

**45 - OBESITY CHILD: CAUSES, CONSEQUENCES AND PHYSICAL ACTIVITY**

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doi:10.16887/87.a1.45

**ABSTRACT:** In Brazil, obesity still a sad reality, though malnutrition. The Child obesity has nearly doubled in the last 10 years and it is estimated that about 15% of Brazilian children are obese. Given the above, the present study aims to provide answers about the causes and consequences taking into account the theoretical references on the subject and discriminating against childhood obesity rate in school, investigating the possible causes that led to obesity. In this sense, we intend to demonstrate in front of their diseases and sequelae presented by obese children, and bringing the academies a new segment of society, since it is not clear, children and adolescents being treated in physical activities in order to assist them in reduction of diseases caused by obesity.

**KEY WORDS:** Childhood Obesity, Physical Activity, Nutrition.

### INTRODUCTION

Obesity is a disease characterized by excess fat is greater than 20% of body weight in men and 30% in women. It is considered a metabolic dysfunction to be related to binge eating, hormonal problems and low levels of physical activity (Negrao; Barreto, 2006).

The Childhood Obesity is already considered the most common nutritional disorder in childhood. Increasing the incidence of childhood obesity in Brazil in the last three decades. Thus, the last assessment of the IBGE, held in 2008-2009, the prevalence of overweight in children aged 5 to 9 years ranged from 25% to 30% in the North and Northeast (more than five times the prevalence of deficit weight), and 32-40% in the Southeast, South and Midwest. Studies also show that, despite the malnutrition still a sad reality in Brazil, there are at least 70 million Brazilians (40% of the population) above the appropriate weight.

The Childhood Obesity can affect the child's health in many ways and depression is very common. When combined with low self-esteem, it can hinder the child's social relationship and result in a feeling of impotence to the problem. Studies show that obese children are more likely to develop psychiatric problems compared with non-obese children.

The Childhood Obesity tends to extend to adulthood: about 40-70% of children who arrive in obese adolescents become obese for life. Cardiovascular and respiratory problems begin in childhood and can worsen with age. According SCAPUCIN (1998, p.42) obesity also decrease the child's learning potential.

The amount of total body fat and localized fat deposits are associated with metabolic syndrome, developing various chronic degenerative diseases, such as atherosclerosis, coronary artery disease, hypertension and type II diabetes and even children who suffer from obesity develop atherosclerotic changes in the arteries coronary during childhood. In some cases, these changes may progress to obstructive lesions, angina and heart attack in a few decades. Fortunately, the process is reversible in the early stages, just as there is control adequately to overweight.

Not even the experts were able to enter into an agreement on how to determine if a child is overweight or not. One of the best known indices to assess the level of obesity is the body mass index, known by the abbreviation BMI. BMI was adopted by the World Health Organization to establish the obesity criteria.

BMI (in kg / m<sup>2</sup>) is determined by the formula: Body weight in kg / height x height, and according to the BMI value, you can determine obesity level of a person. Although it is easy to calculate and interpret the parameters offered by BMI usually not be used alone to determine the presence of Childhood Obesity. Therefore, experts employ a table of percentiles related to BMI. These percentiles vary with the height, the weight and age of the child. The childhood obesity corresponds to a percentile above 95, or about 20% weight above considered ideal for age and height.

Given the above, the present study aims to provide answers about the causes and consequences taking into account the theoretical references on the subject and discriminating against childhood obesity rate in school, investigating possible causes that triggered the syndrome. In this sense, we intend to demonstrate that on the respective diseases and sequelae presented in obese children can bring to the academies a new segment of society, since it is not clear, children and adolescents being met in physical activities in gyms, to auxiliary them in the reduction of diseases caused by obesity.

### THE CAUSES OF OBESITY CHILDREN

There is considerable discussion about the reasons that are producing the crowds of obese children progress through the twenty-first century. The most common cause lies in the imbalance between what the child eats and energy she spends.

The traditional Brazilian diet (rice, beans, meat, salads, vegetables and fruit) has been replaced by rich options in calories, but not always with good nutritional value. And to make matters worse, the portions of the snacks are increasing alarmingly.

The Hypercaloric meals are not a problem of the privileged classes: statistics show that the Childhood Obesity affects all social levels. After all, it is simple, cheap and easy to buy and consume food rich in calories (cookies, processed snacks, sweets) that healthier foods (such as fruits, vegetables, etc.).

Other changes in lifestyle brought by modernity are also at the heart of the problem. Inactivity increased. Children spend more time in front of TV and video games than running on the street, playing ball or riding a bicycle. As children today have the same size of those of old, the result of increased calorie consumption and increasing physical inactivity could only result in one thing: Obesity.

