

## Abstracts

**Results** Correlation with ACQ-5 was obtained for the Hildebrandt index ( $r=0,45$   $p=0,0003$ ), the respiratory rate ( $r=-0,27$ ,  $p=0,032$ ) and the relative pulse index ( $r=0.40$ ,  $p=0,0012$ ). The association of Kerdo index with ACT-C test values ( $r=-0,32$ ,  $p=0,045$ ) was established. In the group of patients with no BA control the Hildebrandt index was statistically significantly higher than in patients with control of the disease. In children with uncontrolled asthma it was  $5,23 \pm 0,25$  units that exceeds normal values and may reflect a mismatch in the work of cardiovascular and respiratory systems.

**Conclusion** The interrelation of changes of vegetative regulation and the level of control of bronchial asthma in children is established, as well as the mismatch of the functioning of the cardiovascular and respiratory systems in children with uncontrolled asthma.

**P21 MODERN TRENDS IN THE HEALTH STATUS OF THE CHILDREN'S POPULATION OF UKRAINE**

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**Introduction** An analysis of the morbidity and prevalence of diseases among the children's population of Ukraine, the level of infant mortality over the past 23 years suggests that they remain significantly higher than the average European indicators.

**Objective** Our objective was to analyze of the morbidity and prevalence of diseases among the children's population of Ukraine.

**Materials and methods** We have performed statistical analysis of the morbidity and prevalence of childhood illnesses and its significant differences in the regions of Ukraine.

**Results** The birth rate in 2017 is 364,000 children and is twice as low as the mortality rate of the entire population. The prevalence of childhood diseases over the past 23 years has increased by 41%. If in 1994 it was 1253.0 per 1000 children, in 2017 it was 1748.0 per 1000 children of the corresponding age. The morbidity of childhood diseases also increased by 36%, from 967.0 to 1292.0 per 1000 children, respectively.

The first place among the diseases were respiratory diseases in children, mainly due to acute respiratory infections and pneumonia. The indexes of dental diseases and pathology of nervous system and eye have increased moderately. The situation is aggravated by the decrease in the number of pediatricians in the country to 7.9 thousand, which reduces the availability of medical care, especially in rural areas.

**Conclusions** The negative dynamics of the morbidity and prevalence of childhood illnesses and its significant differences in the regions of Ukraine shows that this is primarily due to social, environmental and economic factors. Undoubtedly, the ongoing military conflict in the East of Ukraine is exacerbating the situation, which has led to more than 1.5 million refugees, including more than 200,000

children, who need constant and in-depth medical and social assistance. This indicates the need for constant attention to pediatric health care at the national level, taking into account the positive experience of the countries of the European Union.

**P22 THE EFFECTS OF STORAGE METHOD, TEMPERATURE AND EXTRACTION KITS ON THE HUMAN MILK MICROBIOTA**

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Human breast milk is the optimum feeding regime for new born infants. In terms of composition, breast milk contains the required nutrients and bioactive compounds (e.g. oligosaccharides, lactoferrin, secretory antibodies, immune cells, CD14, regulatory cytokines) to support the growth and immunity of the developing infant. Until recently breast milk was considered to be a sterile fluid, however, advances in research has revealed that breast milk provides home to an array of bacterial species, which may provide various health benefits such as promoting gut colonisation, defence against pathogens and maturation of the immune system, an essential aspect of infant health.

Next generation sequencing has enabled detailed insights into the complex microbial ecosystem of breast milk, however authenticity of the microbiome is subject to many factors such as sample collection, suitable storage and extraction method of the biological sample. While cold storage (4°C) immediately after sample collection until DNA extraction is optimal, other storage conditions need to be investigated for their efficacy when this option is not feasible. This study aims to investigate how different storage methods, temperatures additives and extraction techniques influence the human milk microbiome. Overall, 16S compositional sequencing analysis revealed no significant differences from either fresh or frozen samples.

**P23 DETERMINANTS OF GAS EXCHANGE IN SMOKING AND NONSMOKING TEENAGERS DURING A STANDARDIZED SUBMAXIMAL TREADMILL TEST**

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**Introduction** Assessment of physical capacity in the pediatric population has always been a major issue in developmental exercise physiology. It may be influenced by a number of factors, e.g. genetic endowment, developmental rate, body composition, and habitual physical activity. The adverse effects of smoking on the parameters and maximal effort during standardized submaximal treadmill test is not well known.