

Study Finds Nearly One-Fifth of Construction Worker COPD Attributable to Work Exposures

A case-control study of airways obstruction among construction workers

John Dement, Laura Welch, Knut Ringen, Patricia Quinn, Anna Chen, and Scott Haas. American Journal of Industrial Medicine, August 2015.

Overview

While smoking is the major cause of chronic obstructive pulmonary disease (COPD), occupational exposures to vapors, gases, dusts and fumes (VGDF) increase COPD risk. Researchers examined older construction workers participating in a national medical screening program between 1997 and 2013, comparing 834 workers with COPD and 1243 controls. Investigators collected extensive data on work history, identifying each worker's participation in construction tasks associated with VGDF exposure, as well as documenting smoking habits.

Key Findings

- Approximately 18% (95% CI=2–24%) of COPD in this population can be attributed to workplace exposures associated with construction tasks.
- Among construction workers who never smoked, 32% (95% CI=6-42%) of COPD was attributable to the workplace.
- The current regulatory framework, directed at individual exposures and not combined VGDF exposures, is inadequate. A better framework would add a focus on respirable irritants regardless of source. Currently used concepts such as nuisance dusts, inert dusts, or particles not otherwise regulated (PNOR) should be scrapped.
- A simplistic Total Worker Health (TWH) model could conclude that reduction of smoking, if smoking cessation programs were to be effective, could have a significantly greater health impact than preventing occupational exposures to VGDF exposures. However, COPD is a significant health risk even for non-smokers, and the findings above suggest that workplace VGDF exposures account for nearly one-third of COPD incidence among never-smokers. Smoking cessation efforts initiated under the TWH model must not reduce efforts to prevent occupational VGDF exposure.

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See abstract:

<http://bit.ly/1DbRKEa>

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