (LE) of CS-WPC nanoparticles was highly sensitive to formulation pH. This adsorption can be mainly attributed to electrostatic, hydrophobic interactions and hydrogen bonding between WPC and CS. The iron release experiments showed that the nanoparticles prepared with native WPC had favorable properties to resist acid and pepsin degradation in simulated gastric conditions. When transferred to simulated intestinal conditions, the WPC shells of the nanoparticles were not degraded by pancreatin showing the same results with and without enzymes after 6 h. CS-WPC iron nanoparticles at level 0, 3, 6, 9, 12 mg/g protein showed very high bioavailability after evaluated in simulated gastric and intestinal fluids in the presence or absence of the enzymes.
Keywords: Nanoparticles; Whey proteins concentrate; Chitosan; Iron; bioavailability

Abstract Code	P1172
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Abstract Title	The association between neutral mood state with obesity in a tri-ethnic adolescent population

Background: Several studies have examined the association between negative mood state with increase caloric intake and obesity in adults and children. However, similar data on neutral mood state is lacking.
Purpose: To examine the association between neutral mood state and obesity indices in adolescents 11 - 16 years old.
Study Design: A school based, cross-sectional study included adolescents 11 to 16 years old. Data on anthropometric measurements was obtained. Students had to complete 24 hour mood diary during waking hours. Mood was classified into 3 states: negative, neutral and positive. Neutral mood state was measured foe each subjects as a percentage of occasions where neutral mood reported divided by total number of occasions where any mood variable was recorded. Obesity indices (BMI, waist /height, truncal obesity and body fat percent) were obtained. Multi regression analysis was used where percent body fat, truncal obesity and BMI Z scores were the dependent variables and neutral mood variable was the independent variable. Demographic factors (age, gender, ethnic group, mother's education); sexual maturation (Tanner stage); and physical activity (using the actigraph) were measured and controlled in the analysis
Study Results: Data on three hundred and ten students were obtained. Sample composed of 54% female, 37% African American, 31% Hispanic, 29% non-Hispanic white, and 3% other ethnic groups. Anthropometric characteristics: 21% of the sample was classified as obese (BMI >= 95th %percentile), 17.8% were classified as overweight. Neutral mood state was reported by 86.9 % of subjects at least once and was 50.6% of all mood states reported. Non-Hispanic Whites reported neutral mood states in more occasions compared to African Americans (OR 0.60; p <0.001) Neutral mood was positively associated with BMI Z score, waist circumference and percent body fat. Regression model included neutral mood with control of demographic, sexual maturation and physical activity variables explained 16% of the variation of percent body fat (B coef = 0.0875 with p= 0.0080).
Conclusion: This study suggests that neutral mood state in adolescents can be a predictor for obesity. Neutral mood state needs to be assessed during evaluation and management of obesity in adolescents. Further studies are needed to confirm this finding.

Abstract Code	P1173
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Corresponding Author	Ekaterina Maslova
Country	Denmark
Abstract Title	Maternal intake of vitamin A, E, and K in pregnancy and child allergic disease*

Background: Fat-soluble vitamins A, E, and K have been shown to play roles in immunity and inflammation, but studies on child allergic disease are few and inconsistent.
Objective: To examine the relation between maternal intake of vitamin A, E, and K from diet and supplements in mid-pregnancy and child asthma and allergic rhinitis.
Methods: We used data from 44,594 mother-child pairs from the longitudinal Danish National Birth Cohort. Intake of fat-soluble vitamins was calculated based on information from a validated Food Frequency Questionnaire completed in mid-pregnancy. Total intake was defined as the sum of supplements and dietary intake. Interviews with the mothers were used to evaluate doctor-diagnosed child asthma at 18 month. At age 7, we assessed asthma and allergic rhinitis using questions from ISAAC questionnaire. Current asthma was defined as asthma diagnosis and wheeze in the past 12 months by maternal report. We calculated multivariate risk ratios and 95%CI comparing highest vs. lowest quintile of maternal vitamin A, E, K intake in relation to child allergic disease outcomes.
Results: We found a suggestive direct relation between maternal dietary vitamin A and current asthma at 7 years ((Q) uintile5 vs. Q1: 1.14, 95%CI: 0.94, 1.38). Women consuming beta-carotene in the highest vs. lowest quintile were 1.38 (95%CI: 1.06, 1.80) more likely to have children classified with current asthma at age 7; while women with high total retinol consumption were less likely to report child allergic rhinitis (Q5 vs. Q1: 0.79, 95%CI: 0.65, 0.96). Maternal total vitamin K intake was directly associated with current asthma at 7 years (Q5 vs. Q1: 1.30, 95%CI: 0.99, 1.70). We found no associations for vitamin E intake during pregnancy.
Conclusion: Vitamin A and K during pregnancy may increase risk of child asthma at age 7. Conversely, maternal retinol intake may protect against child allergic rhinitis.
*a longitudinal study from the Danish National Birth Cohort

Abstract Code	P1174
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Corresponding Author	Ekaterina Maslova
Country	Denmark
Abstract Title	Maternal macronutrient intake during pregnancy and child anthropometric and adiposity markers at 20 years

