The data were recorded by questioner and analysis with spss 11.5. Frequency distribution, mean, standard deviation, T student, Chi square, Mann Whitney and fisher tests were used.

Results During the study, 150 newborn were enrolled. Ninety five of 150 (63.3%) were male and the other were female. The mean gestational age was 30.24±2.76 (minimum 24 maximum 40), the mean birth weight was 2437.76±539.25 (minimum 560 maximum 3470). The mortality rate was 42.7% (64 of 150). The most common complications were nosocomial sepsis (36.4%), pulmonary hemorrhage (18.4%), pneumothorax (16.4%), intracranial hemorrhage (10.4%) and pneumonia (8.4%).

Conclusions In this study the mortality rate and complications were high. Therefore pay attention to these patients is essential especially nursing patient ratio, indeed as sepsis is very common usage of disposable equipment is necessary.

Background and Aims Bone metabolism involves understanding many factors, especially during puberty, when bone turnover is significant and the bone mass peak must be achieved as a protective factor of future bone health. The objective was to evaluate the behavior of formation and resorption bone biomarkers (BB) in function of biological maturation in female adolescents.

Methods Evaluation of formation and resorption BB, osteocalcin (OC), bone alkaline phosphatase (BAP) and carboxyterminal telopeptide (S-CTx) by correlating them with bone mineralization, bone age and pubertal development in healthy adolescent girls. Seventy-two volunteers were subdivided into groups according to chronological age/bone age (BA): 10–11 years (n=12), 12–13 years (n=16), 14–15 years (n=15) and 16–19 years (n=29). The following were recorded: weight (kg), height (m), BMI (kg/m2), calcium intake (3-day 24h food recalls (mg/day), puberty events (Tanner stages), serum OC (ng/mL), BAP (U/L), S-CTx (ng/mL) and bone mineral density (BMD) as calculated by DXA (g/cm2) in the spine (L1-L4), proximal femur and whole body. The project was approved by the UNESCO Ethics Committee.

Results BB showed similar behaviors, with higher mean values for 10–12 years and when adolescents were in the B2-B3 Pubertal Maturation Stage (B2: BAP=110.16 U/L, OC=33.81ng/mL, S-CTx=1.66 ng/mL and B3: BAP=136.50 U/L, OC=39.15ng/mL and S-CTx=1.88 ng/mL; p<0.001). Mean BB values decreased with advancing BA and pubertal maturity.

Conclusions BB values showed parallelism with peak height velocity and significant negative correlation with BMD in the different evaluated sites, with chronological and BA; higher BMD values correlated with lower bone biomarker values.

Background and Aims The alarming number of young people tend to develop the typical clinical picture of depression. Aim is to determine the presence of depression among young people in Serbia on a representative sample.

Methods Socio-epidemiological surveys and the Beck Depression Inventory Assessment, completed by 2049 students of upper secondary school.

Results The feeling of loss of energy and fatigue was the most common symptom, 40.1% of young people answered yes to this question.0.34% of respondents have difficulty concentrating and making decisions, and 31.6% state that what is bothering them is a feeling of sadness and despondency.

The feeling of decreased self-esteem occurs to 24.5% of respondents, 22.2% of them have no more interest in usual activities. Feeling excessive guilt is confirmed by 21.7% of students, and 19.8% think in the pessimistic way about the future. Problems with appetite have 16.5%, and 15.6% have sleeping problems. 9.0% of young people often think about death or suicide.

Conclusions All these data, especially the one about thinking about suicide, tell how frequent depressive symptoms are and how much they can be dangerous. Although depressed mood is one of the developmental characteristics of adolescence, this many young people who show a tendency to develop this disorder is certainly alarming and require additional efforts in order to counteract this trend.

Background and Aims Bone metabolism involves understanding many factors, especially during puberty, when bone turnover is significant and the bone mass peak must be achieved as a protective factor of future bone health. The objective was to evaluate the behavior of formation and resorption bone biomarkers (BB) in function of biological maturation in female adolescents.

Methods Evaluation of formation and resorption BB, osteocalcin (OC), bone alkaline phosphatase (BAP) and carboxyterminal telopeptide (S-CTx) by correlating them with bone mineralization, bone age and pubertal development in healthy adolescent girls. Seventy-two volunteers were subdivided into groups according to chronological age/bone age (BA): 10–11 years (n=12), 12–13 years (n=16), 14–15 years (n=15) and 16–19 years (n=29). The following were recorded: weight (kg), height (m), BMI (kg/m2), calcium intake (3-day 24h food recalls (mg/day), puberty events (Tanner stages), serum OC (ng/mL), BAP (U/L), S-CTx (ng/mL) and bone mineral density (BMD) as calculated by DXA (g/cm2) in the spine (L1-L4), proximal femur and whole body. The project was approved by the UNESCO Ethics Committee.

