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OBESITY AND OVERWEIGHT IN CHILDREN AGED 6-11 AT INTERNATIONAL LEVEL

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Abstract. *Over time, many countries have seen obesity or overweight as a major problem which is best faced by half the population, both adults and children. In modern Western culture, being overweight or obese is considered unattractive, and is often associated with various negative stereotypes. With more and more obese people, they have become a real reason for discrimination [12].*

Childhood obesity inevitably lowers life expectancy. The problem of overweight and excessive growth of obesity since childhood can be prevented or slowed down by the implementation of diversified programs, if the company focuses more on the causes. There are many causes, some more crucial than others, but a balanced diet, combined with systematic physical activity, can prevent obesity and overweight in all children around the world. Most researchers believe that obesity, which has been present since childhood and is maintained until adolescence, is much more difficult to treat.

Preventing childhood obesity in most countries has become a public health issue, which requires close monitoring of those affected.

Next, I will present an analysis of the situation at the international level regarding obesity and overweight in children aged 6-11 years.

Keywords: *obesity, overweight, children, international level.*

Introduction. Overweight and obesity have recently become a growing public health problem, especially if we look at the figures in the studies for children. More and more people of all ages, especially children, have weight problems and are suffering from obesity, which is growing very fast. The environment encourages overeating through an abundant supply of high-fat, energy-dense, easily accessible, relatively inexpensive, pleasant-tasting and widely served foods. Raising the standard of living in many countries, access to food, along with sedentary lifestyles, has made a significant proportion of people obese. Statistics from the Ministry of Health show that 40% of children are overweight, and in the last 10 years their

number has increased by 18%, and the number of obese or overweight children has doubled in recent years. The main causes of obesity have been shown to be the correlation of lack of physical activity with a high-calorie daily diet, then genetic predisposition, and in some cases endocrine disorders, over-medication and not least mental illness.

There is little experimental research that shows that some obese people who, even if they eat little food, gain weight due to hormonal metabolism disorders. The prevalence of childhood obesity is growing rapidly worldwide, and growth trends must always be closely monitored. These trends are difficult to quantify or compare internationally

because obesity is not commonly accepted in today's society.

According to recent studies, over 66% of the population in the United States is overweight and obese, and the fact that the excess weight has spread around the globe suggests that the environment it has changed in such a way that fewer and fewer people are able to maintain a healthy weight, relying only on their own biology and "instinctual" mechanisms to protect them. According to a study conducted in 79 countries, the World Health Organization finds that there are 250 million obese people in the world, of which 22 million are expected to be children under 5 years of age. The alarming rise in obesity and overweight among children is being seen in both industrialized, high-income developed countries and low- and middle-income countries. Researchers estimate that 80% of obese children will become obese adults at high risk of developing high blood pressure and cardiovascular disease. In the last two decades, many developing countries have seen an alarming increase in the prevalence of

childhood obesity, which is a rapid increase over already developed countries. This suggests that the presence of obesity and overweight since childhood is a growing problem in all countries around the world, its consequences being drastic in some cases due to the significant increase in the number of deaths from one year to the next. There have been more deaths worldwide due to overweight and obesity than due to underweight. **IASO** (International Association for the Study of Obesity) estimates that currently, in the world, 10% of children are overweight or obese, approximately 120 million. In 2009, according to the World Health Organization, worldwide obesity outweighed malnutrition, with 15-18% of children being obese.

Materials and methods

A study conducted by the National Health and Nutrition Examination Survey (NHANES) concludes that the number of obese cases doubled between 1963 and 1995, increasing by 54% in children aged 6-11. [2] In children aged 6-11 years, the overweight rate increased from 6.5% to 11.3% (Table 1).