Background: Animal studies have shown that protein and fat intake in gestation may influence offspring adiposity and fat metabolism. Macronutrient ratio in human pregnancy appears to be important for child blood pressure and glucose tolerance; less is known about the influence on child adiposity.
Objective: To investigate the relation between maternal dietary protein and fat intake during pregnancy and child anthropometric measures and biomarkers of adiposity and glucose metabolism.
Methods: We used a prospective cohort of 965 Danish pregnant women recruited in 1988–1989 with offspring follow-up at 20 years. We used information on macronutrient intake collected in gestational week 30, and divided protein according to source (animal, vegetable, other) and fat according to saturation level (saturated (SFA), monounsaturated (MUFA), polyunsaturated (PUFA)). Offspring body mass index (BMI) and waist circumference were recorded at follow-up (n=696), and biomarkers were quantified in a subset (n=443) of participants. We used multivariate linear and logistic regression to calculate effect estimates and 95%CI for a 1:1substitution of protein and fat for carbohydrates.
Results: Offspring mean BMI and waist circumference were 22.4±3.1kg/m^2 and 81.9±9.6cm respectively; 18% had a BMI>=25kg/m^2. We found that a 1:1 substitution of animal protein for carbohydrates increased risk of a BMI>=25 kg/m^2 among female (Quartile(Q)4 vs. Q1: Risk ratio (RR):3.07, 95%CI: 1.39, 6.80) and male (Q4 vs. Q1: RR:2.21, 95%CI: 0.92, 5.35) offspring. We found a reduction in LDL and an increase in HDL in males for vegetable protein and SFA respectively. Females displayed a decrease in total cholesterol and triglycerides for maternal PUFA intake.
Conclusion: Protein from animal sources consumed during pregnancy instead of carbohydrates may increase risk of overweight in the offspring; this association was stronger for female children. Vegetable protein and SFA consumption in pregnancy improved lipid profiles in male children, while maternal PUFA improved lipids in females.

Abstract Code	P1175
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Corresponding Author	Ekaterina Maslova
Country	Denmark
Abstract Title	Vitamin D intake in mid-pregnancy and child allergic disease – a prospective study in 44,825 Danish women

Background: Past studies suggest that maternal vitamin D intake during pregnancy may protect against child wheeze, but studies on asthma are limited.
Objective: To examine relations between intake of vitamin D in mid-pregnancy and child asthma and allergic rhinitis at 18 months and 7 years.
Methods: We examined data from 44,825 women enrolled during pregnancy in the longitudinal Danish National Birth Cohort between 1996 and 2003. We estimated vitamin D intake from diet and supplements based on information from a 360-item validated Food Frequency Questionnaire completed in week 25 of gestation. At 18 months, we evaluated child asthma using interview data. We also assessed asthma and allergic rhinitis through a questionnaire at age 7 and by using records from national health registries. Current asthma was defined as self-reported asthma diagnosis and wheeze in the past 12 months. We calculated multivariate risk ratios with 95% CI comparing highest vs. lowest quintile of vitamin D intake in relation to child allergic disease outcomes.
Results: The mean intake of total vitamin D was 11.2±5.1 µg/day, with 68% coming from supplements. In multivariate analysis, mothers in the highest quintile of total vitamin D intake were less likely to have children classified with current asthma at 7 years (Q5 vs. Q1: 0.74, 95% CI: 0.56, 0.96) and asthma according to hospital admission (Q5 vs. Q1: 0.80, 95% CI: 0.64, 1.00, P=0.05) compared to mothers in the lowest quintile of total vitamin D. We found no association for vitamin D intake with child asthma at 18 months and allergic rhinitis during the first 7 years of life.
Conclusion: Our findings suggest that higher total vitamin D intake is protective against some child asthma outcomes but not others. The data did not suggest a clear threshold of vitamin D intake above which risk of asthma was reduced.

Abstract Code	P1176
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Corresponding Author	Ekaterina Maslova
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Abstract Title	Does fetal fatty acid status influence the risk of child allergic disease in school age? Evidence from a pre-birth cohort study.

Background: Perinatal fatty acid status has been implicated in allergic disease development in early childhood, but the evidence on allergic disease in later childhood is scarce.
Objective: To examine associations between cord plasma fatty acid concentrations and asthma and atopy among school age children.
Methods: We studied 348 children from Project Viva, a pre-birth cohort study in eastern Massachusetts. Main exposures were individual n-3 and n-6 fatty acids (FAs) concentrations in cord plasma. We ran multivariate logistic regression models adjusted for parental and sociodemographic covariates and calculated odds ratios (OR, 95% CI) for allergic sensitization (total IgE >=100 IU/mL or >=1 allergen-specific IgE>0.35 IU/mL), current asthma (diagnosis plus symptoms/medication use), and current allergic rhinitis (diagnosis plus symptoms) at age 6-10 years.
Results: Prevalence of allergic sensitization, current asthma, and current allergic rhinitis was 51%, 17%, and 24% respectively. Eicosapentanoic acid (EPA) (quartile(Q4) vs. Q1: OR 0.46, 95% CI: 0.22, 0.93) was inversely related to allergic sensitization. We found suggestion of direct associations of allergic sensitization with α-linolenic acid (ALA) (Q4 vs. Q1: OR 1.72, 95% CI: 0.83, 3.59) and linoleic acid (LA) (Q4 vs. Q1: OR 1.68, 95% CI: 0.79, 3.60). Odds of current asthma were higher for higher docosahexaenoic acid (DHA) (Q4 vs. Q1: OR 2.54, 95% CI: 0.96, 6.71). We found no associations with current allergic rhinitis.
Conclusions: Our results suggest that both n-3 and n-6 precursors are directly associated with school-age allergic sensitization, and long-chain FAs were inversely associated.

