physical activity inquiry, the connection between physical activity and food intake.

**Results** The overweight prevalence was 7.1% and that of obesity 12.2%. The overweight and obese children, as compared to the normal weight ones, eat, daily, sweets (57.7%, 62.1% vs. 12.3%), soft drinks (23.9%, 39.9% vs. 5.2%), fast-food (22.8%, 36.7% vs. 9.4%), meat products (54.6%, 76.1% vs. 43.8%), fruits (16.8%, 7.3% vs. 48.5%), vegetables (41.3%, 13.9% vs. 84.5%), cereals (31.1%, 24.7% vs. 49.8%), milk products (18.1%, 32.2% vs. 62.3%). 54.7% of the overweight children and 60.1% of the obese do not perform any physical activity in their spare time, as compared to the normal weight (29.8%). The food consumption while watching TV or playing on the computer was associated with overweight and obesity in children.

**Conclusions** Following the nutritional and physical activity investigation in the school children, I noticed an alimentary abuse, both quantitative and qualitative, associated with a physical activity decrease.

### 1445 THE GROWTH AND NUTRITIONAL STATUS AMONG SCHOOL CHILDREN IN NOVI SAD IN SCHOOL YEAR 2010/2011

**Aim** To examine physical growth and nutritional status of school children in Novi Sad, during the school year 2010/2011 and determine differences in relation to primary and secondary school children.

**Methods** On the medical examination of school children aged 7–14 (primary school) and 15–19 (secondary school) in Novi Sad we registered the total number of children: with normal weight (from –1.5SD to +1.5SD), obese (+1.5 to 3SD) and thin children (from –1.5SD to –3SD); of average height (from –1.5SD to +1.5SD), obese (+2SD, +3SD) and short (–2SD, –3SD) (nomogram provided by Vukovic).

**Results** From the total number of the enrolled pupils (n=40861) we have examined 37.25% (n=15222): there were 12783 (33.98%) of average height, 2325 (15.27%) tall pupils and low height pupils 114 (0.75%); 11990 (78.77%) of well-nourished, obese 2404 (15.79%) and underweight children 828 (5.44%). After comparing the data from primary and secondary schools, a statistically significant difference, considering a total number of tall, short, obese and thin children, was in favor of primary school children (p<0.01). There were more children with normal weight in secondary schools (p<0.05), and more obese children in primary schools (p<0.05).

**Conclusion** During 2010/2011, the assessment of growth and nutritional status results of school children were in favor of primary school children. There were more children with normal weight children in secondary schools, and more obese children in primary schools, but the differences were not significant.

### 1446 INFANT FEEDING CHOICES MAY HAVE GENDER EFFECT ON GROWTH DURING INFANCY

**Background and Aims** A retrospective analysis of healthy Japanese children was conducted to determine whether the growth pattern is altered by breast-feeding (BF) or formula-feeding (FF).

**Methods** The data of 204 elementary students, age 6 to 9 years were obtained from their parents by questionnaires. The BF and FF group were defined as those fed by only breast milk or formula at 4 months of age. Seventy-one children (31 boys, 40 girls) were in BF and 30 (19 boys, 11 girls) were in FF. The anthropometric data at birth, 1, 4, 7, 10, 18, 36 months-old and investigation time in BF was compared to those in FF.

**Result** No significant differences were observed in the anthropometric data between BF and FF girls. The BF boys mean body weight (BW) at 18 months was almost 1,000g lower than those in FF. The BW-SD score was significantly smaller from 4 to 18 months, and BMI was lower from 10 to 36 months in BF boys. However, both BWSD and BMI had no differences between BF and FF boys from 6 to 9 years. Multiple regression analyses showed that the birth weight, pre-pregnancy BW, and infant feeding choice were significant factors associated with BWSD, and feeding choice was the only significant factor associated with BMI at 18 and 36 months.

**Conclusion** Infant feeding choices may have gender effect on growth during infancy. When we evaluate infant growth, we should consider not only infant feeding choices, but also gender, birth weight and pre-pregnancy BW.

### 1447 WEIGHTING THE FACTORS ASSOCIATED WITH CHILDREN OBESITY: AN INTERNATIONAL PERSPECTIVE TOWARD AN UNIFIED MODEL

**Aim** To examine physical growth and nutritional status of school children in Novi Sad, during the school year 2010/2011 and determine differences in relation to primary and secondary school children.

**Methods** On the medical examination of school children aged 7–14 (primary school) and 15–19 (secondary school) in Novi Sad we registered the total number of children: with normal weight (from –1.5SD to +1.5SD), obese (+1.5 to 3SD) and thin children (from –1.5SD to –3SD); of average height (from –1.5SD to +1.5SD), obese (+2SD, +3SD) and short (–2SD, –3SD) (nomogram provided by Vukovic).

**Results** From the total number of the enrolled pupils (n=40861) we have examined 37.25% (n=15222): there were 12783 (33.98%) of average height, 2325 (15.27%) tall pupils and low height pupils 114 (0.75%); 11990 (78.77%) of well-nourished, obese 2404 (15.79%) and underweight children 828 (5.44%). After comparing the data from primary and secondary schools, a statistically significant difference, considering a total number of tall, short, obese and thin children, was in favor of primary school children (p<0.01). There were more children with normal weight in secondary schools (p<0.05), and more obese children in primary schools (p<0.05).

