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EPI

Judging Dept.

Amy Prestanski

Student

EPI/BIOSTAT

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Michele Herdt-Losavio

Dept or Program Years in program

Mentor

World Trade Center Response Workers Asthma Study

Author (s)

Amy Prestanski, Matthew Mauer, Michele Herdt-Losavio

In response to the September 11, 2001 attack at the World Trade Center (WTC), New York State (NYS) agencies assigned employees to the site to assist with rescue and recovery, security, and assessing a range of health and safety parameters. These workers were exposed to hazardous chemicals.

Methods: In this cohort study, NYS employees assigned to the WTC site between 9/11/01 and 12/23/01 were compared to similar NYS employees who were not assigned to determine if exposure to conditions at the WTC caused an increase in asthma and potentially asthma-related symptoms (cough, wheeze, chest tightness, and shortness of breath). Participants completed both an initial health and exposure questionnaire as well as an asthma questionnaire in the summer of 2003. Follow-up surveys were mailed to participants in 2004 and 2005. Results for both the initial survey and the first follow-up survey are reported elsewhere

Results: The second follow-up survey found an increased risk for potentially asthma-related symptoms. Three different exposure definitions were modeled using logistic regression; a dichotomous exposure, dust exposure assessment score, and smoke exposure assessment score. Using these definitions, the greatest increased risk was observed for wheeze in the smoke exposure definition (OR 5.0 (95% C.I. 2.3-10.7) while the least was observed for chest tightness in the dust exposure definition (OR 0.3 (95% C.I. 0.04-2.1).

Conclusion: Exposure to conditions at the WTC may cause an increase risk in developing potentially asthma-related symptoms.