Abstract Code	P1177
Authors' Names	Haidy Michel Shaker
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Abstract Title	Vitamin D deficiency

Vitamin D deficiency is a worldwide problem; the prevalence of deficiency reaches more than 50% of the population in most of the studies. The causes of deficiency are either inadequate exposure to sun light which plays an important role of biosynthesis of vitamin- D from the skin or inadequate intake of food containing vitamin D. Vitamin D deficiency is linked to many diseases like musculoskeletal disorders, diabetes, obesity, dyslipidaemia, cardiovascular , infections, autoimmune diseases, cancers and increased overall mortality. Correction of vitamin D deficiency which is very simple and available and not expensive improves those disorders significantly.

Our work aimed to screening for 25 (OH) vitamin D deficiency among premenopausal women working in Fayoum University.

Subjects and methods: two hundred healthy premenopausal non pregnant non lactating females aged 40-50 years old working at Fayoum University, subjected to thorough medical history and clinical examination, stressing on color of the skin, BMI and style of clothing and all subjects are screened for 25 (OH) vitamin D using ELISA.

Results: Our results showed that 45 females of 200 were sufficient (22.5%), 91 females were insufficient (45.5%), 64 females were deficient (32%). Vitamin D deficient females subdivided into deficient (82.8%) and severely deficient (17.2%). There was significant difference between the mean of vitamin -D in the different BMI, in normal body weight subjects the mean of vitamin D level was 77.9 ± 21.7 in overweight was 51.4 ± 15.5 in obese (40 ± 22.4) and the difference is highly statistically significant ($p < 0.001$). The mean vitamin -D level for western wearing clothes was 66.8 ± 16.4, for ladies wearing Higab was 62 ± 23.2), and for ladies wearing Niqab 28.3 ± 16.3 and the difference is highly statistically significant ($p < 0.001$). The mean of vitamin D level in dark skinned subjects was 57.2 ± 21.2 while in white skinned subjects was 96.2 ± 33.8 and the difference is highly statistically significant ($p < 0.001$).

Conclusion: More than 75 % of the premenopausal women working in Fayoum University had either vitamin –D deficiency or insufficiency. Obesity, darker skin and insufficient sun exposure are the main factors leading to or associated with 25 – vitamin – D deficiency.

Keywords: Vitamin- D – Deficiency - Skin color - BMI - Diet - Sun exposure

Haidy Michel, Mohamed Mashahit, Emad El Moatasem, Mohamed El Basel and Nagwa k. Roshdy. Prevalence of (25) Vitamin D Deficiency among Premenopausal Women Working In Fayoum University.

Abstract Code	P1178
Authors' Names	Mirey Karavetian, Saade Abboud, Nanne De Vries &Hafez Elzein Lebanon Nutritional Educational Model for Hemodialysis Patients, Lebanon
Corresponding Author	Mirey Karavetian
Country	Lebanon
Abstract Title	Nutritional Educational Model for Hemodialysis Patients, Lebanon

Introduction: Most hemodialysis (HD) patients have trouble achieving optimal dietary adherence especially to dietary phosphorus (P) restrictions. Hyperphosphatemia is considered the "silent killer" among HD patients. Patients on HD who are informed about their dietary needs and restrictions are better equipped for dietary self-management, thus enhancing their compliance to dietary restrictions. Objective: This study aimed to develop patient education material tailored to the needs of the Arab HD patient with the aim of facilitating compliance to a P-restricted diet Methods: Semi structured interviews were conducted in focus groups of HD patients (n=15) and dietitians working with HD patients (n=3) to explore their perspective on facilitators and barriers towards optimal adherence to a P-restricted diet. Educational materials were prepared based on these interviews and other successful methods reported in the literature. The trans-theoretical model was used as the theoretical basis of the educational material. Intervention: Educational materials were tested on 150 randomly selected HD patients from 6 HD units, with comparable patients (n=150) as controls in each participant HD unit. Education of patients in the intervention group was given during 2 hours per patient per month for 6 months by dedicated dietitians trained in renal nutrition. Educational material included 1) Recipe books of culturally accepted foods, restricted in phosphorus, sodium, potassium but still attractive and palatable (7 breakfast, 7 lunch , 7 dinner menus); 2) two posters identifying the high and low P food items mostly used in Lebanon for display in the HD unit; 3) pocket size booklets showing pictures of high P food items and their low P alternatives; 4) educational handouts aiming to improve patients' readiness to accept and apply the P-restricted diet and advance them toward full maintenance of the new behavior. Outcome Measures: Serum P (mg/dL) and knowledge (%) questionnaire on P restricted diet Results: Serum P in the experimental group dropped significantly from 5.6±1.55 mg/dL to 5.0 ± 1.51 mg/dL, no significant change was seen in the control group. Knowledge increased significantly from 40±12.5% to 64±9.8% in the experimental group yet it dropped significantly from 38.4 ±11.9% to 29.7 ±20.7% in the control group. Conclusion: The educational intervention proved to be effective in empowering Lebanese HD patients with dietary knowledge that significantly improved their relevant clinical outcomes.