Results BB showed similar behaviors, with higher mean values for 10–12 years and when adolescents were in the B2-B3 Pubertal Maturation Stage (B2: BAP=110.16 U/L, OC=33.81ng/mL, S-CTx=1.66 ng/mL and B3: BAP=136.50 U/L, OC=39.15ng/mL and S-CTx=1.88 ng/mL; p<0.001). Mean BB values decreased with advancing BA and pubertal maturity.

Conclusions BB values showed parallelism with peak height velocity and significant negative correlation with BMD in the different evaluated sites, with chronological and BA; higher BMD values correlated with lower bone biomarker values.

Background and Aims The alarming number of young people tend to develop the typical clinical picture of depression. Aim is to determine the presence of depression among young people in Serbia on a representative sample.

Methods Socio-epidemiological surveys and the Beck Depression Inventory Assessment, completed by 2049 students of upper secondary school.

Results The feeling of loss of energy and fatigue was the most common symptom, 40.1% of young people answered yes to this question.0.34% of respondents have difficulty concentrating and making decisions, and 31.6% state that what is bothering them is a feeling of sadness and despondency.

The feeling of decreased self-esteem occurs to 24.5% of respondents, 22.2% of them have no more interest in usual activities. Feeling excessive guilt is confirmed by 21.7% of students, and 19.8% think in the pessimistic way about the future. Problems with appetite have 16.5%, and 15.6% have sleeping problems. 9.0% of young people often think about death or suicide.

Conclusions All these data, especially the one about thinking about suicide, tell how frequent depressive symptoms are and how much they can be dangerous. Although depressed mood is one of the developmental characteristics of adolescence, this many young people who show a tendency to develop this disorder is certainly alarming and require additional efforts in order to counteract this trend.

Background and Aims Bone metabolism involves understanding many factors, especially during puberty, when bone turnover is significant and the bone mass peak must be achieved as a protective factor of future bone health. The objective was to evaluate the behavior of formation and resorption bone biomarkers (BB) in function of biological maturation in female adolescents.

Methods Evaluation of formation and resorption BB, osteocalcin (OC), bone alkaline phosphatase (BAP) and carboxyterminal telopeptide (S-CTx) by correlating them with bone mineralization, bone age and pubertal development in healthy adolescent girls. Seventy-two volunteers were subdivided into groups according to chronological age/bone age (BA): 10–11 years (n=12), 12–13 years (n=16), 14–15 years (n=15) and 16–19 years (n=29). The following were recorded: weight (kg), height (m), BMI (kg/m2), calcium intake (3-day 24h food recalls (mg/day), puberty events (Tanner stages), serum OC (ng/mL), BAP (U/L), S-CTx (ng/mL) and bone mineral density (BMD) as calculated by DXA (g/cm2) in the spine (L1-L4), proximal femur and whole body. The project was approved by the UNESCO Ethics Committee.

Results BB showed similar behaviors, with higher mean values for 10–12 years and when adolescents were in the B2-B3 Pubertal Maturation Stage (B2: BAP=110.16 U/L, OC=33.81ng/mL, S-CTx=1.66 ng/mL and B3: BAP=136.50 U/L, OC=39.15ng/mL and S-CTx=1.88 ng/mL; p<0.001). Mean BB values decreased with advancing BA and pubertal maturity.

Conclusions BB values showed parallelism with peak height velocity and significant negative correlation with BMD in the different evaluated sites, with chronological and BA; higher BMD values correlated with lower bone biomarker values.
Aim Hormonal balance, genetic background, calcium/vitamin D metabolism, nutrition, lifestyle and physical activity are principle factors effecting bone health during puberty. The aim of the study is to evaluate the effect of regular sportive activity (SA) on bone mineral density.

Materials and methods Adolescents admitted to Department of Pediatrics with licensed regular SA (n: 55) and without regular SA (n: 56) were included in the study. Age, height, body weight, body mass index (BMI), Tanner stages, educational status of parents, mean daily calcium intake, smoking, sun exposure, total of time for watching television and playing computer and type of licensed SA were recorded. Bone mineral density (BMD) was measured with a quantitative ultrasonography device.

Results BMI was higher in group without a regular SA (p=0.024). Adolescents with regular SA had higher BMD when compared to group without a regular SA (p=0.011). Vitamin D levels were also higher in group with SA (p<0.001). Daily calcium intake did not show any significant difference between groups (p>0.05). Higher educational status of parents was significantly related with higher prevalence of SA. Vitamin intake was higher in adolescence with SA (p=0.002) and smoking was more common in adolescents without regular SA (p=0.023).

Conclusion Quantitative ultrasound can be used to evaluate the BMD in children. Physical activity during adolescence is important for bone growth and SA should be encouraged earlier. Especially, adolescents whose mothers had higher educational status took part in SA more frequently.

