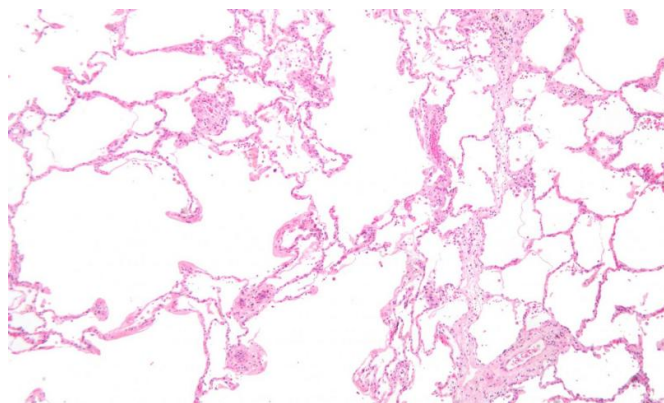


# Obesity strongly associated with chronic obstructive pulmonary disease in never-smokers

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Micrograph showing emphysema (left – large empty spaces) and lung tissue with relative preservation of the alveoli (right). Credit: Wikipedia, CC-BY-SA 3.0

"Chronic obstructive pulmonary disease (COPD) is much more common among never smoking older women who are morbidly obese (having a body mass index of 40 or higher) than among their female peers in the normal weight range (13.4 percent vs 3.5 percent, respectively). Morbidly obese older men who have never smoked also had a much higher prevalence of COPD than never-smoking men who were normal weight (7.6 percent vs 2.5 percent)," said lead author Professor Esme Fuller-Thomson.

Chronic obstructive pulmonary disease, or COPD, is the third leading cause of death in the USA. COPD is a group of progressive lung disorders that make breathing difficult, including emphysema and [chronic bronchitis](#). The best-known risk factor for COPD is smoking, but one-quarter of COPD patients have never smoked.

"Surprisingly few studies have focused on never smoking COPD patients" said co-author Senyo

Agbeyaka, a recent graduate of the University of Toronto's Factor-Inwentash Faculty of Social Work. "We wanted to address this gap in the literature by examining which factors are associated with COPD among never smokers aged 50 and older."

"In addition to obesity, older age and lower income were associated with COPD among both men and women. Among women, but not men, height and education level were negatively associated with COPD, but being married was associated with higher odds of COPD," reported co-author Lilia Fuller-Thomson.

The study was based on a nationally [representative sample](#) of non-Hispanic white respondents aged 50 and older who reported that they had never smoked. The data were drawn from the 2012 Center for Disease Control's Behavioral Risk Factor Surveillance System. The final sample included more than 110,000 respondents of whom approximately 4,000 were morbidly obese and 5,000 reported that they had been diagnosed by a health professional with COPD. The article was published this week in the *Journal of Obesity*.

"Unfortunately, the survey did not allow us to identify why older obese Americans who were never smokers had such a high prevalence of COPD. Future research is needed to investigate plausible mechanisms for this association, including the role of chronic inflammation associated with obesity and the impact of central obesity on respiratory system mechanics" stated co-author Kaitlyn Howden, an MD candidate at McMaster University.

"These findings highlight the importance of health care professionals routinely screening their older obese patients for COPD, even when the patients have no history of smoking," suggested Professor.

Esme Fuller-Thomson.

**More information:** A strong graded relationship between level of obesity & COPD: Findings from a national population-based study of lifelong non-smokers. *Journal of Obesity*, [www.hindawi.com/journals/job/2018/6149263/](http://www.hindawi.com/journals/job/2018/6149263/)

Provided by University of Toronto

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