Abstract Code	P1180
Authors' Names	Mahdi Garelnabi, Ph.D., Department of Clinical Laboratory and Nutritional Sciences, University of Massachusetts Lowell, MA, USA
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Abstract Title	MicroRNA regulations of dietary flavonoids function and the resultant anti-atherosclerotic benefits

Atherosclerosis is a chronic vascular condition associated with lipid deposition and cell infiltratration mediated through a complex series of inflammatory processes with the ultimate development of plaque and tissue build up within the arterial wall. This is the underlying cause of the majority of clinical cardiovascular events, the leading cause of death in the USA and around the world. The etiology of cardiovascular disease is complex and multifactorial, but there is substantial evidence that oxidized lipoproteins and smooth muscle cell (SMC) proliferation triggered by a set of key modulators plays an important role in atherosclerosis pathogenesis. This is supported by a large body of evidence from in vitro and experimental animal studies as well as clinical investigations. However, despite significant progress, there are still many unanswered questions. The discovery of microRNAs (MiRs) a little more than a decade ago has dramatically changed the understanding of gene expression regulation and has provided a unique opportunity to address unexplained metabolic ambiguities. During the last few years a modest number of MiRs have been determined to be linked to this disease, however, they have not been clearly characterized and their functions lack understanding. Although approximately more than seven hundred MiRs are now identified; no credible data on MiRs is linked to exercise induced plaque regression. In this study we evaluated selected microRNAs regulatory function modulated by dietary flavonoids (quercetin) intake in animal model; specifically in transgenic mice lacking LDL receptor. Quercetin is a member of the bioflavonoids family, known to have antiatherogenic, antiinflammatory, and antihypertensive properties; and reported to have cardiovascular protective role. Quercetin through its antioxidant action may protect against oxidative stress induced by free radicals consequently decreasing the potential for modification of low density lipoprotein cholesterol (LDL). Our data has demonstrated that quercetin and exercise activities help reduces atherosclerosis in atherosclerotic mouse model fed atherogenic diet.

Abstract Code	P1181
Authors' Names	Gentile MG, Corradi E, Leonardi R,Lessa C, Clinical Nutrition Unit Niguarda Hospital Milan Italy
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Abstract Title	Modification of body composition and metabolic consumption in long term effective treatment of obesity

Obesity is now a growing phenomenon, not only in industrialized countries, but also in developing countries, resulting in serious social and psychological consequences and constitutes a major cause of chronic non-communicable diseases and disabilities.

Obesity is quite often associated with multiple co morbidities such as hypertension, dyslipidemia and glucose intolerance.

The aim of the study was to evaluate the modification of body composition and metabolic consumption after a multidisciplinary treatment to achieve a reduction of obesity comorbidities.

Methods

58 patients (11 males and 47 females) mean age 48 ± 13 years with obesity (mean BMI 43.6 ± 9.2 Kg/m^2) observed for 4.2 ± 2.3 years were treated with cognitive behaviomal support, personalized Mediterranean style diet and physical rehabilitation program.

The scheme personalized diets were carried out after assessment of nutritional status with anthropometria, indirect calorimetry and bioelectrical impedence and blood tests. The patients then begin a process of group meetings of cognitive behaviour therapy weekly or monthly according to the degree of disease.

Results

The mean values of body composition, resting energy expenditure, clinical and pathology variables at the start (T=0) and at the end of observation (T=1) are shown.

	T0	T1
Number of patients	58	58
Follow up (year)		4.2 ± 2.3
Weight (Kg)	114.4 ± 27.3	84.3 ± 16.8*
BMI (Kg/m2)	43.6 ± 9.2	32.2 ± 6.1*
Δ body weight (Kg)		30.1 ± 19.3
Δ body weight (%)		25 ± 9.9
Fat mass (Kg)	59.02 ± 20.65	35.4 ± 12.7*
Fat free mass (Kg)	55.4 ± 11.9	48.9 ± 7.7
Δ Fat mass (Kg)		23.7 ± 17.8
Δ Fat free mass (Kg)		6.5 ± 6.9
Systolic pressure (mmHg)	138.7 ± 16.7	121.7 ± 12.3*
Diastolic pressure (mmHg)	86.2 ± 12.7	75.1 ± 9.9*
Total plasma Cholesterol (mg/dL)	209.8 ± 39.3	191.9 ± 33.5*
HDL plasma Cholesterol (mg/dL)	49.1 ± 12.6	55.3 ± 16.4*
Plasma triglycerides (mg/dL)	139.6 ± 66.4	98.7 ± 44.7*
Glucose (mg/dL)	102.4 ± 18.6	89.1 ± 12.8*
Insulinemia (μU/mL)	21.5 ± 14.5	15.1 ± 12*
HOMA	5.4 ± 4.1	3.4 ± 2.9*
Measured Kcal/expenditure (Kcal/day)	1834.8 ± 342.1	1541.3 ± 237.7
Diet Kcal/day	1802 ± 314	1741 ± 298

