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# Medicina stilului de viață la vârsta copilăriei

Motto:  
Sănătatea se câștigă  
de la primii pași în viață

conferința va avea loc pe platforma Zoom  
numărul maxim de participanți: 1000

11-12 iunie 2021

eveniment online adresat medicilor de familie și medicilor pediatri

acces gratuit - 11 iunie 2021: 15:00 - 19:40 12 iunie 2021: 09:00 - 14:10

evenimentul este creditat cu 10 puncte EMC, pentru obținerea punctelor EMC  
este nevoie de completarea formularului de înscriere (Google Forms)

<https://docs.google.com/forms/d/e/1FAIpQLSdo-cUJLC9voA4qiaC2ARWvS2bCHPycvHjk9u9w9oFEBhZwlg/viewform>  
participanții validați vor primi certificatul în format digital

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## program conferință

### Lectori invitați:

Prof. Univ. Dr. Ourania Kolokotroni (Cipru), Associate Professor of Epidemiology and Public Health, University of Nicosia Medical School  
Dr. Ioan Hanes (Belgia), Secretary General of the European Lifestyle Medicine Organization, Director of the European Lifestyle Medicine Certificate  
Ana Jorge (Portugalia), Health and Fitness Lifestyle Advisor

	11 iunie 2021	12 iunie 2021
15:00 - 15:05	Deschiderea conferinței - Cuvântul decanului Prof. Univ. Dr. Bogdan Timar	
15:05 - 15:25	Implicațiile stilului de viață din copilărie asupra profilului ponderal în viitor Prof. Univ. Dr. Mihai Galencu	
15:25 - 15:45	Prevenția obezității la adolescenți As. Univ. Dr. Andreea Iana	
15:45 - 16:05	Lifestyle Medicine for Families Prof. Univ. Dr. Ourania Kolokotroni (Cipru), Associate Professor of Epidemiology and Public Health, University of Nicosia Medical School	
16:05 - 16:25	Medicina stilului de viață - rolul mediului academic Șef lucrări Dr. Răzvan Șușan	
16:25 - 16:45	Impactul pandemiei asupra stilului de viață la copii Conf. Univ. Dr. Roxana Folescu	
16:45 - 16:50	Pauză	
16:50 - 17:10	Vitamina D și creșterea Șef lucrări Dr. Corina Paul	
17:10 - 17:30	Microbiomul uman - un partener pentru sănătate! As. Univ. Asoc. Dr. Emiliană Costiug, UMF "Iuliu Hațieganu" Cluj Napoca	
17:30 - 17:50	Adicțiile la copii și adolescent Asist. Univ. Dr. Adriana Cojocaru, Dr. Ghibela Kanalas, Dr. Bianca Micu-Serbu, Prof. Univ. Dr. Laura Nussbaum	
17:50 - 18:10	Formarea adicțiilor la copii Șef lucrări Dr. Biol. Psih. Lavinia Melania Bratu	
18:10 - 18:15	Pauză	
18:15 - 18:35	Importanța stilului de viață în apariția alergiilor la copii Conf. Univ. Dr. Patricia Cristodor	
18:35 - 18:55	Ateroscleroza subclinică Conf. Univ. Dr. Mircea Iurciuc	
18:55 - 19:15	Screeningul aterosclerozei subclinice în practica medicului de familie între mit și realitate Dr. Mihai Iacob, Președintele Societății Timiș de Medicina Familiei, Vicepreședinte Colegiul Medicilor Timiș	
19:15 - 19:35	Impactul activității fizice asupra dezvoltării posturale la copii și adolescenți Conf. Univ. Dr. Elena Amărăci	
19:35 - 19:55	Neuroplasticitatea și implicațiile ei în dezvoltarea capacităților cognitive ale copilului Asist. Univ. Dr. Alin Ionescu	
09:00 - 09:20	Medicina stilului de viață și bolile rare Prof. Univ. Dr. Maria Pulu	
09:20 - 09:40	Apneea obstructivă de somn la adolescenții obezi Șef lucrări Dr. Tamara Martovici	
09:40 - 10:00	Alimentația sănătoasă în perioada copilăriei Șef lucrări Dr. Simona Popescu	
10:00 - 10:20	Alimentația și tulburările hormonale la vârsta pediatrică Asist. Univ. Dr. Niculina Mang, Prof. Univ. Dr. Otilia Mărginean	
10:20 - 10:40	Utilitatea testului hidrogenului expirat în evaluarea disbiozei intestinale la copiii cu afecțiuni digestive Șef lucrări Dr. Dana Belei 10:40:10:45:Pauză	
10:45 - 11:05	De unde pornește educația nutrițională a copiilor noștri? Șef lucrări Dr. Biol. Psih. Lavinia Melania Bratu	
11:05 - 11:25	Rolul părintelui în alimentația copilului As. Univ. Dr. Ciprian Roșca	
11:25 - 11:45	Ce, cum și când să-i administrez copilului meu pentru o creștere sănătoasă? As. Univ. Dr. Monica Șușan	
11:45 - 12:05	Healthy Base, Healthy Raise - The importance of Culinary Medicine for children and families. Ana Jorge (Portugalia), Health and Fitness Lifestyle Advisor	
12:05 - 12:25	Interviu motivațional: metodă de comunicare în medicina stilului de viață Dr. Ioan Hanes (Belgia), Secretary General of the European Lifestyle Medicine Organization, Director of the European Lifestyle Medicine Certificate	
12:25 - 12:30	Pauză	
12:30 - 12:50	Managementul stilului de viață în medicina familiei la vârsta copilăriei: prezent și oportunități Șef lucrări Dr. Daniela Gurgus	
12:50 - 13:10	Screeningul ecografic al soldului și importanța kinetoterapiei și a exercițiilor fizice pentru dezvoltarea neuromotrică la nou născuți și sugari Dr. Mihai Iacob, Președintele Societății Timiș de Medicina Familiei, Vicepreședinte Colegiul Medicilor Timiș	
13:10 - 13:30	Principii diagnostice și terapeutice în picionul strămb congenital Conf. Univ. Dr. Vlad Laurențiu David	
13:30 - 13:50	Măsurile ergoterapiei și terapiei ocupaționale pentru prevenirea deviațiilor axiale la adolescenți și tineri Conf. Univ. Dr. Răzvan Drăgoi	
13:50 - 14:10	Importanța tratamentului PRP la copiii diagnosticați cu osteochondrită disecantă în prevenirea modificărilor degenerative precoce ale genunchiului Șef lucrări Dr. Anca Dinu	

