

DOI: 10.21767/2572-5394.6.6.61

# Relationship between Asthma And Childhood Obesity

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## Short Communication

Obesity is a chronic and multifactorial disease, characterized by the accumulation of excess fat to a degree that causes alterations to health. Lifestyle changes, mainly bad eating habits and sedentary lifestyle, are currently pointed out as the main causes of obesity. The incidence of childhood obesity has shown a great increase during the last decades. Children are eating more fats and sugars, eating less fruits and vegetables, and leading less active lives than before, all of these situations have a direct impact on children's growth and development. Our beliefs about food and health also contribute to children's weight gain [1]. The increase in childhood obesity is accompanied by complications that imply future risks in health and quality of life both in childhood and in adulthood, however, weight problems begin at an earlier age so that women Health complications do as well and is associated with a higher likelihood of premature death and disability in adulthood. In addition to these future risks, obese children suffer from respiratory diseases such as asthma, increased risk of fractures and hypertension, and have early markers of cardiovascular disease, insulin resistance, and psychological effects [2]. Asthma and obesity are two of the most prevalent health problems in childhood today. In recent years, numerous studies have linked both diseases, finding that excess weight favors the development of asthma in children. Asthmatic disease is a chronic disease of worldwide distribution that mainly attacks children, it is a serious inflammatory process of the airways involving various mast cells, eosinophils, neutrophils, T lymphocytes, macrophages, and epithelial cells causing repetitive bouts of nighttime coughing, wheezing, shortness of breath, and chest tightness. These are the symptoms that are associated with a long and variable bronchial obstruction [3]. Asthma associated with childhood obesity is characterized by the presence of neutrophilic airway inflammation. The increase in adipose tissue function in obese subjects leads to a systemic pro-inflammatory state in which the serum concentrations of cytokines, soluble fractions of their receptors and chemokines are increased. Overweight or obese asthmatics have more severe exacerbations requiring hospital admission compared to asthmatics with a normal or low body mass index [4]. In relation to cardiometabolic factors and asthma, in prepubertal children it has been shown that insulin resistance and hyperglycemia are more closely associated with airway hyperresponsiveness than with obesity itself. Metabolic dysregulation, defined by insulin resistance and dyslipidemia, worsens lung function and promotes bronchial hyperresponsiveness, independent of

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**Citation:** Suarez APA (2021) Relationship between Asthma And Childhood Obesity. *Insights Chest Dfis.* 2021, 6:6:61

BMI [4]. Current evidence suggests that the effects of obesity on asthma, both in incidence and severity, are mediated by an inflammatory and cardiometabolic pathway. Adipokines secreted by adipose tissue exert significant effects not only on metabolism but also on the immune system and, although detailed mechanisms of their contribution still need to be established, they appear to represent important mediators in obesity-associated asthma. The metabolic health of adipose tissue seems more important than the fat mass itself; in fact, the negative effect of trunk adiposity in the obese asthmatic patient, rather than due to a mechanical effect, is due to the inflammation associated with central obesity [5]. We can conclude that current behaviors such as hypercaloric diets and the decrease in physical activity in children, favors the development of childhood obesity and asthma. It is very important to promote healthy lifestyles, since weight reduction shows us an improvement in symptoms, lung function and control of the disease at an early age [5].habits.

## References

1. Moreira Ochoa D, Rodríguez Ortiz V, Mera Cedeño J, Medranda Zambrano R, Medranda Ortiz Gladys Cecibel F et al (2018) Risk factors most relevant in the increase of childhood obesity. *Scientific Journal of Research update of the world of Sciences.* 1:1-17.
2. Rico OC, Marcos MD (2020) asthma and obesity: towards a new paradigm. *Breathe to breathe.*2:1-8.

3. Rota AP, Bacharier LB, Jaffee K, Visness CM, Kattan M, et al (2017) Screen Time Engagement Is Increased in Urban Children With Asthma. *Clinical paediatrics*. 56:1048–1053.
4. Díaz LO, Carrillo AT, Fernandez N, Corzo LC, Sarduy Paneque MA, et al. (2020) Evaluation of the acute response to the bronchodilator in overweight and obese asthmatic patients. *Cuban Journal of Medicine* 1:1-10.
5. Soya VL, Lezana VN, Silva AP (2019) child obesity and bronchial asthma. *Chilean Journal of Pediatric Pneumolog* 16: 1-5.