According to VEIGA (1997, p.92): Major Causes of childhood obesity are:

Ø Nutritional Causes: by far the most commonly involved factor.

Ø Psychological causes: anxious children end up eating more.

Ø Environmental Causes: lack of physical activity is the main representative of this group.

Ø Hormonal causes: some endocrine diseases (hypothyroidism, Cushing's syndrome, deficiency Growth Hormone, etc.) may present with weight gain. These diseases account for about 10% of cases of childhood obesity.

Ø Genetic causes: children with Down syndrome, Turner syndrome and other genetic disorders are actually "easy" to get fat.

Ø Drug Causes: Some medications like corticosteroids, can cause weight gain.

Complications of Childhood Obesity as FERNANDES, F. (2003, p.168): Childhood obesity can affect a child's health in several ways, depression is common when associated with low self-esteem it can hinder the social relationship child and result in a feeling of impotence to the problem".

Studies show that obese children are more likely to develop psychiatric problems when compared to non-obese children. Childhood obesity tends to extend to adulthood: about 40-70% of children who arrive obese in adolescence, become obese for life. Cardiovascular and respiratory problems begin in childhood and can worsen with age. Obesity also decrease the child's learning potential.

Fernandes Filho 2003, p. 170-172) The amount of total body fat and localized fat deposits are associated with the development of various degenerative chronic diseases, such as atherosclerosis, coronary artery disease, hypertension and diabetes mellitus.

Researchers MONTEIRO AND CONDE (1999, p. 20) found that children who are obese develop atherosclerotic changes in coronary arteries during childhood. In some cases, these changes may progress to obstructive lesions, angina and heart attack in a few decades. Fortunately, the process is reversible in the early stages, just that the child adequately control excess weight.

In the analysis of the secular trend of obesity according to social strata in the Northeast and Southeast regions of Brazil (Monteiro and Conde 1999, p.20) feature a uniform increase of obesity in adults in some regions of Brazil.

In 1997, the above authors, conducted a survey of the frequency of childhood obesity in the social classes and regions. The results were higher in the intermediate and upper classes of the Northeast, while the Southeast increase in the number of obese was higher in the lower classes, and lower in the intermediate and upper classes. These results demonstrate the influence of socioeconomic status on obesity at the population level expression.

The distribution of the problem in children in Brazil, according to the socioeconomic status in South and Southeast, presents different from the results for the adult population, described by MONTEIRO AND CONDE (1999, p. 20).

According to results presented by VEIGA AND COLS (p.11), SCAPUCIN (p.12), MOURA (p. 13) and Pereira (p.14) show higher rates of obesity in schools with higher socioeconomic level than for same age sample of this study.

In the Northeast, the literature shows no prevalence studies of childhood obesity at different levels of schools. It can be observed, however, that in this study, obesity in children is similar to that described by the authors mentioned above, in the Northeast adults.

The reasons for the higher prevalence of obesity in higher socioeconomic status of children could be associated with easy access to the consumption of foods high in empty calories or decreased physical activity. The applied food frequency questionnaire showed that in addition to the high consumption of milk, meat, bread and margarine and low consumption of leafy found in both school networks, only in obese private schools observed a high intake of sweets and candies, considered foods low in nutrients and high in calories. It is noteworthy, however, the importance of studies to determine the amount of these foods eaten in more often to better association of child and adolescent obesity with poor eating habits.

Whereas, in public schools, most obese were aged between 9 and 10 years old, which is a period of intense anabolism and conducive to the development of obesity, one can understand this higher prevalence for girls in public schools. Already in private schools, where the percentage estimates indicate a greater number of male obese, looking also relate them to age in this case of 7 and 9 years old, periods they also considered critical to the onset of obesity regardless of sex.

Since obesity is a chronic disease requires constant attention regarding eating habits and physical activity. It should be remembered, however, the multi causality of this disease. Heredity and biological factors such as age and sex, should also be considered. The sets of these factors cannot be eliminated, but controlled by changing the eating habits and physical activity of the child and family. The possible involvement of obesity-associated factors (demographic, socioeconomic, dietary and physical activity) suggests the application of standardized methods for population studies in order to evaluate its relationship with this disease. Thus, obesity can be understood and more specific interventions can be carried out in the risk group.

In time, it is important to note that the "metabolism" is a set of quimicas occurring changes in the body that is involved in nutrientes and hormones and energy transfer when there is any kind of "error" in this process triggers metabolic dysfunction.

