to those from a group of apparently healthy students with normal T score (T score ≥ -1).

Results: Osteopenic group were 52 students (26%); 16 males and 36 females, their mean age was 15.46 ± 0.40 years. Cadmium level in blood and urine was significantly higher in osteopenic group. Interpretation of dietary habits in the osteopenic and control groups revealed that carbonated beverages, potatoes chips, corn snacks intake were significantly increased in osteopenic group, whereas no significant difference was detected in milk, tea, and coffee intake. T score was negatively correlated with blood cadmium, urine cadmium, as well as carbonated beverages, potatoes chips, corn snacks. Cadmium concentrations in tap water as well as in commercial mineral water were negligible, but its concentration in carbonated beverages, potatoes chips, corn snacks was relatively high.

Conclusion: Osteopenia and osteoporosis are not uncommon problem among secondary school students in Egypt. Cadmium exposure, evident by high blood and urinary levels, is a risk factor for development of low BMD. Faulty dietary habits, including increased carbonated beverages, potatoes chips, and corn snacks intake, contributes to the occurrence of osteopenia.

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AB1262

THE RELATIONSHIP BETWEEN HYPERURICEMIA AND HEART RATE IRREGULARITY, USING DATA FROM THE KOREAN NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY 2016

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Background: Hyperuricemia is one of the well-known cardiovascular risk factors. In recent studies, hyperuricemia has been shown to be an independent risk factor for atrial fibrillation, which may be associated with oxidative stress or inflammation. There is still a lack of data on the association of hyperuricemia and arrhythmia other than atrial fibrillation.

Objectives: In this study, we investigated the relationship between hyperuricemia and heart rate (HR) irregularity using representative sample data of adult Korean.

Methods: The study included 5870 subjects aged 19 years or older who completed the uric acid measurement in the Korean National Health and Nutrition Examination Survey conducted in 2016. Logistic regression was used to analyze the association between hyperuricemia and HR irregularity identified by the examiner at the time of the survey.

Results: Subjects with HR irregularity were older, had more smoking and drinking, had a higher prevalence of HTN, and had lower glomerular filtration rate than those with regular heartbeat. In the presence of hyperuricemia, the HR irregularity was three times higher than in the absence (HR 3.65, 95% CI 1.77-7.53, $P = 0.0005$). The association of HR irregularity and hyperuricemia was significant in most subjects, especially in those older than 65 years, with diabetes and hypertension.

Conclusion: Hyperuricemia was highly correlated with HR irregularity in adult Korean representative sample data, especially in subjects with conventional cardiovascular risk factors such as old age, hypertension, diabetes mellitus. This study included all subjects who showed HR irregularity at the time of examination, not just atrial fibrillation. Therefore, it is suggested that hyperuricemia may be associated with other arrhythmia as well as atrial fibrillation. Further researches are warranted to clarify the relationship between hyperuricemia and arrhythmia and its mechanism.

Disclosure of Interests: None declared

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AB1263

C-REACTIVE PROTEIN LEVEL AS A MARKER FOR DYSLIPIDEMIA, DIABETES, AND METABOLIC SYNDROME: RESULTS FROM THE KOREAN NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

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Background: High sensitivity C-reactive protein (hsCRP) C-reactive protein (CRP) is a marker of inflammation and increased hsCRP is reported in many diseases including cardiovascular disease, diabetes, metabolic syndrome, arthritis, and malignancies.

Objectives: This study evaluated the association between hsCRP and comorbidities.

Methods: A total of 5,887 (weighted $n = 40,251,868$) participants age 19 or older from the 2016 Korean National Health and Nutrition Examination Survey were included for analysis. Weighted prevalence and odds ratio (OR) of comorbidities were analyzed according to the continuous variable of log hsCRP levels.

Results: Mean age was 46.7 and mean hsCRP levels were 1.23mg/L. Mean hsCRP levels were higher in participants with cardiovascular diseases and cardiovascular risk factors, osteoarthritis, rheumatoid arthritis, pulmonary tuberculosis, and several cancers of gastric, colon, breast, and cervix than the general population. In multivariable analysis, hsCRP concentration was associated with increased prevalence of hypertriglyceridemia (OR 1.15, 95% CI 1.04-1.28, $p = 0.007$), diabetes (OR 1.20, 95% CI 1.05-1.37, $p = 0.005$), and metabolic syndrome (OR 1.22, 95% CI 1.11-1.35, $p < 0.001$) after adjustment for socioeconomic and lifestyle characteristics. There was no significant association between hsCRP level and cancers.

Conclusion: hsCRP was associated with increased risk of dyslipidemia, diabetes, and metabolic syndrome in the general population.

Disclosure of Interests: None declared

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AB1264

THE RELATIONSHIP BETWEEN SERUM URIC ACID AND PULMONARY FUNCTION IN KOREAN ADULT POPULATION: DATA FROM THE KOREAN NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

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Background: Hyperuricemia is associated with several comorbidities. The association between uric acid and pulmonary function is still controversial.

Objectives: The aim of this study was to evaluate the relationship between serum uric acid and pulmonary function in Korean adult population.

Methods: A total of 3,177 (weighted $n = 19,770,902$) participants aged 40 years or older from the 2016 Korean National Health and Nutrition Examination Survey were included and performed cross-sectional study.

Results: Participant with hyperuricemia was older than participants with normouricemia in females. Body mass index, Mean arterial pressure, and hemoglobin A1c, and estimated glomerular filtration rate (eGFR) were significantly associated with uric acid levels in both sex. Hyperuricemia was significantly associated with decreased FEV1 and FVC in females after adjustment for age, income, region, education, marital status, alcohol consumption, smoking, body mass index, mean arterial pressure, hemoglobin A1c, and eGFR ($\beta = -0.143$, P -value = 0.002 and $\beta = -0.159$, P -value = 0.001, respectively). There was no significant association between uric acid levels and lung function in males. After additional adjustment for respiratory disease including pulmonary tuberculosis, asthma, and lung cancer, hyperuricemia was associated with decreased FEV1 and FVC in females ($\beta = -0.142$, P -value = 0.001 and $\beta = -0.161$, P -value < 0.001, respectively).

Conclusion: Hyperuricemia was associated with decreased FVE1 and FVC in female general population.