# High-risk carotid artery plaque formation is increased in older COPD patients

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Older patients with chronic obstructive pulmonary disease (COPD) are at increased risk for carotid artery plaque formation and for the presence of vulnerable plaques with a lipid core, according to a new study from researchers in the Netherlands.

"We know that COPD is a risk factor for ischemic stroke, and that certain components of carotid artery plaques such as intraplaque hemorrhage and lipid core increase the risk of ischemic events, but plaque composition in patients with COPD has not been examined," said researcher Bruno H.C. Stricker, MD, PhD, professor of pharmaco-epidemiology at the Erasmus Medical Center in Rotterdam, the Netherlands. "In our study, carotid artery wall thickening was increased twofold in older COPD patients compared with controls with normal lung function, and COPD was an independent predictor of the presence of plaques with a lipid core, which are more prone to rupture."

The findings were published online ahead of print publication in the American Thoracic Society's *American Journal of Respiratory and* Critical Care Medicine.

The cross-sectional study, part of the Rotterdam Study, an ongoing population-based cohort study examining the occurrence of and risk factors for chronic diseases in subjects aged 55 years and older, involved 253 COPD patients and 920 controls. COPD was confirmed by spirometry. Subjects with carotid wall thickening (intima-media thickness ≥ 2.5 mm) on ultrasonography underwent high-resolution

magnetic resonance imaging (MRI) to characterize carotid plaques.

Subjects with COPD had a twofold increased risk (odds ratio 2.0, 95%CI 1.44-2.85, p