

STUDY ON OBESITY AND OVERWEIGHT AMONG CHILDREN IN THE PRIMARY CYCLE AT INTERNATIONAL PLAN

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Abstract: Prevention of obesity among children is a public health issue, and requires close monitoring of those with a tendency to gain weight. Most researchers believe that obesity, which has appeared since childhood and is maintained until adolescence, is much more difficult to treat. Obesity among children inevitably decreases life expectancy. The problem of overweight and excessive growth of obesity since childhood can be prevented or slowed down by implementing diversified programs, if society 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. Next, I will present the studies done internationally regarding the presence of obesity and overweight in children aged 6-11 years.

Introduction: Obesity is a public health problem worldwide. Rising living standards in many countries, access to food, along with sedentary lifestyle, has made a significant proportion of people obese. The environment encourages overeating through an abundant supply of high-fat foods, with a high energy density, easily accessible, relatively cheap, pleasant to the taste and served in large proportions. Overweight and obesity have recently become a public health problem, in a continuous increase, if we look mainly at the figures in the studies regarding children. More and more people of all ages, especially children, have weight problems and are obese, having a very fast growth. According to statistics from the Ministry of Health, 40% of children are overweight, in the last 10 years their number increased by 18%, and in terms of the number of obese children, it has doubled in the last 7 years. According to recent studies, over 66% of the population in the United States is overweight and obese, and the fact that excess weight has spread around the globe suggests that the environment has changed

so that fewer and fewer people are able to maintain a healthy weight, relying only on their own biology and "instinctual" mechanisms to protect them. The most alarming is the increase in the spread of obesity among the child population. The prevalence of childhood obesity is growing very 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 a study conducted in 79 countries, the World Health Organization (WHO) estimates that there are 250 million obese people in the world, of which an estimated 22 million are children under the age of 5. The idea is that 50% of obese children will become obese adults. WHO estimates over 300 million obese by 2025. The alarming increase in obesity among children is 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 increased risk of developing high blood pressure and cardiovascular disease. We encounter the same problem in other non-Western countries where childhood obesity is essential. In Arab countries and Israel, the proportion of obese children is close to that of the United States. In Japan, the rate of childhood obesity is 15% (up 57% in the last 10 years). 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 since childhood is a growing problem in all countries around the world, it's consequences being drastic in some cases by significantly increasing the number of deaths from one year to another. There have been more deaths worldwide due to overweight and obesity than due to underweight. Globally, there are more people who are obese than underweight, with exceptions only in some areas of Africa and Asia.

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.

Material-method: A study conducted by the National Health and Nutrition Examination Survey (NHANES) shows that between 1963 and 1995 the number of obese cases doubled, increasing by 54% in children aged 6-11 years and by 40% in the age 12-19 years. [2] In children aged

6-11, the prevalence of overweight increased from 6.5% to 11.3%, and in adolescents from 5% to 10.5%, doubling as well. (Table 1)

Age (years)	NHANES 1963-65 1966-70	NHANES 1971-74	NHANES 1976-80	NHANES 1988-94	NHANES 1999-2000	NHANES 2001-02	NHANES 2003-04
2-5	-	5%	5%	7,2%	10,3%	10,6%	13,9%
6-11	4,2%	4%	6,5%	11,3%	15,1%	16,3%	18,8%
12-19	4,6%	6,1%	5%	10,5%	14,8%	16,7%	17,4%

Table 1: Prevalence of overweight in children aged 2-19 years

A study published in 2003 by NHANES shows that in 1996, in Canada, in the 7-13 age group, the prevalence of overweight was 33% for girls and 26% for boys, and the prevalence of obesity was 10% for girls and 9% for boys. [5] In a study conducted in 2001/2002, in Mexico, it was found that the prevalence rate of increasing overweight among children and adolescents is 34.5% and obesity 26.2%. The highest prevalence of increasing overweight and obesity among children, adolescents, and adults has been cited in the Pacific Islands and Saudi Arabia. Recent data from a study, recorded by NHANES II (1976-1980) at NHANES 2003-2006, on the young population in the United States show an increase in the prevalence of obesity in all age groups as follows: in preschoolers 2-5 years, from 5% to 12.4%; in the age group 6-11 years, from 6.5% to 17%, and in the age group 12-19 years, from 5% to 17.6%. [3] (Table 2).

