

New Mount Sinai research finds 9/11 responders twice as likely to have asthma

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First responders who were exposed to caustic dust and toxic pollutants following the 2001 World Trade Center (WTC) terrorist attacks suffer from asthma at more than twice the rate of the general U.S. population, according to data presented today by Mount Sinai School of Medicine researchers at CHEST 2009, the 75th annual international scientific assembly of the American College of Chest Physicians (ACCP), in San Diego.

As many as eight percent of the workers and volunteers who engaged in rescue and recovery, essential service restoration, and clean-up efforts in the wake of 9/11 reported experiencing post-9/11 [asthma](#) attacks or episodes. Asthma is typically seen in only four percent of the population.

"Although previous WTC studies have shown significant respiratory problems, this is the first study to directly quantify the magnitude of asthma among WTC responders," said Hyun Kim, ScD, Instructor of Preventive Medicine at Mount Sinai School of Medicine (MSSM) and lead author of the analysis. "Eight years after 9/11 the WTC Program is still observing responders affected by asthma episodes and attacks at rates more than twice that of people not exposed to WTC dust."

Researchers examined the medical records of 20,843 WTC responders who received medical screenings from July 2002 to December 2007 as part of the Mount Sinai School of Medicine-coordinated WTC Program. Results were compared with the U.S. National Health Survey Interviews adult sample data for the years 2000 and 2002 to 2007.

In the general population, the prevalence of asthma episodes and/or attacks in the previous 12 months remained relatively constant at slightly less than four percent from 2000 to 2007. In contrast, among WTC responders, while fewer than one percent reported asthma episodes occurring during the year 2000, eight percent reported asthma episodes in the years 2005 to 2007. In an age-adjusted ratio, WTC responders were 2.3 times more likely to report asthma episodes/attacks that had occurred during the previous 12 months when compared to the general population of the United States.

Of the study's rescue and recovery workers, 86 percent were men and the average duration of work at WTC sites was 80 days. The study followed uniformed and other law enforcement and protective service workers (42 percent of subjects), as well as construction workers and other responders who had engaged in paid and volunteer WTC-related rescue and recovery, essential service restoration and/or debris removal and clean-up efforts.

"It is important to note that this report focused on findings from baseline or initial visit examinations," said Philip J. Landrigan, MD, Ethel H. Wise Professor and Chair of MSSM's Department of Preventive Medicine and Principal Investigator of the WTC Program Data and Coordination Center. "The data show an increasing percentage of responders reporting asthmatic episodes, rising to double that seen in the general population. It is clearly vital that we continue to track responders' health and look further into the medical outcomes of this population."

"Asthma and other chronic lung conditions remain a significant burden for rescue and recovery workers responding to the attacks on the World Trade Center," said Kalpalatha Guntupalli, MD, FCCP President of the American College of Chest Physicians. "The significant chronic health problems associated with the WTC attacks only reinforces the need for

stronger disaster preparedness plans as well as long-term medical follow-up for 9/11 responders and individuals who respond to disaster-related events."

Source: The Mount Sinai Hospital / Mount Sinai School of Medicine

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