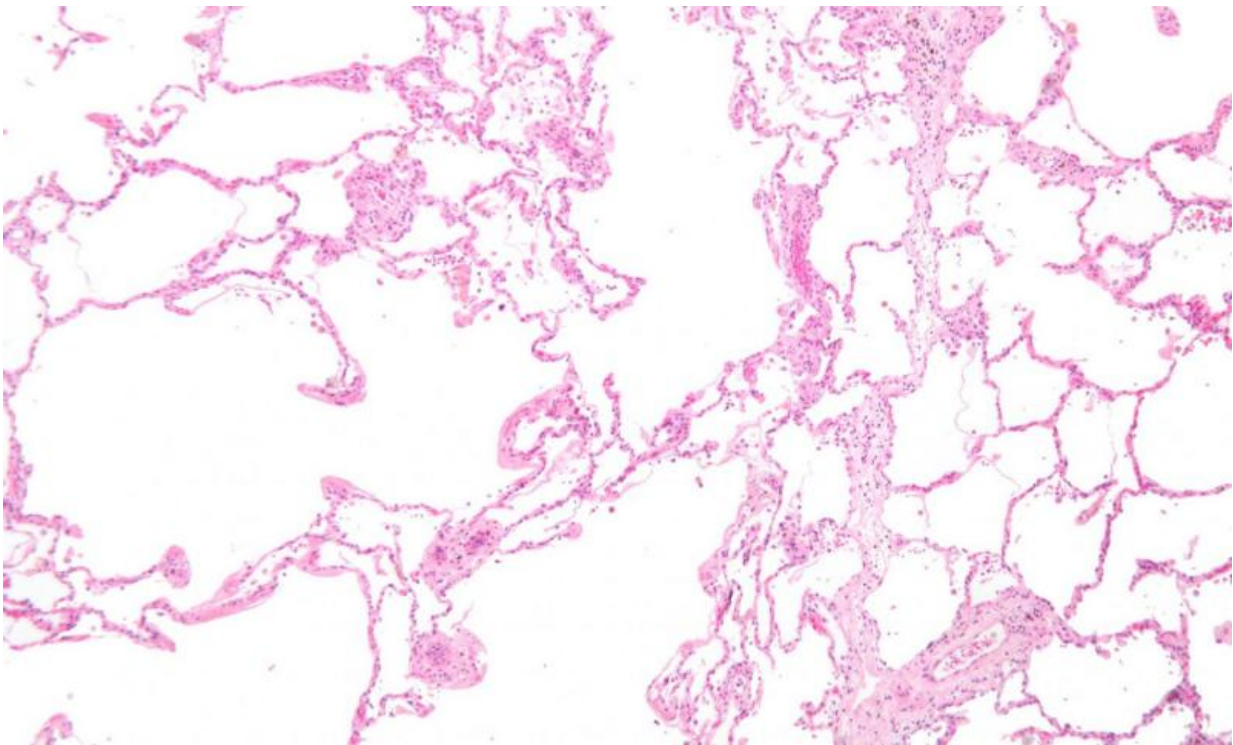


Never-smoking women have high prevalence of Chronic Obstructive Pulmonary Disease (COPD)

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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

A new study published by University of Toronto researchers suggests that women who have never smoked are susceptible to Chronic

Obstructive Pulmonary Disease (COPD) and that African American women are particularly vulnerable. Seven percent of never-smoking older African American women and 5.2% of White older women have Chronic Obstructive Pulmonary Disease (COPD), compared to 2.9% of never-smoking older white men.

COPD is the third leading cause of death in the USA and smoking is the biggest risk factor for the disease. However, approximately one-quarter of Americans with COPD have never smoked.

"Some of women's greater vulnerability to COPD may be due to physiological differences. When we took into account height (a proxy for lung size), the odds of COPD among women compared to men were less elevated. However, we still found women had approximately 50% higher odds of COPD compared to white men even when we adjusted for height, education, income, and [health care access](#)" said lead author, Professor Esme Fuller-Thomson, Sandra Rotman Endowed Chair and Director of the Institute for Life Course & Aging at the University of Toronto's Factor-Inwentash Faculty of Social Work. "Hormones may also play a role. In addition, women are more likely to have been exposed to [second-hand smoke](#) from spouses who smoke."

The study used a representative sample of 129,535 Americans aged 50 and older who had never smoked. The sample included 8,674 African American women, 2,708 African American men, 80,317 white women, and 37,836 white men, drawn from the 2012 Behavioural Risk Surveillance. The study was published online this week in the *International Journal of Chronic Diseases*.

"African American women had, by far, the highest prevalence of COPD among older adults who had never smoked. We found that after adjusting for income and education levels, the odds of COPD among African American women compared to [white men](#) declined by more

than half. We cannot determine causality with this data set, but poverty is associated with increased exposure to toxins, such as second-hand smoke in work-places and air pollution in inner city environments. Future research needs to investigate if these factors play a role in the greater vulnerability of African American women" commented co-author and recent MSW graduate, Rachel Chisholm.

Fuller-Thomson adds "Primary care physicians and other health professionals should consider screening all their older patients for COPD, including those who have never smoked. Women, particularly African American women, have an unexpectedly high prevalence of COPD. Earlier detection of COPD has been found to improve patient outcomes in both the short and long-term and is therefore an important clinical goal."

More information: www.hindawi.com/journals/ijcd/2016/5862026/

Provided by University of Toronto

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