# **Abstract Book**

**Lifestyle Medicine in Childhood – Online Conference 11-  
12th of June 2021**

**"Victor Babeş" University of Medicine and Pharmacy  
Timișoara**

**Center for Preventive Medicine**

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## THE IMPLICATIONS OF THE LIFESTYLE IN CHILDHOOD ON THE WEIGHT PROFILE IN THE FUTURE LIFE

**Mihai Gafencu<sup>1</sup>, Adela Chirita Emandi<sup>2</sup>, Iulia Simina Jurca<sup>2</sup>**

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The early childhood lifestyle greatly influences the weight of the adult. Obesity has become a problem in Western Europe, but also in our country, along with the lack of nomograms dedicated to our children. We made a group of University of Medicine and Pharmacy Timișoara student volunteers, part of Save the Children NGO, together with teachers to initiate measurements in Timis including initially over 3000 from our town and then over 7000 children from the county. As a result, this extended model resulted in anthropometric data being collected in 5 centers in the country, and then the results related to this lot were published. Life and nutrition questionnaires were applied in certain groups. After some experts from the team have joined the NCD risk, the worldwide working group published our results, compared, together with those of other countries, in the most prestigious journals in the medical world. The findings show exactly how waist, weight or BMI have evolved in recent history, changing the appearance and then life expectancy of modern generations. We must take some conclusions from this and initiate the right measures to change this paradigm.

## PREVENTION OF OBESITY IN ADOLESCENTS

**Andreea Iana<sup>1</sup>, Razvan Șușan<sup>1</sup>, Roxana Folescu<sup>1</sup>, Daniela Gurgus<sup>1</sup>, Alin Ionescu<sup>1</sup>**

<sup>1</sup> Discipline of Family Medicine, Center for Preventive Medicine, "Victor Babeş" University of Medicine and Pharmacy Timișoara, Romania

Obesity is a complex disease involving an excessive amount of body fat and is a worldwide medical problem. It increases risk of other diseases and health problems, such as heart disease, diabetes, high blood pressure, depression and certain cancers. Obesity is diagnosed when body mass index (BMI) is 30 or higher. The objectives are to know and avoid the food traps, follow a healthy-eating plan, exercise regularly and a consistency behavior of the adolescents. The parents play an important role as well, their behavior toward the adolescent is one of the key preventions to development of obesity in childhood. Healthy tips for preventing excessive calories intake are: to eat half of a plate veggies, to eat protein, to begin with soup or aperitive or salat, to use small plates and a lot of fiber at meals avoid all processed food with high levels of sugar, salt and fat. Being mentally present when eating, healthy customs as eating with the family without distraction, attentively eating can prevent obesity. Physical activity and sport are a fundamental goal of obesity prevention. In adolescent's physical activity should be at least 60 minutes a day of moderate to vigorous activity.

