Objective To investigate the pattern of sleep and its relationship with obesity in primary school children.

Materials and Methods We carried out a cross sectional study. Data were obtained from a representative sample 270 primary school children (119 boys and 151girls) aged 6–9 years. Sleep pattern was measured for 7 consecutive days using Actigraph accelerometer as well as daily logs. Directly measured height and weight data were used to define overweight and obesity according to the centers for disease Control and Prevention's (CDC) 2000 Growth Charts.

Results No significant difference (p>0.05) was found in current study between boys and girls for BMI percentiles, weekend sleep duration and efficiency. But girls were found to have higher values (p<0.05) than those of boys for height, weight for age and lower values for 7 days and weekdays sleep duration. However, after adjusting these data for age the significant difference for 7 days and weekdays sleep duration disappeared. In addition, sleep efficiency was higher (p<0.05) in girls than boys during 7 days and weekdays.

Conclusions The current study revealed no differences for sleep duration and efficiency among overweight and obese children compared to normal weight one. However, other lifestyle factors might be related to body weight status in children.

1426 RELATIONS BETWEEN OBESITY AND 25-HYDROXYVITAMIN D IN EMIRATI YOUTH

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Objectives The aim of this study was to identify the correlation of obesity with 25-hydroxyvitamin D levels in a population-based sample of schoolchildren Al Ain, United Arab Emirates.

Methods It was a cross-sectional study. A random sample of 1018 adolescents aged 12 to 18 years was selected from 140 Schools. A self-administered questionnaire was used to obtain socio-demographic characteristics, physical activity and dietary habits. Blood samples were collected after overnight fast for more than 8 hours. Blood pressure (BP), height weight, waist and hip circumference measurements were made by trained nurses. Body mass index (BMI) less than 85th, greater than 85th but less than 95^{th,} and ≥95th percentiles for age and gender were used to define normal, overweight and obese according to the 2000 CDC growth charts. Fasting blood glucose and plasma lipids were also measured. Serum 25 (OH) D concentrations were measured in subset of youth aged 15 to 18 years.

Results The age of study participants (n=315) ranged from 15 to 18 years. Overall 13% of the participants had vitamin D deficiency (<15 ng/mL). A high proportion (21%) of female youth had vitamin D deficiency compared to their male counterparts (5%). After adjustment for age, female gender, body mass index was negatively correlated with vitamin D levels (p<0.05).

Conclusion The present findings emphasize the importance of obesity prevention in order to prevent vitamin D defiance. There is significant disparity by gender and vitamin D deficiency prevention programs should particular focus female children.

1427 FAST-FOOD CONSUMPTION, MICRONUTRIENT INTAKE AND ANXIETY LEVELS AMONG PUPILS AGED 8–12 YEARS OLD IN TEHRAN-IRAN

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Background and Aims With regard to excessive consumption of fast foods as an indicator of a lifestyle characterized by urbanization, overworking, low resting time, insufficient time for choosing or preparing food and lack of a pertinent study about this issue in Iran, the present study was conducted aiming at analyzing the relationship between consumption of fast foods and the amount of micronutrient intake as well as anxiety.

Methods We conducted a cross-section study with 488 pupils aged 8–12 years living in Tehran selected by cluster sampling from 22 districts of Tehran. Diet assessments were done using 24 hours recall in two times with a week interval. Levels of anxiety were determined using the Persian version of the validated Speilburger test. A regression analysis model with appropriate odds was used to assess the effect of fast food consumption on anxiety variables.

Results Significant statistical relationship was observed between consumption amount of fast foods and trait and state anxiety levels. Adjusting for age, gender and body mass index, the Proportional Odds Regression Model showed a significant relationship between consumption amount of fast foods and trait and state anxiety. odds of getting either moderate or severe anxiety in those students who frequently consumed fast foods was seven folds higher than those students who rarely used fast foods.

Conclusions High consumption of Fast-foods was associated with the increased anxiety levels.

1428 ASSOCIATION BETWEEN VISCERAL FAT AND BLOOD PRESSURE IN YOUNG ADOLESCENTS IN WESTERN INDIA

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Background and Aims Risk of metabolic syndrome is 5 times higher in adolescents with more visceral fat deposition. We studied the association between visceral fat and blood pressure in young adolescents of gujarati ethnicity.

Methods 50 young healthy adolescents (age 17 to 21 years) of both genders from local community college participated in the cross-sectional non-experimental study. Omron Body Composition Monitor was used to quantify visceral fat level and visceral fat analysis. Height, Blood Pressure, Weight and other obesity parameters were measured. Results were expressed as mean±SD. Independent samples T test and Linear regression analysis was used.

Results Boys and Girls were equally recruited. No significant differences found between groups for pulse, diastolic pressure (DP) and visceral fat (VF) but differences between boys and girls for systolic pressure (SP), pulse pressure (PP) and mean arterial pressure (MAP) were present. Significant correlation between Visceral Fat (2.54±2.2) and Systolic Pressure (102.88±9.99), Diastolic Pressure (69±8.23), Mean Arterial Pressure (80.26±8.53) and Pulse Pressure (33.88±4.98) for females and between Visceral Fat (4.8±3.74) and Systolic Pressure (115.88±11.37), Mean Arterial Pressure (90.63±16.16) and Pulse Pressure (41.60±8.34) with the best correlation between Mean arterial Pressure and Visceral fat among males.

Conclusion Visceral obesity correlated with mean arterial pressure in both sexes with better correlation in males. Distribution of fat in the body is an important indicator which needs to be monitored and/or targeted in management of overweight and obese adolescents.

