



**Asthma and lower respiratory symptoms in New York State employees  
who responded to the World Trade Center disaster**

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**Introduction**

To determine if New York State (NYS) World Trade Center (WTC) responders were more likely than controls to report a diagnosis of asthma or any lower respiratory symptom.

**Methods**

Participants included a group of NYS employees who responded to the WTC disaster (n=578) and a group of similar NYS employees who did not respond (n=702). Participants were mailed self-administered questionnaires that collected information regarding respiratory symptoms, asthma diagnoses, psychological symptoms and potential confounders. Data were analyzed using logistic regression models.

**Findings**

Few participants experienced new-onset asthma post-September 11. WTC exposure was associated with lower respiratory symptoms. When exposure was characterized using an exposure assessment method, participants with exposure scores at or below the mean had a 2-fold risk of most lower respiratory symptoms, compared with controls. Those with scores above the mean had a three to four-fold increased risk. For scores above the mean, the magnitude of effect was consistently higher for smoke exposure.

**Conclusions**

We observed an increased risk of lower respiratory symptoms among NYS employees who responded to the WTC disaster when compared with employees who did not respond. Participants with higher exposures had a greater risk of experiencing lower respiratory symptoms. Results also suggest that exposure to smoke on and around the debris pile may have had a greater lower respiratory impact than exposure to resuspended dust, in some responders.

**If you have any questions or would like more information about this study, please contact:**

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