

# Obesity, large waist size risk factors for COPD

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Obesity, especially excessive belly fat, is a risk factor for chronic obstructive pulmonary disease (COPD), according to an article in *CMAJ* (*Canadian Medical Association Journal*)

Excessive belly fat and low physical activity are linked to progression of the disease in people with COPD, but it is not known whether these modifiable factors are linked to new cases.

A team of researchers in Germany and the United States looked at the relationship of waist and hip circumference, [body mass index](#) (BMI) and [physical activity levels](#) to new cases of COPD in a large group of men and women in the US. They looked at data on 113 279 people between the ages of 50 and 70 years who did not have COPD, cancer or heart disease at the beginning of the study (1995–96). During the 10-year follow-up period, COPD developed in 3648 people. People with large waist circumference (110 cm or over in women and 118 cm or over in men) had a 72% [increased risk](#) of COPD.

"We observed a stronger positive relation with abdominal body fat than with total body fat and COPD," writes Dr. Gundula Behrens, Department of Epidemiology and Preventive Medicine, University of Regensburg, Regensburg, Germany, with coauthors. "In particular, overweight as measured by BMI emerged as a significant predictor of increased risk of COPD only among those with a large waist circumference."

A large waist was a robust predictor of COPD in smokers as well as in people who had never smoked.

Pollution, smoking and toxic particles in workplace dust are thought to cause COPD through chronic inflammation and impaired ability to heal injury to the lungs. "Increased local, abdominal and overall fat depots increase local and systemic inflammation, thus potentially stimulating COPD-related processes in the lung," write the authors.

People with a large [hip circumference](#) and who were physically active at least 5 times a week were 29% less likely to experience COPD. Exercise can reduce inflammation, oxidative stress and enhance healing.

Underweight people had a 56% increased risk of COPD. Possible reasons include malnutrition and reduced muscle mass leading to increased COPD susceptibility and progression through inflammatory processes and impaired lung repair capacity.

"Our findings suggest that next to smoking cessation and the prevention of smoking initiation, meeting guidelines for body weight, body shape and [physical activity](#) level may represent important individual and public health opportunities to decrease the risk of COPD. Physicians should encourage their patients to adhere to these guidelines as a means of preventing chronic diseases in general and possibly COPD in particular," conclude the authors.

**More information:** *Canadian Medical Association Journal*,  
[www.cmaj.ca/lookup/doi/10.1503/cmaj.140025](http://www.cmaj.ca/lookup/doi/10.1503/cmaj.140025)

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