## LIFESTYLE MEDICINE IN CHILDHOOD – THE ROLE OF ACADEMIA

**Răzvan Șușan<sup>1</sup>, Monica Șușan<sup>1</sup>, Daniela Marți<sup>2</sup>, Daniela Gurgus<sup>1</sup>, Roxana Folescu<sup>1</sup>, Alin Ionescu<sup>1</sup>, Andreea Iana<sup>1</sup>**

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Overall life expectancy increases, but at the same time there is an increase in years lived with disability. Chronic lifestyle-related diseases have multiple causes that appear since childhood. On the other hand, the behaviors acquired in childhood will influence the lifestyle of the future adult. We need a better knowledge of lifestyle medicine (LM) in childhood. The academic approach to the lifestyle in childhood is often forgotten or simplified, limited to nutrition and physical activity, without a global approach. Education related to LM in childhood is necessary in training for various categories of



professions: medical or medical – related professions (with certain features for pediatrics, family medicine, gynecology, psychiatry, even cell biology and genetics); professions whose activity is related to children's development such as teachers, coaches, social workers. Academic education in the medical field can provide basic information about the influence of LM in preclinical disciplines (cell biology, genetics, hygiene), information specific to each component for disciplines secondarily interested in LM in children (gynecology, neonatology, cardiology, pneumology, gastroenterology, immunology-allergology, endocrinology, sexology, orthopedics, ophthalmology, neurology, psychiatry), information on LM in pediatrics, family medicine, family planning, public health or information in independent disciplines, whose main concern is lifestyle change. The ways of implementing LM in the university and postgraduate education could be: elaboration of specific bibliographic materials for lifestyle in children and family, establishment of the target group and structuring the information according to the objective, providing the information and finally putting the acquired knowledge into practice. Introducing LM study in a serious, complete and uniform way, will lead to good prevention, increasing life expectancy, increasing the number of healthy life years and decreasing the number of years lived with disability.

## THE IMPACT OF THE PANDEMIC ON CHILDREN'S LIFESTYLES

**Roxana Folescu<sup>1</sup>, Răzvan Mihai Șușan<sup>1</sup>, Alin Vasile Ionescu<sup>1</sup>, Andreea Narcisa Iana<sup>1</sup>, Daniela Gurgus<sup>1</sup>**

<sup>1</sup> Discipline of Family Medicine, Center for Preventive Medicine, "Victor Babeș" University of Medicine and Pharmacy Timișoara, Romania

A healthy lifestyle should be based on the following aspects: a healthy and balanced diet, accompanied by the habit of physical activity, along with emotional and spiritual well-being and combating risk factors that endanger health. The COVID-19 pandemic exacerbates all risk factors for weight gain and it is extremely important to consider the long-term effects on children's health. Even a new word was invented: covibesity (covid + obesity) or covibezity. Coexistence refers to the rapid weight gain in some people during the SARS-CoV-2 pandemic. Sedentary lifestyle and lack of outdoor movement in the pandemic have led to changes in weight, posture and behavior in children. The coronavirus pandemic (COVID-19) causes emotions, such as anxiety, stress and uncertainties, felt even more strongly by children of all ages. The children suffering can occur due to death, illness or separation from loved ones or for illness fear. It has not been scientifically proven that restrictive measures imposed on children have been effective in alleviating the pandemic. "The first case studies show that adults infect children, not the other way around," said the statement from the German Academy for Children and Youth. According to existing studies on how the pandemic affected the lifestyle, there are very few people who said that their lives did not change during the pandemic.

## VITAMIN D AND GROWTH

**Corina Paul<sup>1,2</sup>, Monica Simina Mihuta<sup>1,2</sup>, Cristina Mihaela Cepeha<sup>1,2</sup>, Iulian P. Velea<sup>1,2</sup>**

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The role of vitamin D (vitD) in both bone metabolism and different chronic pathologies, is well known. VitD deficiency increases the risk for cancer, autoimmune and cardiovascular diseases. Numerous studies confirmed, the beneficial role of a proper VitD supplementation in the pregnant woman for the anthropometric indices of the newborn, the short and long-term growth velocity and, also, for the bone mass acquisition. Both GH /IGF1 (growth hormone /insulin-like growth factor) axis and VitD are essential for growth. It is not clear yet, how the two factors interact. VitD insufficiency, frequently associated in GHD (GH deficient) patients, does not correct only with substitution, and, serum IGF1 increases when VitD is properly supplemented. It has been showed that VitD status influences the hepatic synthesis of IGF1 and the expression of IGF1 receptors in many tissues. Vitamin D supplementation increases IGF1 secretion while IGF1 stimulates the enzyme 1 alfa hydroxylase and, consecutively, the VitD3 production. Conclusions: 1. A proper vitamin D supplementation is essential for

growth and bone mass acquisition and, may, also, reduce the risk for many chronic diseases. 2. In GHD patients, the screening for VitD status (both at diagnosis, and during therapy) and proper VitD supplementation is highly recommended.

## ADDICTIONS OF CURRENT TECHNOLOGIES IN CHILDREN AND ADOLESCENTS

**Adriana Cojocaru<sup>1,2</sup>, Ghizela Kanalaş<sup>2</sup>, Bianca Micu Şerbu<sup>3</sup>, Laura Nussbaum<sup>1,2</sup>**

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Excessive use of current technologies has a negative impact on the mental health of the child and adolescent. The stimulation determined through over-exposure to technology is associated with dangerous toxic effects in brain's developing process of the child. The interactions with the technology can be defining in child's period of development, because they influence psyche's structure and organization in a full process of intellectual, emotional, moral and civic maturation.