432 NUTRITIONAL KNOWLEDGE, ATTITUDE AND PRACTICE OF HIGH SCHOOL GIRLS LIVING IN KUWAIT: A PILOT STUDY

doi:10.1136/archdischild-2012-302724.0432

F Arefaee, M Nassar, S Alkhafri, S Alaquttan, A Al Mutairi. Pediatrics, Adan Hospital, Kuwait, Kuwait; Pediatrics, Ain Shams University, Cairo, Egypt; Food and Nutrition Department, Adan Hospital, Kuwait, Kuwait

Aim of the work This study was designed to study the nutritional knowledge, attitude and practice of adolescent school girls in Kuwait to assess the current situation and advise the need for directed nutritional programs.

Methods A dietary questionnaire on nutritional knowledge, food habits, eating behavior and food frequency sheet as well as anthropometric measurements were done to 72 school girls aged 15 to 17 years who were recruited from a governmental high school in Kuwait.

Results Among the studied girls nearly half stated that the family was their primary nutritional knowledge source compared to approximately one fifth who chose the internet, another one fifth were from books and journals. More than half of the studied girls had below average knowledge about different nutrients and their function. This deficient knowledge affected their food frequency sheet and limited their choices to below average in about half of cases. Their life style was less than satisfactory in over two thirds where the girls preferred sedentary activities compared to active cases. Their life style was less than satisfactory in over two thirds where the girls preferred sedentary activities compared to active cases.

Conclusion Although there is insignificant effect of the deficient nutritional knowledge and dietary behavior of the studied high school girls on their BMI, this deficient nutritional knowledge is likely to have a negative impact on their nutritional status as future mothers as well as the nutritional status of their children to come since family is the commonest source of nutritional knowledge.

433 THE KNOWLEDGE OF SEXUAL TRANSMITTED DISEASES ADOLESCENCE IN LOW ECONOMIC LEVEL

doi:10.1136/archdischild-2012-302724.0433

MA Taşar, H Demir, Y Dallar Bilge. Pediatrics, Ministry of Health, Ankara Training and Education Hospital, Ankara, Turkey

The purpose of this work is to do a research on the level of awareness about sexually transmitted diseases (STD) of adolescence and the factors effecting it.

Method A number of adolescent at the ages of 14–17 (n=527) were asked to complete a survey questioning their level of knowledge of STDs and their sociological and demographical issues.

Data were entered into the SPSS 15.0 program and evaluated. A value of p<0.05 was assumed for statistical significance.

Findings 78.9% of the adolescent responded positively to the question of whether or not they are aware of the fact that diseases could be transmitted via sexual intercourse. 48.6% of the adolescent responded negatively to whether or not they knew “how the diseases are transmitted”, 59.4% responded negatively to whether or not they know “how to protect themselves from those diseases”, and 67.2% responded negatively to whether or not they know “the symptoms of STDs”. The count of the right answers were in increase in correlation with the education and economic level of the parents (p=0.05). The results showed that 49.3% of them learned information about STDs at school and from medical institutions. 9.8% of them stated that they had intercourse in the last one-year period and 8.0% of them utilized a method of protection.

Result Awareness level of adults about STDs is inadequate. For that, schools and medical institutions, where they are inclined most to get education, should organize mass education events for them about these matters.

434 RELATIONSHIP BETWEEN OBESITY AND 8-HYDROXY 2- DEOXY GUANOSINE AS AN OXIDATIVE MARKER IN OBESE ADOLESCENTS OF GIZA

doi:10.1136/archdischild-2012-302724.0434

E Abdel Hameed, A El Waikakd, NEM Hassan, I Sherif, A Abd El-Shaheed, H Sebii, S El Zayat. Child Health; Physiology; Anthropology, National Research Centre, Cairo, Egypt

Background and Aim This study was conducted to assess the relationship between obesity markers (Body mass index “BMI”, weight percentage) and DNA oxidative marker 8-hydroxy guanosine (OHG), as a predictor for future clinical problems in obese adolescents of Giza.

Methods The study was conducted on 108 adolescents aged 13–18 years (22 boys, 81 girls). BMI was calculated as body weight (kg) divided by height (m) squared and obesity was defined as BMI of 95 percentile. Fat percentage was determined by using Biological impedance technique. Oxidative stress markers as 8-hydroxy guanosine, superoxide and glutathione were measured. The adolescents were divided according to BMI into two groups. Group I with BMI > 95 percentile and less than 97 percentile (obese) and Group ∩ with BMI > 97 percentile (severely obese).

Results Significant differences were detected between the two groups of the study as regard obesity markers (BMI, fat %) and oxidative stress markers (lipid oxidation, superoxide dismutate enzyme activity, glutathione peroxidase enzyme activity, 8-hydroxyl guanosine) (p<0.0005). Significant positive correlations were detected between obesity markers and oxidative stress markers among severely obese adolescent (group II). Obesity is highly associated with states of oxidative stress in adolescents, with a positive relation with 8-hydroxy-guanosine and obesity markers and other oxidative markers.

Conclusion This marker might play an important role in the prediction of future development of some clinical diseases.