*p<0,001

Conclusion

We observed a significant reduction of BMI and major risk factors. The loss of fat mass represents the 79% of total loss. The reduction of REE was well counterbalanced by a more active
style of life, so we could maintain the quite the same amount diet calorie. Our findings suggest that a long term effective treatment of obesity can significant improve the main comorbilities and it is able to improve the body composition of obesity patients.

Abstract Code	P1184
Authors' Names	Shayan Mohammad Moradi*[1], Negin Naderi[2], Aida Javidan[1], Mohammad Hasan Goudarzi[2], Sajedeh Sadat Tabatabaei Keshmirian[2], Golnesa Adl[2] 1: Omega Research Team (ORT), Tehran, Iran. 2: Faculty of Food Science and Technology, Science and Research Branch, Islamic Azad University, Tehran, Iran.
Corresponding Author	Shayan Mohammad Moradi
Country	Iran
Abstract Title	Stevia and diseases: A new functional food on the table?

Nowadays, in many countries maintaining a healthy diet turned into a challenge for the majority of people. On the other hand, refined sugar consumption has increased rapidly in recent years, resulting in inability to weight management, positive caloric balance, obesity and weight gain. Furthermore, this inadequate dietary habit leads to cancer, inflammatory bowel disease, type 2 diabetes and dental caries. Considering the overconsumption of refined sugar, a natural non-caloric sweetener may draw the attention of individuals who are suffering from complications associated with high levels of sugar consumption. Stevia (Stevia rebaudiana Bertoni) a natural sweet tasting and non-caloric herb, is a new food compound with pharmacological and therapeutic activities. Researches showed that the sweet and functional components of stevia are stevioside and rebaudiosides A, B, C and D. Alongside the mentioned compounds flavonoids also can be found in stevia. Many preclinical and some clinical studies indicate that compounds present in stevia can produce beneficial antihypertensive, anti-hyperglycemic, antioxidant, anti-carcinogenic, chemoprotective, anti-inflammatory and antiviral effects on human health. Some studies showed that stevioside enhances both insulin secretion and insulin sensitivity. In addition, Stevioside also enhances glucose stimulated insulin secretion but does not affect fasting insulinemia. Furthermore, Studies in rats and dogs suggested that stevioside induces vasorelaxation. On the other hand, stevia showed high levels of antioxidant activities due to the scavenging of free radical electrons and superoxides. Immune system support and beneficial effects on treatment of inflammatory bowel disease are among the other health promoting effects of this sweet herb. To be concluded, stevia is a new replacement for sweeteners and considering its recent GRAS acceptance, an increase in the consumption of this functional food will be expected. Although many studies reported health promoting effects of this natural product, still long way is ahead for clinical evidences and demonstration of metabolic pathways regarding to such benefits.

Abstract Code	P1186
Authors' Names	Shayan Mohammad Moradi*[1], Mohammad Hasan Goudarzi[2], Negin Naderi[2], Sajedeh Sadat Tabatabaei Keshmirian[2], Aida Javidan[1], Namdar Kashanian[3] 1: Omega Research Team (ORT), Tehran, Iran. 2: Faculty of Food Science and Technology, Science and Research Branch, Islamic Azad University, Tehran, Iran. 3: Omega Research Team (ORT), Washington DC, USA.
Corresponding Author	Shayan Mohammad Moradi
Country	Iran
Abstract Title	Chocolate and atherosclerosis: A systematic review

Background: In recent years chocolate has been known as a food substance with high levels of antioxidant flavonoids. Atherosclerosis is promoted by elevated platelet activation and impaired endothelial function. Thus, chocolate has the potential to have a beneficial impact on atherosclerosis since decreased antioxidants play an important role in the pathogenesis of atherosclerosis. However, there are still debates regarding the long term effects of chocolate.
Objective: The goal of this study was to conduct a systematic review to investigate the effect of chocolate consumption on atherosclerosis.
Methods: Google Scholar and PubMed were electronically searched for English relevant studies. Observational, experimental and review studies published up to October 2012 that investigated a correlation between chocolate consumption and atherosclerosis or its risk factors were included in the review. The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) and Cochrane recommendations were considered in the systematic review. One reviewer performed the quality assessments by using the validated instrument AMSTAR (assessment of multiple systematic reviews), a one-page tool with 11 questions. The American Dietetic Association Research Design and Implementation Checklist was also used to assess the quality of non-review studies. A data abstraction form was designed to summarize and gather the details of included articles.
Results: The systematic review included 73 articles (7 cohorts, 25 reviews, 8 case controls, 9 cross sectionals, 1 case report, 3 meta analyses, 15 clinical trials, 5 systematic reviews) from 14 countries. Except 7% (n=5) articles (3 clinical trials, 1 cross sectional, 1 review), 93% of the studies suggests that chocolate have beneficial effects on atherosclerosis via effects on lowering blood pressure, anti-inflammation, anti-platelet function, reduced LDL oxidation and higher HDL. Results also showed that studies investigating the effect of dark chocolate, reported more positive results in comparison with other chocolate types. On the other hand, most studies suggest that the flavonoid of chocolate may decrease the risk of cardiovascular mortality.
Conclusion: Findings of this systematic review reveal that many evidence from experimental, observational and review studies suggest that chocolate has a protective effect on atherosclerosis. However, more studies should be conducted to investigate the long term impact of chocolate consumption on atherosclerosis and related complications.