Excessive use of actual technology can influence the process of making decisions, because it has an informativ or a misinformative role, it can change your perception, your emotionality, your thinking and your behavior, lead to thinking errors, perception disorders, changing feelings and attitudes or dysfunctional behavior. High correlations have been found between the increased use of technology (computer, laptop, ipad, smartphones, videogames, internet launching, social media) and mental health problems in children and adolescents: emotional and conduct disorders, anxiety and depressive disorders, ADHD, learning disorders, phobias, sleep disorders, autism/ virtual autism, other affective and psychotic disorders, eating and body image disorders, tics, cyber-bullying, technology addictions (internet, videogames, social media, pathologic or internet gaming disorder). Also, these children present high externalizing symptoms – aggressivity, hostility and internalizing symptoms – withdrawal in the virtual world, alcohol and drugs addiction, are observed in these children. We will also approach neurobiological and neuro-imagistic correlations for the studied category. Family, school and society have the responsibility to control the content of information that children have access to, to limit the access to the negative content, to allow prudent access to these ways of communication, so as technology has a positive effect on development of the children and adolescents. Conclusions: The excessive use of current technologies has a huge negative impact on the somatic development and mental health of the children. For the future we need to develop prevention and support programs for these children and their families in order to improve their quality of life and mental health.

## CHILDHOOD TRAUMA AND ADDICTION

**Lavinia Melania Bratu<sup>1</sup>**

<sup>1</sup>Department of Psychology, "Victor Babeş" University of Medicine and Pharmacy Timișoara, Romania

Many assumptions have been made and countless specialized articles have been written about the process of developing addictions. At the end of the 19th century, Pierre Janet, and then, Sigmund Freud, issued the hypothesis that "most of the psychological disorders we are dealing with in daily medical practice - depression, anxiety, bulimia, alcohol or drug abuse - rooted in traumatic events". (David Servan-Schreiber, 2007, p. 116). When we refer to an addiction, we refer to an altered physiological state in the brain, said doctor and researcher, Charles O'Brien. The physiological development of the human brain is directly influenced by the environment and childhood emotional experience. However, addictions cannot be related only with the modified chemistry of the brain, the implications being much more complex. According to Gabor Mare, the renowned addiction expert, speaker and author, "the effects of early stress or adverse experiences directly shape both the psychology and the neurobiology of addiction in the brain." (Gabor Mate, In the Realm of Hungry Ghosts, 2019, p. 42). The research literature views addiction as a chronic brain disease. This can change the way we manifest our humanity, understanding, tolerance... It takes the unconditional support of those around us, so we be able to succeed. "From the Latin word vulnerare, "to wound," vulnerability is our susceptibility to be wounded. This fragility is part of our nature and cannot be escaped. The best the brain can do is to shut down conscious awareness of it when pain becomes so vast or unbearable that it threatens to overwhelm our capacity to function. The automatic repression of painful emotion is a helpless child's prime

defense mechanism and can enable the child to endure trauma that would otherwise be catastrophic.” (Gabor Mate, In the Realm of Hungry Ghosts: Close Encounters with Addiction, 2019)

## THE IMPORTANCE OF LIFESTYLE IN CHILDHOOD ALLERGIES

**Patricia Cristodor<sup>1</sup>, Iasmina-Maria Hâncu<sup>1</sup>, Laurențiu-Nicolae Ilinca<sup>1</sup>, Justin Hâncu<sup>1</sup>**

<sup>1</sup> Department of Dermatology "Victor Babeș" University of Medicine and Pharmacy Timișoara, Romania

Allergies are a group of predisposing dermatoses characterized by an altered tissue reactivity, developed following the body's contact with various antigens. Manifestations of allergies are cutaneous, respiratory, cardiac, renal, ophthalmological, nervous, psychiatric, locomotor. The number of allergies has tripled in the last 20 years, especially in developed countries. Some hypotheses to explain this are: rigorous hygiene (that also limits exposure to beneficial microorganisms resulting in a rarer and less diversified microbiome), increasing the number of vaccinations (by foreign protein intake, molecular mimicry, etc.) and food rich in toxic / allergenic food proteins (GMOs). The microbiome of a healthy organism prevents contamination with pathogenic species, synthesizes bacteriocins, prevents abdominal discomfort and flatulence, contributes to the normal bowel movements and bowel feces formation, facilitates intestinal transit, synthesizes vitamin B12 and modulates the immune system. The microbiome can be a therapeutic target in inflammatory and allergic diseases. Lifestyle dictates the microbiome. Increased consumption of carbohydrates or lipids, salts, low fiber intake, stress, lack of exercise change it, causing inflammation and allergies. Allergy treatment involves eliminating allergens and adopting a proactive attitude: following an anti-inflammatory diet, strengthening the immune system, exercise, balancing the nervous system, intake of Omega-3, optimizing the level of vitamin E, consumption of quality probiotics.