1429 LOWER COGNITIVE PERFORMANCE AMONG OBESE EGYPTIAN ADOLESCENTS

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Objective To investigate cognitive function in obese Egyptian adolescents.
Methods A stratified-cluster proportionate random sampling was used to select a representative sample of 4899 pupils in preparatory school aged 12–15 year. Overweight was defined as BMI ≥85th but <95th percentile, while obesity as ≥95th BMI percentile, using Egyptian percentile. Wechsler Intelligence Scale and Executive Function test were used to assess cognitive function.
Results The prevalence of overweight was 14.9% and obesity was 6.6%. The children's mean full scale IQ was 89.54. Wechsler Intelligence Scale revealed significant differences in performance intelligence quotient (PIQ) scores between overweight and obese children. Parental educational was significantly related to total intelligence quotient (TIQ) (p 0.03). Executive function was significantly impaired in obese adolescents. Executive function was significantly lower in obese than overweight adolescents. After adjustment for age and parental education level female obese adolescents had lower cognitive function than male adolescents. BMI and waist circumference were the best predictor of impaired cognitive function in obese and overweight adolescents.
Conclusion Overweight and obesity were associated with cognitive dysfunction in adolescents.

1430 OBESITY - ADOLESCENT PROBLEM

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Background Obesity is one of the most serious health problems of the modern world.
Aim Was to assess the prevalence of obesity in adolescents, who are treated in the school infirmary "SMT" Health Center Novi Sad.
Material and Methods The study was conducted among high school students across the measurement of anthropometric parameters and calculate body mass index. The students answered questions about the quality and quantity of food and liquid intake, frequency and duration of physical activity or no activity.
Results The study lasted over two academic years (2009 to 2011.), The number of učenika. Gojaznih 92.93%: 16.23%, fed: 4.49% ideal body weight had: 72.21% of students. Rolls for meals consumed 62.47% of adolescents, the liquid entered in the form of soda 71.82%, not soda and water was used by 21.12%, adolescents consumed sweets daily: 80.85% of adolescents. Only 39.57%, daily participation in the sport, and they rarely participate 9.23%, 73.56% of them even sit in front of the TV or computer, with 2 or more hours a day.
Conclusion The consequence of obesity is sedentary lifestyle, lack of exercise, improper and inadequate and Save. Preventive measures should focus on: diet, physical activity, reducing sedentary habits, which is a prerequisite for the prevention of possible consequences made in adulthood.

1431 ATHEROSCLEROSIS RISK FACTORS IN OBESE CHILDREN AND ADOLESCENTS

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Introduction Atherosclerosis is among the important long term complications and leading causes of death among obese children and adolescents. Its risk factors (RFs) include mainly: high body mass index (BMI), central obesity, smoking, lack of physical activity (PA), hypertension, hyperglycemia, elevated uric acid (UA), alanine aminotransferase (ALT), inflammation, adhesion molecules (as E-selectin) and highly sensitive (hs) CRP.
Aim of the work To determine the extent and severity of the aforementioned obesity-related atherosclerotic risk factors among school aged children and adolescents.
Subjects and methods The sample has included 98 obese (non-syndromic) and 36 non obese control subjects aged 6–16 years. A questionnaire was filled to evaluate the daily and weekly PA calculated in hours, anthropometry was done and blood pressure was measured, together with assessment of serum lipid profile and levels of fasting blood sugar, ALT, UA, E-selectin and hs CRP.
Results 55% of obese group have shown 4 or 5 atherosclerotic RFs. One or more features of abnormal lipid profile were found in 94% of obese group with 73% showing high cholesterol level. ALT and UA were significantly higher in the obese group, similarly E-selectin that was elevated in71% of obese and hs CRP were significantly higher among obese. FBS did not show similar significant elevations. Positive correlations were found between cholesterol, E-selectin and hs CRP with BMI and waist/hip ratio.
Conclusion Most of obese children and adolescents do suffer from some risk factors that can lead to an earlier and greater risk for developing atherosclerosis.

1432 CHILDREN AND OBESITY - HOW SEVERE IS THE PROBLEM?

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Introduction Childhood is more ofen nowadays confronting with a different pathology, specific to adulthood like obesity, diabetes mellitus, essential hypertension and hypercholesterolemia. The prevalence of these diseases is rising and cardiovascular risk factors are present even in children and the key is represented by the process of atherosclerosis.
Objective The aim of our study is to determine the presence of cardiovascular risk factors in childhood and if there is any evidence of atherosclerosis effects on the vessels.
Material and method The study had included 80 children, boys and girls, aged between 10 and 18 years. All of the children had obesity. The protocol of investigations had consisted in: blood pressure measurement (BP), body mass index calculation (BMI), blood levels of glucose, oral test of glucose tolerance, cholesterol, tryglycerides, low density lipoproteins, high density lipoproteins, echocardiography and measurement of the mass of the left ventricle, Doppler ecograpy of the common carotid artery and measurement of the intima-media thickness (IMTc) as a evidence of the atherosclerotic process.
Results We had found a stong and positive correlation between IMTc and BMI, systolic BP, the level of total cholesterol, tryglycerides and a negative correlation with the level of high density lipoproteins. All the subjects had had impairment of the oral test of glucose tolerance.
Conclusions The rising incidence of obesity in children is a reality. It is strongly connected with the atherosclerosis and its consequences, like early structural changes of artery, even in childhood, and therefore prevention should be a priority.

1433 VITAMIN D DEFICIENCY AND SECONDARY HYPERPARATHYROIDISM IN OBESE CHILDREN

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Obesity subjects individuals into metabolic and endocrine disorders. Thus obesity may increase the risk of vitamin D deficiency. This text aims at studying the prevalence of vitamin D deficiency and secondary hyperparathyroidism in obese children. In a non-randomized