

## Harm from Workplace Vapors, Gases, Dust and Fumes Extends into Retirement

### Longitudinal decline in lung function among older construction workers

*John M. Dement, Laura S. Welch, Knut Ringen, Kim Cranford, and Patricia Quinn. Occupational and Environmental Medicine, 2017.*

#### Overview

High occupational exposures to vapors, gases, dust and fumes (VGDF) are common in many construction tasks and trades. Cross-sectional studies have linked occupational VGDF exposures to declines in lung function and increased risk of COPD. Using data from the Building Trades Medical Screening Program (BTMed), which screens workers and former workers at certain Department of Energy construction sites, researchers constructed a longitudinal study to measure this association. The authors gathered work history information, chest X-ray results and spirometry test results from a population of 3150 construction workers who received at least one follow-up examination after initial intake.

#### Key Findings

- Workers with a history of high or intermediate VGDF exposures on the job had poorer lung function at their initial screening than those with a history of low VGDF exposures.
- In the years following the initial screening, lung function declined more quickly in workers with a history of high or intermediate VGDF exposures than those with a history of low VGDF exposures.
- Pleural plaque, even in the absence of Diffuse Pleural Thickening, was associated with a decline in lung function.

**For more information, contact:**

John Dement: [john.dement@duke.edu](mailto:john.dement@duke.edu)

**See abstract:**