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## Adults with Asthma Have a Higher Risk of Developing Obesity

*A new study concludes that the risk is higher among those with non-allergic asthma, of longer disease duration or under treatment with corticosteroids*

**Barcelona, April 28, 2022-** A study with more than **8,700 participants from 11 European countries and Australia** has concluded that adults with asthma are more likely to become obese later in life. The research, led by the Barcelona Institute of Global Health (ISGlobal), a centre supported by the "la Caixa" Foundation, has also shown the **risk is higher among patients with non-allergic asthma, those who have had the disease for a longer period or those who are under treatment with corticosteroids**. These results have been published in *Thorax*.

"Several studies have shown that asthma and obesity share some common socioeconomic, behavioural and environmental risk factors that can lead to the development of both diseases. Some previous research focused on the mechanisms by which obesity could lead to asthma, but the inverse relationship had not received much attention until recently", says **Subhabrata Moitra**, who carried out this research at ISGlobal and is now a researcher at the University of Alberta.

The researchers used data from the cohort study European Community Respiratory Health Survey (ECRHS), collected in three waves **between 1990 and 2014** and with follow-up visits at intervals of approximately 10 years. The different waves gathered data from questionnaires, lung function tests and measures taken to determine participants' body mass index and asthma status and characteristics.

Between the first and the second follow-ups, 14.6% of non-asthmatic participants developed obesity, while the percentage increased up to 16.9% among asthmatic participants. The difference between the two groups became more obvious when the research team translated it into a **relative risk** that took into consideration the role of other factors such as asthma and smoking, and saw that asthmatic had an **increased 21% risk of obesity** compared to non-asthmatic participants.

Asthmatic participants with **longer disease duration had 32% larger risk** of obesity than those with shorter duration and those with **non-allergic asthma had an increased 47% risk** than those with allergic asthma. Those participants treating the respiratory disease with **corticosteroids showed a 99% higher risk** of obesity compared to those who did not use this treatment, which had already been associated with abnormal weight gain in previous research.

"A potential explanation for the weight gain associated with asthma could be the reduction of physical activity in asthmatic patients. However, our results do not support this hypothesis, since the levels of physical activity in our study did not affect the observed association", says **Judith Garcia-Aymerich**, Head of the Non-Communicable Diseases and Environment Programme at ISGlobal and senior author of the study. "Regardless of the mechanisms, still unknown, our results have implications for the clinical care of adults with asthma", she adds.

Unlike a previous study that found this association between asthma and weight gain only in women, in this case **there were no sex differences**. Another previous study had found an association between asthma in children and obesity after a 10 years follow-up, but this is the first know study to show a similar association in adults regardless of their sex.

The study was carried out in Australia, Belgium, Estonia, France, Germany, Iceland, Italy, Norway, Spain, Sweden, Switzerland and the UK.

## Reference

Moitra S, Carsin A-E, Abramson MJ, et al. Long-term effect of asthma on the development of obesity among adults: an international cohort study, ECRHS. *Thorax*. Epub ahead of print: 28 April, 2022. <https://doi.org/10.1136/thoraxjnl-2021-217867>

## About ISGlobal

The Barcelona Institute for Global Health, ISGlobal, is the fruit of an innovative alliance between the "la Caixa" Foundation and academic and government institutions to contribute to the efforts undertaken by the international community to address the challenges in global health. ISGlobal is a consolidated hub of excellence in research that has grown out of work first started in the world of health care by the Hospital Clínic and the Parc de Salut MAR and in the academic sphere by the University of Barcelona and Pompeu Fabra University. Its working model is based on the generation of scientific knowledge through Research Programmes and Groups, and its translation through the areas of Training and Analysis and Global Development. ISGlobal has been named a Severo Ochoa Centre of Excellence and is a member of the CERCA system of the Generalitat de Catalunya.

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