Abstract Code	P1187
Authors' Names	Shayan Mohammad Moradi*1, Mohammad Hasan Goudarzi2, Sajedeh Sadat Tabatabaei Keshmirian2, Negin Naderi2, Aida Javidan1, Namdar Kashanian3, Farnaz Asgarinezhad2 1: Omega Research Team (ORT), Tehran, Iran. 2: Faculty of Food Science and Technology, Science and Research Branch, Islamic Azad University, Tehran, Iran. 3: Omega Research Team (ORT), Washington DC, USA.
Corresponding Author	Shayan Mohammad Moradi
Country	Iran
Abstract Title	Vitamin D and breast cancer: a comprehensive systematic review

Background: Numerous observational and interventional studies have suggested that dietary and/or supplemental intake of vitamin D has anticarcinogenic effects on breast cancer (BC). However, not only the study results are inconsistent, but also there is a paucity of unified knowledge regarding to the relation of different aspects of BC (prevention, after treatment, different BC phenotypes) with of vitamin D intake (supplementation, diet or sun exposure).
Objective: The purpose of this study was to conduct a comprehensive systematic review on the correlation of BC and vitamin D, centralizing all data from different aspects.
Design: A systematic literature review (January 2002 to October 2012) was conducted through Google Scholar, PubMed and bibliographic hand search to identify English articles that evaluated the correlation between BC and vitamin D, regardless of study type. The review followed Cochrane and PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) recommendations. A standard data abstraction form was used and validity assessment was performed by one head investigator using the American Dietetic Association Research Design and Implementation Checklist for primary research and AMSTAR (assessment of multiple systematic reviews) validity assessment tool.
Results: In total 227 articles were identified of which 83 of them considered for assessment. After duplications removed and quality assessments, 62 articles (16 countries, 237,794 subjects in human studies) fulfilled the inclusion criteria. About 68% (n=42) articles supported the association between vitamin D and BC. However, about 10% of studies showed no evidence of relation. Also, 22% of articles did not have a clear conclusion on the relation between vitamin D and BC. The variance in results can be attributed to the ethnics of subjects, sampling issues, lack of proper inclusion criteria and use of wide range of analytical techniques.
Conclusion: findings of this comprehensive review support the association between vitamin D and BC risk. Hence, vitamin D could represent a target for cancer prevention efforts. However, additional research is required to examine the metabolite pathways involved in the effect of vitamin D on BC.

Abstract Code	P1188
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Corresponding Author	Shayan Mohammad Moradi
Country	Iran
Abstract Title	Nutrition and eye disorders: What is the correlation?

Visual impairments (VI) and blindness had been increased in recent years, especially in the aging societies. Furthermore, demographic forecasts indicate that elderly population will be an extending part of developed and developing countries. Age is an important factor which affects the eye and the prevalence of VI and blindness rise sharply with age. Considering the fact that VI will lead to disability in elders, it can be a major challenge in the public health of many societies. In recent years, the role of nutrition and nutritional factors in VI and blindness turned to an expanding interest due to its amenability to modification. Supplementation (antioxidants, zinc, lipids) and remodeling diet are among the most effective nutritional modifications in order to prevent or delay degenerative eye diseases (cataract, glaucoma and age related maculopathy) which are the major causes of VI and blindness, affecting different eye parts; lens, optic nerves and retina. In addition to antioxidants, carotenoids, lutein, omega 3 poly unsaturated fatty acid (PUFA) and zeaxanthin are among mostly investigated nutritional compounds offering protective/preventive means against eye aging. In general, there is an uprising trend in the scientific background of nutrition's role in the pathogenesis of eye disorders. However, there is a need for more experimental and observational studies in different societies, examining the role of nutritional factors in the incidence of eye disorders. In particular, very limited studies have been carried out in order to investigate the latter with strong methodology. The goal of this study is to summarize and update the knowledge existing about the correlation of nutrition and eye diseases.