## ULTRASONOGRAPHIC SCREENING OF SUBCLINICAL ATHEROSCLEROSIS BY CALCULATING INTIMATE - MEDIA THICKNESS INDEX FOR EARLY DIAGNOSIS IN FAMILY DOCTOR PRACTICE BETWEEN MYTH AND REALITY

**Mihai Iacob<sup>1</sup>**

<sup>1</sup> President of the Timiș Society of Family Medicine, Vice President of the Timiș Medical College, Senior Medical Expert, EUVEKUS President

Background: Atherosclerosis is a chronic inflammatory disease of the arterial wall induced from endothelial injury followed finally by the complications of plaque and its obstruction. It is the leading cause of morbidity and mortality from heart attacks and strokes in Romania. Research question: How can we early detect, assess and treat the vulnerability of atherosclerosis plaque? Method: We did a randomized clinical trial, controlled, on 500 Caucasian patients, aged 40-80 years, sex ratio 1:1. Inclusion criteria were asymptomatic patients with high-risk lipid profiles (LDL>160mg%) with or without statins and antiplatelet therapy in the past two years. Exclusion criteria were target organ damage. We formed two groups: first under treatment with statins and antiplatelet agents and second as a control group with untreated patients. All patients were examined with Doppler ultrasound and SE in three regions: carotid, abdominal aorta, and femoral arteries. We monitored the following: IMT, velocity, RI, PI, stenosis. We have established some criteria of elastography, for the classification of atherosclerotic plaque in "stable-uniform elasticity" or "unstable-mosaic stiffness", and designed an ultrasound score to diagnose the vulnerable plaque. Results: An increase of carotid IMT between 0.9-1.5 mm had meant: mild and moderate atherosclerosis in 42% of patients in the first and 33% in the control group. IMT over 1.5 mm had meant severe atherosclerosis in 58% of the first and 67% in the second group. Cut off the value of the aorta and femoral IMT>0.5 cm. Sensitivity:96.2%, specificity: 88%, 95%CI: 79.97% to 93.64%, prevalence: 83%. The relative risk was: 0.86 with 95%CI:



0.75 to 1, Odds Ratio: 0.68,  $p < 0.05$ . Based on the Strain-Elastography-US, we managed to distinguish the unstable vulnerable atherosclerotic plaques that have a completely inhomogeneous, multicolored, and uneven mosaic appearance versus the stable atherosclerotic plaques that have parallel and concentric layers. Their percentage was less than 7% of the total identified lesions. Conclusions: Ultrasound measurement of IMT in three regions, when assessing subclinical atherosclerosis and assessment of the atheroma plaque stiffness, was important for primary prevention of cardiovascular events.

## THE INFLUENCE OF PHYSICAL ACTIVITY ON POSTURAL DEVELOPMENT IN CHILDREN AND ADOLESCENTS

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A proper postural development in children and adolescents depends greatly on the tone degree of muscles supporting the posture (multifidus, latissimus dorsi, erector spinae, rectus abdominis, transverse abdominis, external and internal obliques, psoas major). A balanced posture is the result of an adequate muscle tone between neck flexors and extensors, upper and lower back extensors and abdominals, hip flexors and extensors, hamstrings and quadriceps femoris. Children and adolescents should be encouraged to perform daily physical activity (at least 60 minutes per day of moderate to vigorous intensity aerobic activity). Moderate intensity aerobic physical activities can consist in brisk walking, bicycle riding, active recreation (hiking, skateboarding, etc.) or games that require throwing and catching. Vigorous intensity aerobic physical activities can be represented by running, bicycle riding, jumping rope, active games involving running or chasing, sports (football, basketball, tennis, swimming, etc.), vigorous dancing or skiing. There must be an adequate proportion between the time spent in static positions (sitting at the desk at school and at home, watching TV, using the phone or the computer/tablet) and dynamic activities. Children and adolescents should be highly sustained to get involved in different types of physical activities (recreational sport and leisure activities).

## NEUROPLASTICITY AND ITS IMPLICATIONS IN THE DEVELOPMENT OF CHILDREN’S COGNITIVE ABILITIES

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The child's cognitive development involves the brain's capacity for structural and functional adaptive changes depending on environmental interaction. This mechanism shapes the neural connections according to every growth step, starting with intrauterine life. Maternal stress negatively influences fetal brain development by altering gene expression through the process of DNA methylation and microRNA. Research in epigenetics shows that DNA methylation directly impacts the genes associated with cortisol expression, while miRNA regulates dendritic arborization and synaptogenesis during early development. Also, the increasing emphasis on neurobiology included new insights into Piaget's theory of a child's cognitive development, considering unique aspects of the brain's ability to develop specific environment-required skills. Neural plasticity is maximal in the first years of life. Speech acquisition and learning abilities are related to experience-driven changes in the neural pathway that improve or impair linguistic function for children. At the same time, certain types of cognitions need to be made within their peak period of neuronal-specific connectivity; otherwise, the ability will be lost. Parental guidance and balanced social exposure are to be listed as significant factors. In conclusion, neuroplasticity is a fantastic cognitive support system that offers impressive abilities for survival, adaptation to the environment, and evolution. Therefore, for the optimal mental development of a child, the beneficial aspects of brain plasticity must be considered.