A sedentary lifestyle is a major factor for surgimento these metabolic diseases contribute significativa way to "slow" metabolism, so if the metabolismo works slowly, is the energy accumulation in adipose tissue with as a final product specific weight gain and obesity. Obesity is the starting point for metabolic problems such as metabolic syndrome and Type 2 diabetes, one of the main factors for chronic complicações, cardiovascular diseases and cancers, limiting the individual's functional ability and reducing its life expectancy.

We cannot fail to mention genetics as a cause of some metabolic diseases such as Type 1 diabetes, it is characterized by an abnormality of the metabolism.

On the other hand, regular physical activity apresentam metabolic adaptations such as; adjustments bioquímico profile (increased sugar uptake, lipid oxidation and hormonal controle), cardiovascular (improved cardiac function and blood pressure control) and promoting the "acceleration" of the metabolism causing weight loss and gain physical fitness (Ciolac, EG; Guimarães: 2004: 319-324.).

#### METHODOLOGY

Regarding the procedure of data collection at first was Bibliographical with secondary sources taken from books and research, and the second time the research will be a case study, with data collection taking place in a public school in western Colorado city -RO. As for the source of information the study will be field, the instruments for anthropometric measurements which will be used by performing the measurements for the students BMI calculation and then in cases of overweight applications will be used with tape measures skinfold and measures in circumference.

#### DISCUSSION AND RESULTS

Physical exercises are key components for the control of obesity, and are considered a type of physical activity planned, structured and repetitive. Physical fitness, in turn, is a characteristic of the individual that includes aerobic power, strength and flexibility. Studies of these components can assist in the identification of children and adolescents at risk of obesity.

According to NAHAS (1999, p. 38), lack of physical activity is as important as hyperphagia (overeating) in the development of obesity. Although the derived weight loss of exercise without calorie restriction are small, the exercise remains the determining factor in the control or weight loss declares DÂMASO (2003, p.540). "Physical activity, even when spontaneous, is important in body composition, to increase bone mass and prevent osteoporosis and obesity."

#### FINAL CONSIDERATIONS

Childhood obesity is a multifactorial disease, this because there are behavioral contributions of lifestyle and

physiological aspects in their development and maintenance. In recent years the prevalence of a number of children with high levels of fat percentage above the recommended come only increasing.

The hypothesis at the beginning of this work was proven, since, found that the problem of obesity in the most privileged classes and the significantly higher figures involving the homogenization of classes made by studies of the population. In analyzing the data that comes to the school, we find that there is a considerable difference from the high levels of fat above the ideal, the population analyzed compared to the total number of child Brazilian population. Again showing that excess body fat does not choose class.

The solution to minimize this situation, can be viewed through the junction between educational, social planning, regular physical activity, as well as the theoretical discussions that have been held in specialized courses and / or training of professionals in the field of health and education Physical. Involving children in systematic recreational physical activities, and guided by trained professionals is the first step.

Thus, it is up to parents, health professionals, educators and communications media, given its strong influence on the population, acting jointly through guidance and information on the prevention of this disease increasingly present in our environment. Just like that, in the near future childhood obesity not present at such an alarming rate.

#### BIBLIOGRAPHIC REFERENCES

- BRAZIL. IBGE- Brazilian Institute of Research and Statistics 2008-2009. [www.boasaude.com.br/artigos-of-health](http://www.boasaude.com.br/artigos-of-health).  
 Ciolac, E. L. ; GUIMARAES, G. V. Physical exercise and metabolic síndrome. Rev. Bras. Med. Sport, Niterói, v. 10, no. 4, p. 319-324, August. 2004. Available: at <<http://www.scielo.br/pdf/rbme/v10n4/22048.pdf>>. Accessed on: 24 June 2015.  
 DÂMASO, A. Obesity. Rio de Janeiro: Medsi, 2003. 590p.  
 FERNANDES FILHO, José. The practice of physical assessment. Rio de Janeiro: Shape, 2003. 266p.  
 MONTEIRO C. A. ; EARL W. L. Secular trends of obesity according to social strata: the Northeast and Southeast of Brazil. Air. Bras. Endocrinol Metab. 1999 V.43, p.186-94.  
 MOURA EC, Padua J Mellin A, Santos AM Ibanez P, H. Lamb Obesity Anthropometric assessment in school. Arq Bras Endocrinol Metab 1999; 43 (supl2): S133.  
 NAHAS, M. V. Obesity, weight control and physical activity. London: Midiograf, 1999. 84p.  
 NEGRÃO, C. E. ; BARRETO, A. C. P. Cardiology Exercise: Athlete to cardiac disease. 2. ed. São Paulo: Manole, 2006.  
 PEREIRA, M., SICHIERI, R. Obesity in children 6 to 11 years in the city of Rio de Janeiro. Arq Bras Endocrinol Metab 1999; 43 (supl2).  
 SCAPUCIN, L. ; DELLE, L.A.B. ; VOLOCHTCHUK, O.M. ; YAMAMOTO, I.H. ; GRAF, H. Prevalence of obesity in a population of 1087 students from public and private educational institutions of Curitiba. Arq Bras Endocrinol Metab 1998; 42 (5): S216.  
 VEIGA, G.V. ; Prevalence and determinants of obesity factors in children and adolescents from two socioeconomic levels. Proc. 520596 / 95-1. Final report of the research project, CNPq 1997. Niterói, RJ. 92p.