Abstract Code	P1190
Authors' Names	Shayan Mohammad Moradi *1, Mohammad Hassan Goudarzi 2, Negar Borghei 2, Shiva Khani 2, Negin Naderi 2, Sajedeh Sadat Tabatabaei Keshmirian 2, Tabatabaei Keshmirian2, Aida Javidan 1 1: Omega Research Team (ORT), Tehran, Iran. 2: Faculty of Food Science and Technology, Science and Research Branch, Islamic Azad University, Tehran, Iran.
Corresponding Author	Shayan Mohammad Moradi
Country	Iran
Abstract Title	Health effects of ginger: a systematic review on human studies

Introduction: Traditional herbs have been used to treat many human disorders from a long time ago. Ginger is one of the most common traditional medicines which have been used for therapeutic purposes due to its antioxidant, antimicrobial, and anti-inflammatory potentials. Alongside of ginger food additive role, it has been used for curing various types of human ailments such as digestive complications, cardiovascular disorders, diabetes and cancer.
Objectives: This systematic review was carried out to address human observations and elucidate the health effects of ginger.
Methodology: A systematic review was conducted to investigate human studies that reported health benefit(s) of ginger consumption. Google Scholar was searched for relevant English articles published from January 2002 up to December 2012. PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) recommendations were followed for the review and a review team screened the relevant articles and extracted data using a standardized data-abstraction form. In addition, quality assessment was conducted by a head reviewer using the validated instrument AMSTAR (assessment of multiple systematic reviews) and the American Dietetic Association Research Design and Implementation Checklist for primary researches.
Results: A total of 86 articles were identified to be included in the review. After assessments and duplications removed, 23 articles (14 RCTs, 8 reviews and 1 case control) from 8 countries were considered eligible to be included. The majority of studies (48%) reported that ginger consumption will have beneficial effects on cancer. On the other hand, 18% of articles concluded that ginger has improvement effects on nausea and vomiting after chemotherapy. Other studies also reported that ginger will have cardiovascular improvement effects due to its anti-inflammatory properties (26%). Moreover, some studies also showed beneficial effects on functional dyspepsia and diabetes.
Conclusion: Results of this review demonstrate that many studies suggest ginger has potential treatment effects on various types of aliments. However, a great proportion of studies lack a strong methodology and adequate sample size. Hence, future studies with strong design should be conducted for more reliable evidences.

Abstract Code	P1192
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Abstract Title	Comparing the effect of ultra-filtered feta cheese and yoghurt as probiotic careers on lipid profile: a triple blinded randomized trial

Background: There have been studies investigating the effect of Probiotic yoghurt (PY) on blood lipids. However the results were conflicting. On the other hand, there have been few studies about Probiotic cheese (PCh) and a comparison between these products.
Objectives: The goal of this trial was to compare the consumption effect of PY and PCh on blood lipids in a 7wk period in a large sample.
Design: 180 subjects aged 18 – 65, with <6 mmol/l total cholesterol were participated in the trial. Subjects were assigned into three 60-person groups. E1 consumed 30 g of PCh (daily), E2 consumed 100 g (daily) of PY along with a control group. Probiotics strains in products were Lactobacillus acidophilus LA5 and Bifidobacterium lactis BB12. Anthropometric measurements and blood sampling were conducted at the baseline and end of the seventh wk.
Results: a significant reduction in cholesterol was observed after a 7 wk period in both experimental groups; E1 (-0.42 mmol/L; 95% CI, -0.47, -0.37; P<0.0001), E2 (-0.15 mmol/L; 95% CI, -0.25, -0.05; P=0.007). HDL, LDL, Triglyceride and BMI also showed significant improvements during a 7 wk period. Cholesterol comparison with control also revealed a significant reduction in both groups; E1 (-0.51 mmol/L; 95% CI, -0.63, -0.39; P<0.0001), E2 (-0.27 mmol/L; 95% CI, -0.39, -0.15; P<0.0001).
Conclusion: PCh showed greater improvement effects on blood lipids and it can be used as a new and valuable Probiotic carrier. This trial was registered in the Australian New Zealand Clinical Trials Registry (ANZCTR) at http://www.anzctr.org.au as ACTRN12612000623897.

Abstract Code	P1194
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Abstract Title	Chemopreventive effect of Curcumin

Introduction: Curcumin, one of the most studied chemopreventive agents, is a natural compound extracted from Curcuma longa L. that allows suppression, retardation or inversion of carcinogenesis. Curcumin is also described as an anti-tumoral. The objective of our work is to verify the effect of Curcumin against the hepatotoxicity produced by carbon tetrachloride. Materials and methods: The male albino rats were grouped into four groups: The first group considered as control one, the second administered CCl4, the third treated with Curcumin and the fourth intoxicated by carbon tetrachloride and treated with Curcumin in the same time. After 2 and 4 weeks sacrification occur. Histological studies, liver and kidney function variables and oxidative stress markers were measured in the four groups.
Results: The obtained results show that: Curcumin decreased the toxic effect of CCl4 by amelioration of liver and kidney function variables, oxidative stress markers, hepatic collagen and elastin content and caused improvement of the histological lesions produced in liver and kidney. The results also revealed that the tumor cells found in liver after four weeks of CCl4 administration were not present as a result of Curcumin administration together with CCl4.
Conclusion: Curcumin manifested effective hepatocellular protective action and ameliorative effect against chronic liver damage and developing liver fibrosis induced by CCl4 administration.
Keywords: Carbon tetrachloride, Curcumin, Liver injury, Antioxidant enzyme, Lipid peroxidation.

