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**DETERMINING OF THE ENERGY IMBALANCE IN PEOPLE WITH
NORMAL WEIGHT AND OVERWEIGHT**

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Introduction. According to current views, the leading factors of increased body weight and obesity are considered the decrease of physical activity in conditions of uncontrolled consumption of high-calorie foods. Obesity is emerging as an energy imbalance when energy intake from food significantly exceeds its use. The optimal diet requires compliance to the physiological needs and rhythms, balance between energy intake and expenditure in the body.

Aim. The aim of our study was to determine how the energy value of the diet conforms to the energy expenditure in young persons with normal and overweight.

Materials and methods. A study involved 68 individuals of both sexes 18-25 years old. We determined the weight, height, waist and hip girth and calculated the body mass index (BMI). Individuals with a BMI of 18,5-24,9 kg/m² were included to the control group (20 boys and 21 girls). Individuals with a BMI above 25 kg/m² formed a main group of people with the overweight (11 boys and 16 girls). Nutritional status was investigated by the method of 24-hour reproduction during two days. Calculation of basal metabolic energy was done by Harris-Benedict and Mifflin-St Jeor formulas. The recommended daily energy intake to maintain the current body weight was calculated using the coefficient of physical activity 1,2 for people with the minimal physical activity. Statistical analysis of data was performed using the software package Statistika 6,1.

Results. The results show that men of the main group are consumed in the weekend by 1,5 times kcal more than recommended by calculations based on the data usage Harris-Benedict formula. Comparison of actual energy intake of the recommended daily intake of energy, calculated according to Mifflin-St Jeor formula, of men from the main group exceeded for 1,4 times in the working day and 1,8 times in the weekend. Women of the main group actually consumed in the working day and the weekend by 1,3 times kcal more than recommended by calculations using data from Harris-Benedict formula. When comparing the actual energy consumption of the recommended daily intake calculated by Mifflin-St Jeor formula, the excess was respectively by 1,5 times in the working day and 1,6 times in the weekend.

Conclusions. It was concluded that people of both sexes with the overweight actually get more energy from food than required according to the level of basal metabolism and physical activity factor. The power imbalance between an excessive intake of nutrients and a low energy consumption is the basis for increased body weight among the young people.

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**INFLUENCESWEET NONALCOHOLIC THE GASED BEVERAGES ON
DIGESTIVE SYSTEM, THE PROCESS OF THE DIGESTIONANDON THE
HUMAN ORGANISM INTHE WHOLE**

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Introduction. At present popularity of sweet nonalcoholic the gassed beverages (SNGB) increased considerably. These beverages are very widespread and accessible. But



very few people who drink SNGB think on the action, which renders on the organism these beverages.

Aim. To determine the nature of the influence of the sweet nonalcoholic gassed beverages to the digestive system and to the organism man as a whole. To confirm or to refute the influence of the control nonalcoholic sweet gassed beverage on the human organism, described in the literary sources. To draw conclusions. To grant the appropriate recommendations.

Materials and methods. For the realization of the stated goal it was carried out the research, which included 4 modules. 1. Survey of the literary sources and data of WHO (World Health Organization). 2. The opinion poll. Results showed that 86% of interrogated respondents use SNGB. From these people: 49% - periodically use, 31% - rarely use, 20% - frequently use. 26% of those interrogated respondents they prefer to quench thirst by the sweet gassed nonalcoholic beverages. 68% of respondents consider that SNGB damages the organism. 26% of respondents assume that these beverages do not damage the organism. 6% of respondents consider that the light beverages can be of benefit to the organism. The experiment was conducted only with one of the beverages being investigated, which will be further designated "control beverage". Beverage was selected because of its popularity. 3. Determination of arterial pressure. (before and after reception by the tested person of control beverage). As results average value is indicated. Instrument - electronic tonometer. Results showed the following: arterial pressure sharply rises 30 minutes after the method of control beverage, in some tested people to the values higher than standard; only after 2 hours arterial pressure is reduced to the values, close to the original values. 4. Determination of the level of insulin in the blood. Instrument - Glyukometr. Accuracy - 0,1 the millimole/l; threshold of response - 2.5. Method by Khagedorn-Ensen. Laboratory standard - 4,4 - 6,6 mmol/l. Results showed the following: 30 minutes after receipt of a control beverage blood glucose rapidly rises to digital values higher than normal (in most cases). 2 hours after receiving the blood glucose level decreased to normal but not to baseline values.

Results. According to experimental and literature data, it is possible to draw a conclusion and to present the possible sequence of acting the control beverage on the human organism. In one 0,33-liter capacities of control beverage the day standard of sugar is contained. Phosphoric acid suppresses the action of sugar. An excess quantity of easily mastered carbohydrate is transformed in the organism into the fat. An abrupt increase in the content of insulin in the blood occurs. Mastering caffeine then concludes, arterial pressure because of this rises. In the bowels the phosphoric acid connects calcium, magnesium and zinc. This accelerates metabolism. In the evening and two hours after the use of beverage calcium, magnesium and zinc together with the water, which is contained in the beverage, will be derived from the organism. According to the data of the literary sources, confirmed by experimental, the danger of SNGB it consists of the following: 1. High content of sugar or the substitute of sugar. 2. Presence of carbonic acid dioxide. 3. Content of orthophosphoric acid among the beverages being investigated it is discovered only in the beverages of imported production. In the beverages of its Ukrainian and Russian production they substitute by citric acid. 4. Content of preservative - the benzoate sodium.

Conclusions. Sweet nonalcoholic gassed beverages and renders negative the influence to the digestive system and to the human organism as a whole. It is especially dangerous for the human organism SNGB of imported production. We recommend to limit to the minimum or to completely exclude the sweet nonalcoholic gassed beverages from the ration.