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**ABSTRACT:** In Brazil, obesity still a sad reality, though malnutrition. The Child obesity has nearly doubled in the last 10 years and it is estimated that about 15% of Brazilian children are obese. Given the above, the present study aims to provide answers about the causes and consequences taking into account the theoretical references on the subject and discriminating against childhood obesity rate in school, investigating the possible causes that led to obesity. In this sense, we intend to demonstrate in front of their diseases and sequelae presented by obese children, and bringing the academies a new segment of society, since it is not clear, children and adolescents being treated in physical activities in order to assist them in reduction of diseases caused by obesity.

**KEY WORDS:** Childhood Obesity, Physical Activity, Nutrition.

#### OBÉSITÉ ENFANT: CAUSES, CONSEQUENCES ET ACTIVITÉ PHYSIQUE.

**RÉSUMÉ:** Au Brésil, l'obésité reste une triste réalité, mais la malnutrition. L'obésité infantile a presque doublé au cours des 10 dernières années et il est estimé qu'environ 15% des enfants brésiliens sont obèses. Compte tenu de ce qui précède, la présente étude a pour but de fournir des réponses sur les causes et les conséquences en tenant compte des références théoriques sur le sujet et une discrimination contre les taux d'obésité chez les enfants à l'école, d'enquêter sur les causes possibles qui ont conduit à l'obésité. En ce sens, nous avons l'intention de démontrer devant leurs maladies et séquelles présentées par les enfants obèses, et en rapprochant les académies d'un nouveau segment de la société, car on ne sait pas, les enfants et les adolescents traités à des activités physiques afin de les aider à la réduction des maladies causées par l'obésité.

**MOTS CLÉS:** Obésité infantile, l'activité physique, de la nutrition.

#### LA OBESIDAD INFANTIL: CAUSAS, CONSECUENCIAS Y LA ACTIVIDAD FÍSICA.

**RESUMEN:** En Brasil, la obesidad sigue siendo una triste realidad, aunque la desnutrición. La obesidad infantil se ha duplicado en los últimos 10 años y se estima que alrededor del 15% de los niños brasileños son obesos. Teniendo en cuenta lo anterior, el presente estudio tiene como objetivo proporcionar respuestas acerca de las causas y consecuencias, teniendo en cuenta las referencias teóricas sobre el tema y que discriminan a la tasa de obesidad infantil en la escuela, la investigación de las posibles causas que llevaron a la obesidad. En este sentido, tenemos la intención de demostrar frente a sus enfermedades y secuelas presentado por los niños obesos, y llevando las academias un nuevo segmento de la sociedad, ya que no está claro, los niños y adolescentes están siendo tratados en las actividades físicas con el fin de ayudarles a reducción de las enfermedades causadas por la obesidad.

**PALABRAS CLAVE:** obesidad de la niñez, la actividad física, la nutrición.

#### OBESIDADE INFANTIL: CAUSAS, CONSEQUÊNCIAS E ATIVIDADE FÍSICA.

**RESUMO:** No Brasil, a obesidade ainda ser uma triste realidade, apesar da desnutrição. A obesidade Infantil praticamente dobrou nos últimos 10 anos e calcula-se que cerca de 15% das crianças brasileiras estão obesas. Face ao exposto, o presente estudo tem por objetivo apresentar respostas sobre as causas e consequências levando em consideração os referenciais teóricos sobre o assunto e discriminar o índice de obesidade infantil em escolares, investigando as possíveis causas que desencadearam a obesidade. Neste sentido, pretendemos demonstrar diante das respectivas doenças e sequelas apresentadas pelas crianças obesas, e trazendo para as academias um novo segmento da sociedade, uma vez que não se percebe, crianças e adolescente sendo atendidos em atividades físicas, a fim de auxilia-los na diminuição das doenças causadas pela obesidade.

**PALAVRAS CHAVE:** Obesidade Infantil, Atividades Físicas, Alimentação.