**Conclusion** During 2010/2011, the assessment of growth and nutritional status results of school children were in favor of primary school children. There were more children with normal weight children in secondary schools, and more obese children in primary schools, but the differences were not significant.

### 1448 EARLY FORMULA FEEDING PRACTICES AND THEIR POTENTIAL CONTRIBUTION TO LATER OBESITY RISK

**Background and Aims** Early feeding practices, including early introduction to solid foods and overfeeding, are known risk factors for childhood obesity. This study aimed to assess maternal formula feeding practices and infant formula feeding patterns, factors that are known to potentially contribute to later obesity risk.

**Methods** This Irish prospective observational study involved the recruitment and follow-up of 450 eligible mother-infant pairs to 6 weeks postpartum. Data related to formula milk consumption patterns, formula type/brand changing, additions of solids to bottle
Abstracts


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Methods During regular health checks in primary and secondary schools in Novi Sad, we registered a total number of children with average height (from –1.5 SD to +1.5 SD), tall (+2 SD, +3 SD), short (–2 SD, –3 SD), with normal weight (from –0.5 SD to +1 SD), obese (+1.5 SD to +3 SD), and thin pupils (from –1.5 SD to –3 SD).

Results From the total of 40861 pupils (7–19 years) in school year 2010/2011, we examined 15222 (37.25%): 11095 (41.52%) in primary schools, while in 1996/1997 there were more in secondary schools. In the school year 1996/1997, from the total of 23248 enrolled pupils, 20704 (89.05%) were examined, in primary schools 12135 (94.80%) and in secondary schools 8569 (82.01%).

After comparing data from primary and secondary schools, in the school year 2000/2011, a statistically significant difference was in favor of primary school children, where there was the number of obese children (p < 0.000) and thin children (p < 0.000) in 2010/2011, while the number of obese children in secondary school in the school year 1996/1997 accounts for obese (p = 0.000) and thin children (p = 0.000), which is favor of secondary school children.

Conclusion Comparing the data between two school years, there were significantly more obese and thin children in 2010/2011 in primary schools, while in 1996/1997 there were more in secondary schools.

1451 NUTRIENT ADEQUACY OF THE DIETS OF UAE INFANTS AND TODDLERS

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Background Compared with other population subgroups, less is known about the dietary status of UAE infants and toddlers, especially how subgroups of different ages vary in their food consumption and nutrient intakes.

Objectives To assess the nutrient adequacy of the diets of UAE infants and toddlers 6 to 24 months of age.

Design Descriptive analysis of the usual nutrient intakes of infants and toddlers using 24-hour recall.

Subjects Families were recruited consecutively from the infants attending the preventive medicine department for immunization, until the number needed was attained. The study included UAE national infants (infants born to UAE national fathers) only. A sample of 1,000 infants and toddlers was selected from 2 cities, Dubai and Al Ain, in the UAE.

Results Percentage of breast feeding was found to be 49.6% in infants aged 6–11 months and 38.4% at 12–24 months. 65.6% percent of infants 6 to 11 months consumed cow’s milk or camel’s on a daily basis before the recommended age of 12 months or later. In most infants aged between 6 and 12 months had higher than the RDA levels of energy, protein, fats and carbohydrates, but surprisingly toddlers ingested less fat than RDA.

Conclusions More parents and caregivers can benefit from guidance about the introduction of developmentally appropriate, micronutrient-rich first solid foods such as iron-rich infant cereals, iron-fortified grain products, meats, soft fruits, and cooked vegetables and the importance of breastfeeding through the first year of life.

1450 EVALUATION OF NUTRITIONAL KNOWLEDGE AND ASSESSMENT OF DIETARY INTAKE OF SECOND GRADE SCHOOL CHILDREN

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Aim Assessment of nutritional knowledge and physical activity rate among the children and evaluation of their nutritional intake.

Methods Cross-sectional study was conducted in randomly selected schools of Tbilisi. In each school was selected one group of the second grade children and their parents by cluster selection method. A population of 290 children aged 6–8 years and their parents were interviewed.

Results In general, the level of knowledge related to rich sources of nutrients was poor. The most of the children can’t identify the role of calcium (72.6%), proteins (68.1%) and iron (84.6 %). Children prefer to eat foods they like (71.8%), such as sweets and cakes, hamburgers and etc. The most of the children (83.3%) have normal weight for age, underweight was revealed in 3.1%, overweight in 12.3% and obesity in 1.4% cases. The assessment of dietary intake show, that intake of fruits and vegetables, as well as milk and milk products is quite low, while intake of bread and pastry, and sweets are quite high. Daily consumption of sweets was significantly higher in girls (64.2%) than in boys (47.5%) (p < 0.01). Only 62% of children eat the breakfast, most children 60.4% view TV during the meal time or play computer games. The most of the children play the active games approximately 30–60 minutes, quite often children play active games only 20–30 minutes.

Conclusion The dietary intake of children does not correspond to WHO recommendations. It is recommended to implement nutrition education programs for children an parents.

1452 OBESITY AND ALIMENTATION PATTERN IN ADOLESCENT HEALTH

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Introduction Obesity is one of the most important health problems in children all over the world. The disease is detected more often nowadays and is correlated with lifestyle.
1448 Early Formula Feeding Practices and Their Potential Contribution to Later Obesity Risk

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