

## Studies on the Health Impacts of 9/11

*Updated June 2008*

	Author	Year	Peer Reviewed Journal	Findings:
1	Rom, W	2002	American Journal of Respiratory and Critical Care Medicine	38 year old firefighter with eosinophilic pneumonia. Washings of his airways showed fly ash, degraded glass, metal, and asbestos fibers
2	Prezant, D	2002	New England Journal of Medicine	90% of FDNY firefighters working at the WTC site had a cough, nasal congestion, chest tightness and chest burning; 87% had new onset GERD (gastroesophageal reflux disease). Increased bronchial reactivity was present and worsened over time in many firefighters.
3	Trout, D	2002	Journal of Occupational and Environmental Medicine	Federal workers working near the WTC site were far more likely to have symptoms to shortness of breath, chest tightness and eye irritation, compared to workers in Dallas. Rates of depression and PTSD symptoms were also significantly higher.
4	Galea, S	2002	New England Journal of Medicine	Rescue workers at the site were far more likely to have PTSD and depression than NYC residents who did not do this type of work.
5	CDC	2002	Morbidity and Mortality Weekly Report	82% of the adult population surveyed in neighborhoods surrounding the WTC two months after the event had persistent respiratory symptoms that developed or worsened after the WTC attack, and 39% had symptoms suggestive of PTSD.
6	Das, D	2003	Journal of Urban Health	Individuals within two miles of the WTC site were significantly more likely to visit an Emergency Department for smoke inhalation, trauma, asthma or anxiety compared to those outside a two-mile radius
7	CDC	2003	Morbidity and Mortality Weekly Report	High school and college staff present near the WTC at the time of the collapse had increased rates of eye, nose and throat irritation, cough, and shortness of breath compared to similar workers five miles away.
8	Berkowitz, GS	2003	The Journal of the American Medical Association	Women pregnant and present in lower Manhattan on 9/11/01 and in the three weeks after 9/11 were more likely to have babies with intrauterine growth retardation (smaller babies at birth).
9	Fireman, EM	2004	Environmental Health Perspectives	Sputum (phlegm) induced in firefighters (FDNY) showed WTC dust and particles with a high pH more than eight months after the attack, as well as signs of inflammation

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10	Salzman, SH	2004	Journal of Occupational and Environmental Medicine	78% of police officers at the WTC site developed respiratory symptoms, and 29% of participants had abnormal breathing tests. The study was conducted in December 2001.
11	Skloot, G	2004	Chest	A study of ironworkers working at the site from September 11-15, 2001 had one or more respiratory symptom five months after the attack. Fifty-three percent had evidence of lung function abnormalities.
12	Lederman, S	2004	Environmental Health Perspectives	Birth outcomes for women living within two miles of the WTC had smaller babies than those living farther away, after controlling for other factors.
13	Lin, S	2005	American Journal of Epidemiology	Residents living near the WTC site were significantly more likely to have new-onset respiratory symptoms, compared to residents 6 miles away
14	Tapp, LC	2005	American Journal of Industrial Medicine	Transit workers evaluated seven months after 9/11/01 with dust cloud exposure had more symptoms of PTSD and depression compared to those without these exposures.
15	Mann, JM	2005	American Journal of Industrial Medicine	A 42 year old highway patrol officer who arrived on September 11 <sup>th</sup> and was in the dust cloud developed severe respiratory symptoms and was found to have interstitial lung disease on open lung biopsy.
16	Reibman, J	2005	Environmental Health Perspectives	56% of residents surveyed in lower Manhattan had new onset lower respiratory symptoms. 26% of the residents had persistent new-onset respiratory symptoms.
17	Banauch. G	2006	American Journal of Respiratory and Critical Care Medicine	Pulmonary function was compared before and after September 11 <sup>th</sup> . A significant decline in pulmonary function was noted in FDNY personnel who were present at the WTC from September 11-13, 2001, about 12 times more than would be expected from normal aging.
18	Herbert, R.	2006	Environmental Health Perspectives	Over 9000 WTC responders were examined over 2.5 year period from July 2002 to April 2004. 69% reported new or worsened respiratory upper and lower symptoms while performing WTC work. Symptoms persisted to the time of examination in 59% of these workers. 28% of responders had abnormal breathing tests.

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19	Mauer, MP	2007	Journal of Occupational and Environmental Medicine	Nearly half of NY State personnel (1,400) responding to the WTC had lower and upper respiratory symptoms, and one third reported psychological symptoms. Participants were evaluated from May 2002 – November 2003.
20	Buyantseva, LV	2007	Journal of Occupational and Environmental Medicine	44% of police officers surveyed at one month and 19 months after September 11 <sup>th</sup> had persistent cough, and other respiratory symptoms. Rates of lower respiratory symptoms increased significantly from 2001 to 2003.
21	Izbicki, G	2007	Chest	26 firefighters (FDNY) developed sarcoidosis in the five years after September 11, 2001. The incidence of sarcoidosis was significantly (nearly 8 times) increased when compared to the years before September 11 <sup>th</sup> .
22	Mendelson, D.	2007	Journal of Occupational and Environmental Medicine	25 World Trade Center workers with lower respiratory symptoms had chest imaging revealing air trapping. Air trapping in these workers may be a result of disease of the small airways in the lungs.
23	Wheeler K	2007	Environmental Health Perspectives	WTC rescue, recovery and clean-up workers were surveyed in the WTC Health Registry and found elevated rates of newly diagnosed asthma.
24	De la Hoz, RE	2008	International Archives of Occupational and Environmental Health	In a cohort of World Trade Center workers, five categories of disease were predominant: upper airway disease (78%), gastroesophageal reflux disease (58%), lower airway disease (49%), psychological (42%) and chronic musculoskeletal illness (18%).
25	De La Hoz, RE	2008	American Journal of Industrial Medicine	In addition to upper and lower airway disorders, vocal cord dysfunction has been found in World Trade Center workers.

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