## OBSTRUCTIVE SLEEP APNEA IN OBESE ADOLESCENTS

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Obesity is a major public health problem whose incidence is increasing in adolescents. 60% of obese adolescents have obstructive sleep apnea (OSA) and significant cardiometabolic risk. Type 2 OSA predominates in adolescents. Obesity increases the risk of OSA by 5 times, which is still underdiagnosed in adolescents. The prevalence of moderate and severe OSA is important in adolescents with morbid obesity, being affected over 30% of them. The association of obesity with adeno-tonsillar hypertrophy increases the severity of OSA in this age group. Sleep fragmentation leads to altered carbohydrate and lipid metabolism and increased sympathetic activity with the onset of type 2 diabetes, dyslipidemia and hypertension in obese adolescents with OSA. The association of obesity with OSA is bidirectional, participating in mutual initiation and progression. Sleep studies (polysomnography, sleep polygraphy) specify the diagnosis and severity of OSA. Early diagnosis and prompt initiation of therapy (reduction of caloric intake, avoidance of sedentary lifestyle, weight loss, nutritional and psychological counseling, medication, adenotonsilectomy, CPAP therapy, etc.) aims to improve the prognosis and increase quality of life. The multidisciplinary management of these cases is required. Adherence of adolescents to the treatment of obesity and obstructive sleep apnea is essential.

## EATING BEHAVIOR AND HORMONAL DISORDERS IN PEDIATRIC AGE

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Nutrition is one of the most important factors affecting pubertal development. Puberty involves a progressive non-linear process, from prepubescence to full sexual maturity through the interaction of biological, physical and psychological changes. Consumption of an adequate and balanced healthy diet in all phases of growth (childhood and puberty) is necessary for proper growth as well as for normal pubertal development. Overweight or obese children are more likely to enter puberty earlier. Nutritional status in childhood has a significant effect on pubertal development. Nutrition is an important regulator of growth. Obesity is usually associated with hyperstature and early pubertal development. Overeating and obesity seem to trigger the onset of puberty. Low weight and small waist at birth are associated with early pubertal maturation. Most girls enter puberty between the ages of 8 and 13, while boys enter puberty between the ages of 10 and 15. Before the twentieth century, the average age of puberty at girls was 16 or 17 years. The age of menarche has decreased in the last 100 years. Today, about 16% of young girls reach puberty before the age of 7 and about 30% when they turn 8 years old. The decrease in age in Western countries is due to increased consumption of animal products and calorie intake. The higher incidence of anorexia nervosa and bulimia in adolescents imposes a nutritional risk on pubertal development. Furthermore, numerous endocrine disruptors (ED) have been identified that can significantly affect the normal course of puberty.

## THE USEFULNESS OF THE HYDROGEN BREATH TEST IN ASSESSING INTESTINAL DYSBIOSIS IN CHILDREN WITH DIGESTIVE DISORDERS

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**Introduction:** Non-celiac gluten sensitivity (NCGS) is characterized by intestinal symptoms (bloating, diarrhoea and abdominal pain) compatible with irritable bowel syndrome (IBS) that occurs after ingestion of gluten in subjects in whom infectious enterocolitis, inflammatory bowel diseases, celiac disease and wheat allergy have been ruled out. Gastro-esophageal reflux disease (GERD) is mainly a functional condition often diagnosed in children and treated with proton pump inhibitors (PPI). Long term PPI can alter intestinal bacterial population by suppressing the gastric acid barrier and may cause diarrhea. **Objectives:** The aim of this study was to evaluate the incidence of small intestinal bacterial overgrowth (SIBO) assessed by glucose hydrogen breath test (GHBT) among children that received 12 weeks of PPI treatment with or without probiotics associated, compared to children with NCGS that did not received PPI and a control lot. **Methods:** We performed GHBT to 182 consecutive children aged 1-18 years old: 64 with GERD who received PPI for 12 weeks, 58 children with NCGS in absence of PPI treatment and 60 healthy control subjects. The children with GERD were randomized in two groups: 32 who received only PPI and 32 who received PPI and probiotics (*Lactobacillus reuteri*) for 12 weeks. In children with GERD, GHBT was performed before treatment and after 12 weeks of treatment for every child. **Results:** There weren't any patient detected with SIBO by GHBT among children with GERD before treatment. After 12 weeks of treatment, we detected SIBO among 56% of children treated with PPI only (18/32), compared to 6% of children treated with PPI and probiotics (2/32), ( $p < 0,001$ ). SIBO was detected in 20% of patients with NCGS (12/58) and 5% of healthy control subjects (3/60). There was a statistically significant difference regarding SIBO prevalence between children with GERD treated with PPI only and those with NCGS or healthy control subjects ( $p < 0,001$ ). Children with GERD treated with PPI and probiotics had a significant lower prevalence of SIBO, similar to control lot. **Conclusions:** SIBO assessed by GHBT occurred significantly more frequently among children with GERD treated with long term PPI compared to children with NCGS or control subjects. Association of probiotics based on *Lactobacillus reuteri* decreased the rate of SIBO among children with GERD treated with PPI. Being a functional disorder that request long term PPI, GERD may benefit by acid suppression inhibition combined with probiotics in order to decrease the risk of intestinal bacteria alteration.

