

## For the Patient

The full report is titled “Long-term effect of bariatric surgery on lung function and asthma control” by Jan Witte, Harman Singh, Yasemin Türk, Astrid van Huisstede, Erwin Birnie, Pieter Hiemstra, Jasper Kappen, Gert-Jan, Braunstahl. The report appears in the May-June 2023 volume 44, issue 3 of *Allergy Asthma Proceedings* (volume 44, pages 165–170).

*For the Patient* is provided to physicians so that the patients can better understand the language of modern medicine.

*For the Patient* is written by the editors (Bellanti, JA and Settignano, RA) and provided to practitioners so that patients can better understand the usefulness of new information results from medical research.

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### Long-term effect of bariatric surgery on lung function and asthma control

**O**besity is a medical condition characterized by an excessive accumulation of body fat, which can have a negative impact on lung function in several ways. First, excess body fat can put pressure on the chest and abdomen, which makes it more difficult for the lungs to expand fully, resulting in decreased lung volumes, impaired respiratory function, difficulty breathing, and shortness of breath. Second, obesity is often associated with inflammation, which can damage lung tissue and increase the risk of developing respiratory diseases, such as asthma, chronic obstructive pulmonary disease, and pulmonary fibrosis. Bariatric surgery is a type of surgery that helps people who are obese lose weight and improve their overall health by making changes to the digestive system to limit the amount of food that can be eaten or absorbed. Although previous reports have demonstrated that weight loss by bariatric surgery improves asthma control by increasing lung function and reducing airway hyperreactivity in the short term for up to 12 months, the long-term effects of the procedure are lacking. In a recent report, Witte and coworkers from the Department of Pulmonology, Franciscus Gasthuis, Rotterdam, the Netherlands, performed a study to evaluate the very-long-term effects of previous clinical trial bariatric surgery on asthma symptoms and lung function over an 8-year period.

#### Why Did the Researchers Do This Particular Study?

The authors conducted this research to determine if bariatric surgery can be beneficial in improving lung function in patients with obesity.

#### Who or What Was Studied?

A prospective, longitudinal 8-year follow-up study was conducted of patients who were included in a previous clinical trial in the Netherlands that evaluated the effects of bariatric surgery on asthma control and lung function in patients with asthma and obesity.

#### What Did the Researchers Find?

Of 78 patients from the previous clinical trial, 15 completed the 8-year follow-up visit. Of these, nine patients underwent bariatric surgery, and six patients did not. After 8 years of follow-up, asthma control and small airway function remained clinically stable compared with 12 months of follow-up.

#### What Were the Limitations of the Study?

Limitations of this study include findings from a single center and limitations of sample sizes

#### What Are the Implications of the Study?

The results of the study suggest that bariatric surgery has a long-lasting effect on lung function, asthma control, and small airway activity. Although there was some relapse in terms of weight gain, the measurement of body fat based on an individual's weight and height was significantly lower compared with baseline values and supports the importance of bariatric surgery in the treatment of obesity-related asthma. □