Age (years)	NHANES II 1976-1980	NHANES III 1988-1994	NHANES 1999-2002	NHANES 2003-2006
2-5	5%	7,2%	10,3%	12,4%
6-11	6,5%	11,3%	15,8%	17,0%
12-19	5%	10,5%	16,1%	17,6%

Table 2: Prevalence of obesity in children 2-19 years of age in the USA

In Europe there are about 14 million overweight children, their number growing very fast from year to year, and about 3 million children are obese, its rate being 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 disorders, low self-esteem, all of which affect children's social and educational relationships. "Following data presented at the Congress of the European Society of Cardiology in Barcelona from 29 August to 2 September 2009, it is estimated that 1 billion people worldwide are overweight, 22 million of them are children under 8 years old. In 2010, there were 26 million overweight children in European countries, of which 6.4 million were already obese. Childhood obesity has been shown to be steadily rising in Europe, with the highest in Southern and Western European countries. In the UK, overweight children make up 22% of children aged 6 and 31% of those aged 15 and over. In the United States, overweight children make up 27% of 6- and 11-year-olds and 22% of 12- and 18-year-olds. "[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 prevalence 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. In the last 30 years, the prevalence of increasing childhood obesity, according to data provided by NHANES (National Health and Nutrition Examination Survey) has tripled: in children aged 6-11 years from 6.5% in 1980, to 19.6% in 2008, and in adolescents aged 12-19 years from 5% to 18.1%. [8] The lowest growth rate of childhood obesity of about 5% is found in Africa and some parts of Asia. In Europe, the growth rate of obesity is over 20%, and in the US and in some areas of the Middle East over 30%. According to a 2002 NHANES study, the lowest prevalence of obesity growth in Europe was 2.2% in girls in Bulgaria, followed by Switzerland 2.4%, the Netherlands 2.6% and Norway 3%.

Following a study published by Cole TJ et al., It shows the prevalence of increasing overweight and obesity in different periods and in different age groups in Europe. [1] (Table 3)

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	
Cyprus	F	2-6	15,6	5,7	2004
	M	2-6	12,8	5,4	
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	
Greece	F	2-6	16,3	11,4	2003
	M	2-6	18,1	11,2	
Ireland	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	

Table 3: Prevalence of increasing overweight and obesity in Europe

"The 2016 situation analysis of the European Day against Obesity states that internationally, the prevalence of obesity has more than doubled between 1980 and 2014. Most of the world's population lives in countries where overweight and obesity kill more people than underweight. In 2013, 42 million children under the age of 5 were overweight or obese. " [9] "In its analysis of the European Day Against Obesity, in 2017, the European Commission campaigned to raise awareness and promote health and lifestyles active in EU Member States through several policies and initiatives. Thus, in March 2005, the European Commission launched the European Platform for Action on Diet, Physical Activity and Health, which led to more than 300 initiatives

to promote improved nutrition and physical activity in the EU. "[10] "In the analysis of the situation in 2018, during the European Day against Obesity, the WHO initiative for the Monitoring of Childhood Obesity in Europe (COSI) assessed the differences in terms of the environment for healthy nutrition in schools and the body mass index in primary schools in 12 European countries. The main conclusion was that in most countries where the environment for healthy nutrition in schools is not very conducive, there are also schools where policies to support healthy eating operate, which suggests the need to harmonize school policies. "[11] In 2018, according to studies, over 40 million children under the age of 5 were overweight or obese. Considered mainly at the beginning a problem only in high-income countries, overweight and increased obesity, it has become a problem in low- and middle-income countries, especially in urban areas.

Conclusions: The prevalence of increasing obesity among children is due to cultural changes that accompany the development of society, as well as lack of physical activity and excessive food abuse. In recent decades, children have become less active, encouraged by advances in technology and socio-economic factors. Scientific evidence suggests that once obesity has been established, it is difficult to return to a normal weight through lifestyle interventions and, moreover, obesity is consolidated in adulthood, which emphasizes the importance of primary prevention of childhood obesity. A program to combat childhood obesity was implemented in France, following the EPODE model, in 1992.

The French EPODE (Ensemble Prévenons l'Obésité Des Enfants or Together let's Prevent Childhood Obesity) program is a community-based program that aims to prevent overweight and obesity in childhood. The main target groups of EPODE are children aged 0-12 years 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, EPODE has been implemented worldwide in more than 25 countries on five continents. "[7] 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 TV, computer and increased use of new technology, which captures all the attention.

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