

**THEME INTRODUCTION**

# The 9/11 World Trade Center Disaster: Past and Future

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On September 11, 2001, terrorists hijacked four passenger airliners and flew one into the North Tower and another into the South Tower of New York City's World Trade Center. Shortly thereafter, both towers collapsed. Major trauma, burns, overwhelming smoke inhalation, and falls from great heights killed more than 2000 tower occupants, 147 airline passengers (in addition to the hijackers), 343 firefighters from the New York City Fire Department, 23 officers from the New York City Police Department, and 37 officers from the Port Authority of New York and New Jersey Police Department.

The disaster triggered an unprecedented emergency response involving hundreds of early arriving rescue workers and volunteers—both previously trained volunteers and “spontaneous” volunteers. Thousands of later arriving rescue responders and volunteers engaged in search and rescue activities to free those who were trapped in the rubble of the collapsed towers. In the months immediately following September 11th, tens of thousands of additional responders and volunteers from all over the United States worked tirelessly to retrieve human remains; to recover and clean up the site itself and the streets, residences, and commercial buildings in Lower Manhattan; to transport an enormous amount of debris to barge stations located along the west side of Lower

Manhattan; to receive, handle, and, in some cases, shift through the debris at the Staten Island Landfill; and to perform forensic examinations of human remains at the New York City Medical Examiner's Office.

The collapse of the towers immediately generated a massive cloud of dust. Persistent smoke resulted from fires that burned until late December 2001. The dust generated by the collapse and the smoke from the fires contained numerous chemical and physical agents known to be hazardous to human health. Responders and volunteers who were actively engaged in the nearly year-long rescue, recovery, and clean-up activities and several hundred thousand people who live, work, and attend school near the World Trade Center site were exposed to the dust, smoke, and concomitant hazardous agents from the place that became known as *Ground Zero*.

Not unexpectedly, some early responders developed acute respiratory conditions from massive dust inhalation, and some experienced significant stress reactions. In the months that followed the disaster, many responders and some Lower Manhattan residents, students, and building occupants noted new or worsened aerodigestive and mental health problems. In response to these early findings, medical screening of firefighters, emergency medical services personnel, and other responders and volunteers was begun along with recruitment of all exposed persons to the World Trade Center Health Registry. More recently, ongoing medical monitoring and treatment programs for responder and nonresponder populations have been established by federal and city governments to care for those whose physical and mental health has been adversely affected by their exposure to the World Trade Center disaster.

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Despite the progress that has been achieved to date in addressing the needs of World Trade Center-affected populations, more still needs to be done. One area that needs more attention is the scientific study of the physical and mental health impact of exposure to the World Trade Center disaster. I thank the editors of the *Mount Sinai Journal of Medicine* for

dedicating a special edition of the journal to scientific papers that help us better understand that impact.

As the new World Trade Center towers rise above the skyline of New York City in the years ahead, let us not forget those who gave their lives and risked their health in their heroic response to the events of September 11, 2001.