Table 1. Prevalence of overweight in children aged 6-11 years

Age 6 - 11 years	
NHANES 1963-65 1966-70	4,2%
NHANES 1971-74	4%
NHANES 1976-80	6,5%
NHANES 1988-94	11,3%
NHANES 1988-94	15,1%
NHANES 1988-94	16,3%
NHANES 1988-94	18,8%

In 2003, NHANES published a study showing that in Canada, in 1996, the rate of increase in overweight in girls was 33% for children aged 7 to 13, and 26% for boys, and in terms of the increase in obesity, it was 10% for girls and 9% for boys [5].

Another study conducted in 2001/2002 in Mexico shows that the prevalence rate of the increase in overweight among children is

34.5% and that of obesity is 26.2%. The highest prevalence of increasing overweight and childhood obesity has been cited in the Pacific Islands and Saudi Arabia. Recent data from a study by NHANES II (1976-1980) on the young population in the United States show an increase in the prevalence of obesity in children aged 6-11 years, from 6.5% to 17% [3] (Table 2).

Table 2. Prevalence of obesity in children aged 6-11 in the United States

Age 6 - 11 years	
NHANES II 1976-1980	6,5%
NHANES II 1976-1980	11,3%
NHANES II 1976-1980	15,8%
NHANES II 1976-1980	17,0%

There are about 14 million overweight children in Europe, growing rapidly from year to year, and about 3 million children being obese, at a rate of 20%. Given that more and more children are affected by this "pandemic", I can say that childhood obesity can be associated with multiple long-term health problems, as well as behavioral and emotional problems. It can also cause unwanted psychological consequences, such as anxiety, depression, sleep disturbances, low self-esteem, all of which affect children's social and educational relationships. In 2010, there were 26 million overweight children in European countries, of which 6.4 million were already obese. Childhood obesity is on the rise in Europe, with the highest rates in Southern and Western European countries. The prevalence of overweight and obesity among children between the ages of 6 and 11 has increased dramatically from 4% in 1975 to just over 18% in 2016. The increase was similar for both boys and girls: in 2016, 18% of girls and 19% of boys were overweight. In 1975, less than 1% of children aged 6 to 11 were obese, and in 2016 the number increased dramatically, with over 124 million children being overweight or obese. In the UK, overweight children make up 22% of children aged 6 to 11, and in the US overweight children make up 27% of those aged 6 to 11. [6] In France, between 1980 and 1996, the proportion of obese people increased from 5.1% to 12.7% among 10 year-olds. In Germany, the spread of obesity in children aged 7 to 14 years has increased in 20 years (from 1975 to 1995) from 5.3% to 8.2% for boys, and from 4.7% to 10 %, in the case of

girls. According to a study published in 2000, 25% of European children could be obese in less than a decade if a real change in eating habits and lifestyle does not occur quickly in this generation [4]. In many countries, more than half of the population is overweight or obese. The prevalence of increasing obesity and overweight in children, according to data provided by NHANES (National Health and Nutrition Examination Survey) in the last 30 years, has tripled: in children aged 6-11 from 6.5% in 1980 , at 19.6% in 2008 [8].

A study published by Cole TJ et al. Shows the prevalence of increasing overweight and obesity at different times and in different age groups in Europe [1] (Table 3).

The lowest growth rate of childhood obesity is found in Africa and some parts of Asia, at about 5%. In Europe, the growth rate of obesity is over 20%, and in the US and in some areas of the Middle East over 30%. In 2002, a study by NHANES showed the lowest growth rate of obesity in girls in Bulgaria at 2.2%, followed by Switzerland at 2.4%, the Netherlands at 2.6% and Norway at 3%. The European Day Against Obesity, following the analysis of the situation in 2016, states that at the international level, the rate of obesity and overweight doubled between 1980 and 2014. A large percentage of the world's population lives in countries where overweight and obesity kill more people than underweight [9].

On the occasion of the European Day Against Obesity, in 2017, following the situation analysis, the European Commission has generated a strategy to promote an active lifestyle involving as many people as possible within the EU member states. Thus, in July

2017, the European Commission launched the European Platform targeting actions on diet and physical activity. This has led to more

than 300 initiatives to promote a healthy lifestyle and proper nutrition in all EU member states [10].