## WHERE DOES OUR CHILDREN'S NUTRITION EDUCATION BEGINS?

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"Natural and processed foods are the only two groups of foods that I would include in a food pyramid. Do you read labels of the products that you buy? It's simple: look for the labels where is written "100% whole/natural product!" - (Nutritionism The Science and Politics of Dietary Advice, Gyorgy Scrinis, Columbia University Press, 2015). Gyorgy Scrinis, the parent of "nutritionism", spoked about the importance of food processing, rather than the nutrient composition of foods. Foods satisfies the most basic human need and are an important part of our life, but we are often unaware of their importance. What we are eating has a direct effect on our energy level, our concentration, our health and well-being and proper nutrition affects our children's development. It all starts in our family, how we manage emotions, how we adapt and react to different life events... Mom and Dad are our first models on how to be and how to live; then our older brothers, our friends and our entourage. As parents, we have "3 seeds to plant" as we engage in the process of our children's nutrition education: 1. The child "mirrors" his parents!; 2. The child is "invited to dinner" with his family!; 3. The child is a "PRIORITY" in his parent's lives!

## PARENTAL INFLUENCE ON EATING BEHAVIOR

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A child come in this his life in a wild variety of cultures. This variety refers at dietary habits related to religion, to financial aspect of the parents and the country of which he will be a citizen, to nutritional habits of his family (vegetarians, milk-egg-vegetarians, vegans, ro-vegans). No matter of region of birth the new come child come in this world as an omnivore. This initial physiological setting made the young human being capable to adapt at all food regimen. In the first years of life the child has a rapid growth and the alimentary habits and patterns will be developed by his parents. In our days more and more family eat precooked food and sugar-based drinks in expense of healthy food made by fresh ingredients. The very complex working programs of the parents determine a non-controlled feeding program of the child, and let the responsibility of the choice of feed plan to the grand-parents or even worse to the unprepared (for this responsibility) child and increasing the probability to eat larger servings and more fat and energy.

## WHEN, WHAT AND HOW SHOULD I GIVE MY CHILD MICRONUTRIENTS SUPPLEMENTS FOR A HEALTHY GROWTH?

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Pediatric scientific societies recommend a balanced diet for children, to provide all the nutrients necessary for a healthy growth. European Pediatric Association does not routinely recommend micronutrients supplementation (vitamins, microelements), unless there are diagnosed deficiencies, only after consultation with family doctor / pediatrician and after excluding any medical conditions. Unfortunately, providing a balanced diet in children proves to be a challenge for parents, because of their very demanding time schedule. The quality / quantity ratio of food is constantly decreasing. Soil composition and quality have declined dramatically worldwide, with the decrease of the nutritional value of the food. Micronutrients supplementation is indicated for the correction of nutritional deficiencies, optimal growth and body development as well as for detoxification and immune support. Food supplements are indicated in most children as adjuvants along with a balanced diet, especially during periods of growth. We believe that parents should assess, with the help of a qualified person, their child's diet, the possible nutritional deficiencies and seek for the advice of their family doctor or pediatrician when they have a suspicion of micronutrients deficiency. Lifestyle medicine, the Nutrition pillar, plays a key role in improving health and reducing micronutrients deficiency in children.

## CULINARY MEDICINE FOR CHILDREN AND FAMILIES, STARTING FROM THE BEGINNING TO CREATE A HEALTHY SOCIETY

**Ana Jorge<sup>1</sup>**

<sup>1</sup> NutriHealth Coaching, Portugal

When our mission is to create a healthy society it is clear that we should start from the beginning and Prevention may be the key. With the world children obesity rates and chronic diseases incidence increasing (specially between teenagers) it is urgent to intercede in the early years of life, when information can be better assimilated and changes are easier to the brain. The first thousand days appears as a window of opportunity to leave the “seeds” in the child’s body and mind that latter will germinate and will become the bases of the Adult Health. As part of a Healthy Lifestyle the concepts of a Healthy Nutrition should be learned from the beginning following the nutritional general guidelines and also the specific guidelines according to each early life different stages. Culinary Medicine appears as a tool that will help families to implement and follow the nutritional guidelines, translating the nutritional concepts into real food, educating parents and children how to buy, cook and prepare healthy meals. Evolving children can be the secret for the success, as they will have more probability to understand and accept the concepts and recommendations, participating as protagonists bringing fun into it. With several benefits for both children and parents, Culinary Medicine has the potential to join families in the Healthy Nutrition Mission turning meals into a funny and pleasant family moment.

