



HEALTH ISSUES FACT SHEET

The restoration of the World Trade Center site following the September 11th disaster represents one of the largest demolition and clean-up jobs in history. Since the beginning of the clean-up, workers and volunteers at and near the site have experienced a number of health problems - both medical and psychological.

HAZARDS

Rescue, recovery, and clean-up workers and volunteers at the World Trade Center site may have been exposed to many hazardous materials from the burning and collapse of the towers.

What Hazardous Materials Were Released in the Air?

Irritating materials including concrete and gypsum dust, residues of burning plastics and building components, fiberglass, pulverized glass, and soot were released during the explosions and collapse of the towers. Asbestos, used in the World Trade Center buildings as insulation and fireproofing material, also has been found in the dust and debris. Workers may also have been exposed to settled hazardous dust and debris that was stirred up during site cleanup activities.

Toxic and irritating gases, along with acid mists, were released when plastics and other materials burned. Even in the absence of visible flames, the release of combustion gases continued until the fires were entirely out.

Exposure Conditions

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| *Smoke | *Acid mists |
| *Dust | *Metal fumes |
| *Combustion gases | *Inadequate respiratory protection |

Did Certain Work Activities Increase the Risk of Exposure?

Rescue and recovery workers were exposed to the airborne irritants and combustion products of the fire that burned beneath the debris pile for months. During debris removal activities, settled dust was stirred up and workers were exposed to contaminated dust. In addition, the use of torches to cut through steel could have resulted in exposure to other irritants and hazards.

Main Populations at Risk

- *Those caught in the collapse "cloud"
- *Ground Zero workers or volunteers in rescue and recovery
- *Service restoration workers at and near Ground Zero
- *Debris removal workers and support services
- *Building clean-up workers

What factors determine how heavily exposed you were

- *Whether caught in debris cloud
- *How long at or near Ground Zero
- *When at or near Ground Zero
- *What activity at or near Ground Zero
- *What respiratory protection was used

HEALTH CONCERNS

What Are the Health Risks From Asbestos Exposure?

Asbestos fiber was used for insulation in the construction of the World Trade Center. Exposure to asbestos can cause lung scarring, lung cancer, GI tract cancer, and mesothelioma, (a relatively rare cancer of the lining of the lung and abdominal organs). Asbestos-related health problems are usually related to the amount and duration of exposure. Asbestos-related diseases do not become detectable for at least 15-20 years after exposure begins. The more prolonged and intense the exposure, the greater the risk. Medical experts believe that, with few exceptions, there is a relatively low risk of developing an asbestos-related disease from World Trade Center clean-up and recovery work.

What World Trade Center-Related Health Effects Can Be Detected Now?

Conditions that have been seen in those who worked or volunteered at or near the site for as little as 24 to 36 hours, include reactive airways disease, new onset or worsening of pre-existing asthma, sinusitis, irritant rhinitis, and persistent cough. There has also been increase in gastro-esophageal reflux.

Irritating dusts and gases can markedly worsen medical conditions such as asthma, chronic bronchitis, emphysema, other chronic lung diseases and heart disease. These exposures might also trigger an asthma attack in people who may be susceptible, but who have not had an asthma attack before. A first asthma attack can be caused by an intense exposure of this kind, with symptoms persisting for long periods of time.

Upper and Lower Conditions Caused by WTC-Related Exposures

Conditions	Symptoms	Treatment May Include*
Rhinitis	Nasal congestion Nasal soreness, itching or burning Nasal discharge (clear) Cough	Saline irrigations Oral or spray decongestants Steroid nasal sprays to reduce inflammation
Sinusitis	Nasal discharge, often thick Post-Nasal drip Cough Facial or tooth pain Facial swelling Headache Fever/chills if infected	Saline irrigations Oral or spray decongestants Steroid nasal sprays to reduce inflammation Antibiotics when infection is present Surgery in severe cases
Laryngitis/ Tracheitis	Hoarse, raspy voice Throat pain or burning Cough	Inhaled steroids may be helpful
Bronchitis	Cough, with or without phlegm Fever/chills when infection occurs	Inhaled medications to open the airways (bronchodilators) Antibiotics when infection is present
RADS/ Asthma	Chest tightness Cough Shortness of breath Wheezing Unusual reactivity to airborne irritants: second-hand smoke, vehicle exhaust, cleaning agents, cold air	Inhaled steroids to reduce inflammation Inhaled medications to open the airways (bronchodilators) Oral anti-inflammation medications

*Treatment should be guided by a physician after a thorough clinical examination.

What Is Meant By “World Trade Center Cough”?

Many people who had significant exposure to the dusts, gases, and fumes at the disaster site developed a persistent cough. WTC Cough is a persistent cough that developed after exposure to the WTC site and is severe enough to require at least four consecutive weeks of medical leave. This cough may be caused by some of the nasal, sinus, respiratory and gastrointestinal symptoms mentioned above. In some cases, the cough was caused by irritation of the airways to airborne contaminants. In others, it is due to a post-nasal drip, which causes the person to clear his or her throat somewhat like a cough. Some people developed bronchitis and still others developed asthma with cough. In some cases, the cough was caused by reflux (heartburn). It is important to have the cough properly evaluated so that the correct treatment is prescribed.

Gastrointestinal Symptoms

- *inability to tolerate certain foods
- *chronic indigestion
- *burning sensation in chest

Psychological Symptoms

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| *depression | *feeling detached from family or friends |
| *anxiety | *difficulty concentrating |
| *panic attacks | *nightmares |
| *easily startled | *flashbacks |
| *irritability and agitation | *difficulty sleeping |
| *excessive exhaustion | *increased use of alcohol, drugs and/or tobacco |
| *lack of interest in usual activities | |

If you have developed these symptoms since September 11th and still have them OR if you had these problems before September 11th but they are worse than they were previously, medical evaluation is recommended.

Three studies were released in September 2002 that have confirmed what many medical practitioners have predicted: Rates of acute respiratory symptoms and post-traumatic stress disorder are markedly higher for workers around the World Trade Center site.

The three studies involved firefighters; truck drivers who helped to clear debris from the site; and workers at the Borough of Manhattan Community College, located two blocks north of the World Trade Center.

Each of the studies documented only short-term effects. Additional study of long-term effects is needed to determine if there are persistent or delayed health consequences.

The World Trade Center Worker and Volunteer Medical Screening Program is directed by the Mount Sinai Center for Occupational and Environmental Medicine, in partnership with the National Institute for Occupational Safety and Health of the Centers for Disease Control and Prevention, with medical examinations and related services performed by a consortium of occupational medicine providers.