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The Importance of Obesity Prophylaxis in Young People

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Abstract

Obesity has reached pandemic proportions today, and its consequences lead to an unprecedented burden in the health, financial and social fields. This is why effective actions are needed to reduce the frequency of obesity. Overweight and obesity represent the fifth highest risk of death globally. Obesity is most often linked to lifestyle factors that can be prevented, especially poor eating habits and sedentary lifestyle. Obesity in children is of particular importance, as eating habits and physical exertion are adopted early and tend to last a lifetime. Adults need to be a role model for young generations in adopting a healthier lifestyle. Unhealthy behaviors regarding nutrition and physical activity in children and young people involve proposing and implementing strategies to reduce and prevent, respectively, promoting healthy behaviors, both through individual and group interventions, but especially at community, population level. Behavioral changes must be supported by the elaboration and implementation of health policies applicable in the communities of children and students.

Keywords: Obesity; Overweight; Prophylaxis; Physical activity; Lipogenesis

Introduction

Obesity is a global public health problem affecting hundreds of millions of people of all races and ages [1]. It is a priority for many countries and requires immediate action to prevent and manage obesity. In Romania there is still a need to implement a national health strategy aimed at preventing and combating obesity in adults and children. Obesity is a metabolic disorder due to an energy imbalance with the predominance of lipogenesis having major implications for health and economy. Overweight and obesity are caused by many factors. Obesity is a complex, multifactorial, and heterogeneous disease due to the complex interaction of genetic and environmental factors,

largely preventable disease, affecting over third of the world's population today [2].

Global Obesity Epidemic

The incidence of obesity and overweight is increasing; they are present in over 30% of the population of industrialized countries, with a predominance of women. It is more common with increasing age, but there is an increase in the incidence in the child as well. Regardless of the statistical variations, increasing the prevalence of obesity in the last decades at all ages and in both sexes is a reality. Romania ranks third in Europe in terms of obesity incidence according to the International Obesity Task Force. Internationally, obesity has nearly tripled since 1975. In 2016, over 1.9 billion adults aged 18 and over were overweight. Of these, over 650 million were obese [3]. Therefore, in the absence of drastic measures of prevention and treatment, by 2025, over 50% of the world's population will be obese.

In Europe, the rising incidence of childhood obesity is of particular concern. Obesity in children is recognized to be a definite predictor of obesity in adults, especially in the case of very obese children from obese parents. In 2016, 39% of adults aged 18 years and over (39% of men and 40% of women) were overweight. 41 million children under the age of 5 were overweight or obese. Once considered a high-income country problem, overweight and obesity are now on the rise in low- and middle-income countries, particularly in urban settings. In Africa, the number of overweight children under 5 has increased by nearly 50 per cent since 2000. Nearly half of the children under 5 who were overweight or obese in 2016 lived in Asia. Over 340 million children and adolescents between the ages of 5 and 19 were overweight or obese. The prevalence of overweight and obesity among children and adolescents aged 5-19 has risen dramatically from just 4% in 1975 to just over 18% in 2016. The rise has occurred similarly among both boys and girls: in 2016 18% of girls and 19% of boys were overweight. While just less than 1% of children and adolescents aged 5-19 were obese in 1975, more 124 million children and adolescents (6% of girls and 8% of boys) were obese in 2016. Overweight and obesity are linked to more

deaths worldwide than underweight. Globally there are more people who are obese than underweight— this occurs in every region except parts of sub-Saharan Africa and Asia [4].

Overweight and obesity are important public health issues and need a common strategy, which includes promoting healthy eating habits and a more active lifestyle, as well as appropriate treatment and care.

Consequences of Obesity

Obesity has become one of the major contributors to the global burden of disease and disability and represents the fifth highest risk of death globally. It is one of the main risk factors for life-threatening non-communicable diseases such as heart disease, type 2 diabetes, hypertension, stroke and certain types of cancers (endometrial, breast and colon). Cardiovascular diseases (heart disease and stroke) kill 17 million people globally each year and deaths due to diabetes are predicted to increase by more than 50% worldwide in the next ten years. Obesity also contributes to debilitating conditions such as osteoarthritis, gall bladder disease and respiratory problems often reducing quality of life [5,6]. Increase in obesity levels not only has serious consequences for individuals with increased risk of much co-morbidity but also has cost implications. The direct costs of obesity consist of the resources used in the health care system, which may include the costs arising from the excessive use of the outpatient, hospitalization, pharmacotherapy, laboratory tests or imaging investigations, long-term care, due to the conditions favored by the excess weight [7].

In addition to the direct costs, there are also significant indirect costs, by decreasing the number of years without disabilities and increasing mortality before retirement, early retirement, absenteeism at work or decreasing productivity and pensions for disabilities as a result of chronic diseases favoured by obesity. Obese workers lose several working days due to illnesses, accidents and disabilities [8]. Increasing the percentage of obesity in the workforce, forces employees to pay more attention to strategies to prevent weight gain in employees. In the USA, a research study based on the Gallup-Healthways Well-Being index was conducted between January 2 and October 2, 2011. The Gallup study had a sample of 109,875 full-time American employees—those who work at least 30 hours a week. Gallup analysts claim that full-time employees in the US who are overweight or obese and have heart disease are missing 450 million days from work, compared to healthy employees—resulting in a loss of \$ 153 billion due to lack of productivity. Obesity has serious psychosocial consequences and negative impact on the general condition. It is linked to low vitality and increases the risk of social discrimination and decreased social mobility. Low family income is also associated with being overweight [9].