## LIFESTYLE MANAGEMENT IN FAMILY MEDICINE IN CHILDHOOD: PRESENT AND OPPORTUNITIES

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The WHO affirm that a person's lifestyle has a 50% influence on his health, the environment and hereditary factors have a share of 20%, and medicine has only 10% contribution to people's health. Lifestyle management in family medicine currently offers a lot of evaluation and counseling methods in preventive medical consultations. First, lifestyle influences the intrauterine period of ontogeny, which requires education and counseling the pregnant woman about the impact on fetal development. The healthy lifestyle is implemented and consolidated in early childhood through the education of parents by the family doctor, the family environment has a decisive role during this period. In the second and third childhood, it is important to have a partnership family doctor - child - parent - education system, for the purpose of educating the child regarding the lifestyle and the long-term consequences on his own health. Lifestyle in childhood involves a balance between healthy eating, physical activity, sleep and relaxation, family and friends, passions and time for himself. Lifestyle medicine offers opportunities that can be used in family doctor practice.



## THE HIP ULTRASOUND SCREENING AND THE IMPORTANCE OF PHYSICAL THERAPY AND EXERCISE FOR THE NEWBORNS AND INFANT NEUROMOTOR DEVELOPMENT

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**Background:** We are presenting an Experimental Ultrasound Screening for the early diagnosis of Developmental Dysplasia of the Hip (DDH) targeted at infants with risk factors, conducted by the Family Physicians with expertise special trained for hip joint screening. We used the Bayley Scales for the evaluation of infant development and growth. **Aims:** This study aims to demonstrate the accuracy of hip ultrasonographic screening in infants at high risk between 6-14 weeks of life, conducted by the family physician with expertise in this technique, compared with the Gold Standard method of positive diagnosis established by the radiologist. DDH is a condition where there is an inadequate formation of the acetabulum that finally has an abnormal relationship with the femoral head or may grow abnormally. **Research question:** What method is useful in medical practice for the early diagnosis and treatment of DDH? **Methods:** We made a targeted ultrasound hip screening of 588 infants at high risk. The inclusion criteria were both: anamnestic risk factors after Dimeglio, along with the clinical examination of the infant, with limb length discrepancy, thigh fold symmetry, and any limitation of hip abduction with the following positive maneuvers as Barlow, Ortolani, or Galeazzi. Each baby was examined ultrasonographic, the first time in six weeks, and those found positive were sent to the radiologist, and then re-examined within 12-16 weeks. We used both ultrasonographic Graf's classification of DDH and second the femoral head cover (FHC) after the Terjesen method. All the data obtained were introduced into a smart software created by us with a diagnostic algorithm for hip dysplasia. **Results:** The incidence of DDH in our targeted ultrasound screening was 2.72 %. The sex ratio showed the female predominance 4:1. The left hip was involved two times more often, with 20% bilateral involvement. We obtained after Graf's classification the follow results: normal (type1a=93,5%/type1b=3%), physiologically immature (type2a=1,3%), dysplastic (type2b-c=1%), subluxated (type 3=0,68%), and dislocated (type4=0,34%). Regarding the risk factors the distribution was as follows: hereditary (31%), pelvic respectively breech presentation (20%), abdominal delivery (14%), postural syndrome (5%), premature birth (5.0%), post-term birth (4%), twin pregnancy (2%), primiparity (10%), high birth weight (6%). The screening had the sensitivity 80%, specificity 98,2%, and accuracy of 97% with 95%CI: 96.04% to 98.69%, but with a low PPV:61.54%, p<0,01. We recommended to all examined infants who presented physiologically immature hip joint (type2a) or dysplastic (type2bc) performing gymnastic exercises such as flexion, extension, rotation, abduction, and adduction of the hip with Reflex Locomotion - after Vojta Therapy, which contributed decisively to stabilizing the balance with specific orthoses. **Conclusions:** The targeted screening has high accuracy and could increase the rate of early diagnosis of DDH with a permanent disability, to be treated in the first trimester of life using splinting, but depends on the physician's expertise. Ultrasound examination of the hips should be performed routinely, together with the clinical examination or at least for unstable hip joints.

## DIAGNOSTIC AND THERAPEUTIC PRINCIPLES IN CONGENITAL FOOT ABNORMALITIES

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Congenital foot are the most common skeletal malformations. There are a wide range of foot abnormalities that may be present at birth. The most common are: club foot, calcaneovalgus, metatarsus adductus and congenital flat foot. This presentation focus on the main clinical, anatomo-pathological, evolutive and therapeutic characteristics of these malformations in children. Club foot is a severe malformation that includes deviation of the foot in 4 distinct directions:

varus, equine, supination and adduction. The treatment based on Ponseti method, when correct applied has the best results. Thallus valgus is rather a malposition than a deformation of the foot and is solved in most of the cases by foot physical therapy (manipulation and therapeutic massage). Meanwhile, even though similar in aspect to thallus valgus, congenital flat foot (vertical talus), is a true deformity of the foot and the treatment includes complex orthopedic and/ or surgical treatment. Most of the patients with metatarsus adductus requires combined physical therapy and orthopedic treatment. Unless proper diagnosed and treated these foot abnormalities will be an important cause of suffering of the children or may evolve into permanent disabilities.