Table 3. Prevalence of increasing overweight and obesity in Europe

The country	Sex	Age (years)	Prevalence of overweight (%)	Prevalence of obesity (%)	Period
Belgium	F	2-9	19,0	7,8	2004
	M	2-9	18,0	6	
Bulgaria	F	5-9	9,9	2,2	2004
	M	5-9	16,8	6,6	
Denmark	F	6-8	21,0	4,0	2003
	M	6-8	14,8	4,6	
Switzerland	F	6-9	19,5	4,0	2002-2003
	M	6-9	17,0	4,1	
France	F	7-9	18,3	3,6	2000
	M	7-9	17,9	3,9	
Irlanda	F	4-9	29,2	7,5	2001-2002
	M	4-9	22,5	5,8	
Italy	F	6-11	29,5	7,0	2000-2002
	M	6-11	24,8	5,9	
Netherlands	F	2-9	16,2	4,5	2005
	M	2-9	12,9	2,4	
Norway	F	8-9	18,8	4,0	2000
	M	8-9	17,3	3,0	
Poland	F	1-9	21,1	6,3	2000
	M	1-9	22,8	7,0	
Portugal	F	7-9	33,7	12,3	2002-2003
	M	7-9	29,4	10,3	
Spain	F	2-9	32,4	10,5	1998-2000
	M	2-9	30,2	10,3	
Sweden	F	4-8	19,2	2,6	2000
	M	4-8	19,0	3,4	

On the occasion of the European Day Against Obesity in 2018, at the initiative of the WHO Surveillance of Childhood Obesity in Europe (COSI), the causes of the differences in the environment for a healthy diet and body mass index in primary schools in 12 European countries were assessed. It has been found that healthy nutrition is not promoted in most schools, and as a result they have been proposed for inclusion in curricula "Nutrition

and dietetics", to teach them to make a balanced menu with a healthy diet [11].

Being initially considered a problem only in developed countries, the increase in obesity and overweight among the population, especially among children, has become a rather serious problem and more and more common in less developed or middle income countries.

Conclusions. The prevalence of increasing obesity and overweight among

children is due to the cultural changes that accompany the development of society, as well as the lack of physical activity and excessive abuse of food. In recent decades, children have become less active, encouraged by advances in technology and socio-economic factors. Researchers believe that the growing prevalence of obesity is the result of changes in the lifestyle of societies, such as inactivity, energy imbalance, high consumption of fast food, long time spent in front of the TV, computer and increased use of new technology. which captures all the attention. In 1992, a program to combat childhood obesity and overweight was implemented in France, following the EPODE model. This French EPODE program (Ensemble Prévenons l'Obésité Des Enfants or Together let's Prevent Childhood Obesity) is a program at community level, which aims to prevent overweight and obesity in childhood. The main target groups of this EPODE program are children aged 0-12 and their families. Through initiatives and a long-term program, interested participants foster and promote a healthy lifestyle in families in a

sustainable way. The EPODE program was designed on the basis of a school-based nutrition education study, which was initiated in 1992 in two cities in northern France - Fleurbaix and Laventie (in 1991, there were 6,500 inhabitants in the two cities). The 12-year study showed a significant decrease in the prevalence of overweight in children (1992: 11.4% vs. 12.6% in the two control cities; 2004: 8.8% vs. 17.8% in the two control cities ($P < 0.0001$), although it took 8 years to observe the decline in the prevalence of overweight. Since 2004, the EPODE program has been implemented worldwide in more than 25 countries on five continents" [7].

The problem of overweight and excessive growth of obesity since childhood can be prevented or slowed down by implementing diversified programs, if the company focuses more on the causes.

There are many causes, some more crucial than others, but a balanced diet, combined with systematic physical activity, can prevent obesity and overweight in all children around the world.

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