Obesity in adolescence affects the professional trajectory of individuals. Obesity in children is of particular importance, as eating habits and physical exertion are adopted early and tend to last a lifetime. For this reason, obese young people tend to become obese adults, with all the health risks that result from

this: heart disease, type-2 diabetes, high blood pressure, strokes, and certain types of cancer. According to the European Commission, about 3 million schoolchildren in Europe are obese and about 85,000 become obese every year. It is estimated that obesity-favored diseases are responsible for 7% of total health costs in the European Union [10].

Triggers for Weight Gain

At present, obesity is increasing in low and middle income countries, especially in urban areas. Children in low- and middle-income countries are more vulnerable to inadequate nutrition in prenatal, infants and young children. They are also exposed to foods high in fat, sugar, salt, high energy density, and few micronutrients and cheaper. These eating patterns, together with reduced physical activity, lead to marked increase in childhood obesity [11].

Insufficient physical activity is a risk factor for the occurrence of overweight and obesity, both in adults and children. Physical activity is considered insufficient if less than 5 times 30 minutes of moderate activity per week or less than 3 times 20 minutes of activity per week, or equivalent. Information and communications technologies have improved living standards worldwide. The increase in time spent in front of computers, television and video games is a significant factor in increasing obesity globally [12]. A study published in 2012 by the Milken Institute shows that for every 10% increase in information technology investments, there is a 1% increase in the obesity rate, and a 0.4% increase in the obesity rate due to the time spent in front of the screen leads to a total increase of 1.4% in the obesity rate. These figures show, for example, that in a country with a population of 300 million, 4.2 million new cases of obesity will be registered. The study also shows that in countries where much is invested in information technology, a 1% increase in the number of physically active persons can prevent a 0.2% increase in obesity [13].

Sedentarism and high intake of foods with high energy density but poor in micronutrients increases the risk of obesity and regular physical activities, as well as increased intake of dietary fiber, reduce the risk of obesity. Moreover, it has been established, based on the existing evidence, that the risk of obesity is increased in the case of advertising on foods with high energy density and fast food type, the supply of soft drinks and fruit juices sweetened with sugar, of the low socio-economic conditions. On the other hand, breast feeding, as well as the family and school environment that encourages the choice of healthy foods for children, reduce the risk of obesity [14].

Research on Obesity Prevention

Since the mid-1990s, various diet, exercise, behavioral and drug interventions have been developed and trialled for the treatment of obesity. In early 2000, these interventions were systematically reviewed to identify effective obesity treatment interventions. These reviews showed some short-term beneficial effects on many health outcomes but the evidence for long-term sustainability of these benefits was limited [15].

Consequently, studies have begun to suggest that the focus should be on weight gain in order to combat the consequences of obesity [16]. Identifying transition points in the life course and time periods where individuals are at high risk of gaining weight was one of the approaches suggested to help change behavior in an attempt to prevent obesity [17,18].

Research has identified several key trigger points in an individual's life course, where significant life-style changes make them vulnerable to weight gain. These critical time periods for weight gain were early on in the course of cohabitation, newly married, leaving home to go to University/College, pregnancy, puberty and child rearing years and retirement [19-22].

Recent studies have shown that overall, more than a third of young men (32.2%) and young women (32.8%) aged 16-24 are overweight or obese [23]. There is limited literature on the perceptions and attitudes of young people towards obesity and weight management [24].

As there are many lifestyle factors related to obesity, any intervention to prevent obesity in this age group is likely to require "complex intervention" with various interacting components. The dimension of complexity includes interaction between intervention components with various observables needing to be addressed. To engage young adults in weight management, interventions need to be tailored and designed specifically for this age group.

Conclusion

Obesity requires long-term management by health organizations, such as: WHO, Organization for Economic Cooperation and Development (OECD), American Medical Association (AMA) and Canadian Medical Association (CMA). To combat the obesity epidemic, this condition should be treated as seriously as other diseases, such as heart disease or cancer. In the absence of drastic measures of prevention and treatment, by 2025 over 50% of the world's population will be obese. Medical professionals and healthcare providers play a vital role in helping to overcome the obesity epidemic in Europe. An effective approach to the treatment of obesity should involve establishing a trust-based collaboration between the caregiver and the patient. Training of health care providers is important to treat obesity. They must address the prejudices related to this condition, as well as develop strategies for behavior change, and for this, healthcare professionals must have the ability to work in multidisciplinary teams. Reducing stigma and discrimination can improve recovery rates. In order to prevent obesity, it is necessary to develop effective public policies, to increase the level of education and awareness, but at the same time those who are already obese need the most effective methods of care and treatment. Multidisciplinary obesity management programs must involve specialist physicians, dietitians and nutritionists, psychologists. Interventions are needed to adopt healthy eating behaviors (breakfast, fruit and vegetable consumption, water consumption instead of sweetened drinks) and stimulation of physical activity to the detriment of sedentary

behaviors by young people. Modifying behavioral factors such as: promoting healthy eating habits, encouraging the consumption of vegetables and fruits, avoiding packaging and tempting advertisements, educating the young population about the principles of healthy eating, observing the work and rest schedule, practicing sports.

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