Abstract Code	P1197
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Abstract Title	Glycemic Index of Six Types of Commercial Rice in Iraq

Blood glucose response and glycemic index (GI) for six types of commercial rice in Iraq were studied. For twelve healthy Iraqi students (8 males and 4 females) with BMI average 21.34, mean age was 21.5years) have volunteered to this study. the six types of rice tested, there were local rice (Anbar 33, Furat, Jasmine) and the others were white long rice; Thai, Indian long grain Basmati (1) and Indian basmati (2) which was processed especially for diabetic patients. Subjects were divided randomly so that each subject would consume two types of rice; three were repeated tests for the reference food which was white wheat bread. After an overnight testing, blood samples were taken immediately as a fasting blood sugar (0 minutes) and 15, 30, 45, 60, 90 and 120 minutes after consumption of the test food. The Blood glucose response was obtained and by calculating the incremental area under the curve (IAUC). GI was determined. This study showed that local types of rice (Anbar 33) had high GI which was significantly higher than other five types while Basmati (2) could be categorized as having intermediate GI. The other was having high GI. The GI was as follow: Anbar 33: 88±5.3, Furat: 76±4.4, Jasmine 73.6±6.7, Thai 74.9±5.2, Basmati (1) 75.6±7.6 and Basmati (2) 62.5±7.1. Many factors may influence the GI value of rice include amylose, amylopectine content, gelatinization, processing and botanical sources. The results might give useful information for dietitian and diabetic specialists.

Abstract Code	P1198
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Abstract Title	AN EVALUATION OF NUTRITIONAL BEHAVIOUR OF STUDENTS ATTENDING A UNIVERSITY IN EASTERN TURKEY

Objectives: This research conducted to determine the nutritional habits of the students attending faculty of economics and administrative sciences in eastern Turkey.
Method: 300 students attending faculty of economics and administrative sciences, department of economics in Eastern Turkey in 2012-2013 academic term constitute universe of research. But we reached only 240 undergraduates willing to participate in this study. For data collection, a questionnaire prepared for this study was used. Implementation of the questionnaire took nearly 15 minutes. Data and percentages evaluated by using numbers, percents and chi-square test.
Findings: It is found by this study that 57.9% of the undergraduates is between 18-21 ages and 78.8% stays in dormitory, average income of the undergraduates is 361 Turkish Liras and 67.9% uses 20-50% of their own income for nutrition, 11.3% is under weight and 9.1% is overweight. In addition to these, it is stated by undergraduates that, in relation to nutritional behavior, 86.3% skips repast, 48.3% skips the lunch and nearly 50% gives importance to the dinner. Although only 28.3% states that they try to take nourishment in healthy way but the remain, constituting most of the sampling, stated that they pay more attention to taste than healthy nutrition and consume junk food. In addition that 65,8% of all consumes the caffeine-containing beverages each day. On the other hand, 59.6%, 42.9% and 43.8% of the undergraduates respectively reported to take the meat and meat products, milk and milk products and high carbohydrate content foods several times a week.

It is found statistically significant when undergraduates' answer analyzed and compared according to their gender ($p<0.05$).
Conclusion: Last of all, it is determined for the undergraduates that they pay more attention to taste than healthy nutrition, consume high carbohydrate content and increasingly junk foods, skip repast.
Key words: nutrition, eating habits, higher education, students

Abstract Code	P1199
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Abstract Title	Are all coloured fruits cardioprotective? Effects of betanin-rich red pitaya juice in diet-induced obesity in rats

Red pitaya may improve lipid profiles and glucose concentrations in diabetic rats, probably due betalains such as betanin. The aim of this study was to assess whether red pitaya juice produces therapeutic effects on high-carbohydrate, high-fat diet-induced obesity in rats. Male Wistar rats were randomly divided into 2 groups based on their diet for 16 weeks; corn starch–rich diet-fed rats (C; n=8) and high-carbohydrate, high-fat diet-fed rats (H; n=8). The rats developed hypertension, dyslipidaemia, impaired glucose tolerance, excess fat deposition and increased pro-inflammatory markers. Red pitaya juice (5 % in food, RP) was administered for the last eight weeks. Total fat mass was determined with DXA scan. Abdominal adiposity index was determined from the excised adipose tissue. Heart function was determined in vivo with echocardiography and ex vivo with Langendorff hearts. Glucose uptake was measured with OGTT. Red pitaya juice increases total fat mass, abdominal obesity index and abdominal adipose tissue masses ($P<0.05$). No improvement was observed in glucose tolerance test and systolic blood pressure ($P<0.05$). Red pitaya did not reversed cardiovascular remodeling in left ventricular eccentric hypertrophy and left ventricular mass ($P<0.05$). However, a reduction in cardiac stiffness was observed. In conclusion, incorporation of the appropriate coloured fruits in healthy diet for disease prevention should be carefully considered.