

Gregg Fishman is a retired Emergency Medical Technician from Glen Oaks Volunteer Ambulance Corps in Union Turnpike, NY. On September 11, 2001, he responded to the tragedy by putting his health at risk in an attempt to serve others. He is now the World Trade Center Rescuers Foundation Secretary.

To understand the health issues that have come from September 11th 2001, you first have to understand what the World Trade Center was. The World Trade Center was its own midsize city. Unlike most cities that cover many square miles, it was a city that was vertical and compact. Most people think of the World Trade Center as the two buildings, but it was much more than that. Along with the 110-floor Twin Towers, numerous other buildings at the World Trade Center site were destroyed or badly damaged on 9/11, including the Marriott Hotel (3 WTC), The U.S. Customs House (6 World Trade Center), 4 World Trade Center, 5 World Trade Center and the 47-story 7 WTC. St. Nicholas Greek Orthodox Church, Manhattan Community College's Fiterman Hall at 30 West Broadway, The Deutsche Bank Building, and several other smaller buildings were also destroyed as a direct result of the terrorist attack. The World Financial Center, One Liberty Plaza, the Millenium Hilton and dozens of other buildings along with the PATH train and subway lines were damaged and would eventually be repaired.

The World Trade Center was a 24 /7 operation. At night there were several thousand people in the complex -- from shoppers to workers, cleaners and police. During the day it was a commuter city with its population swelling past one hundred thousand persons. Connected to the PATH train and several subway lines, and multiple parking garages, the World Trade Center occupants would come and go each day. The Michigan Stadium and Beaver Stadium are among the handful of stadiums in the world that could hold as many people as were in the World Trade Center complex. When you take into account the number of people in lower Manhattan who were directly affected and had to be evacuated on 9/11, the number swells to about one million. The largest boatlift ever to have happened; greater and faster than the one at Dunkirk during World War II, took place in Lower Manhattan as hundreds of thousands fled the attack and aftermath.

From the time the first plane hit, the world as we knew it had changed. On September 11th, 2001 rescuers from the Police, Fire, EMS, the construction industry, the trades and everyday citizens answered the call for help stemming from the attack on our country. Without hesitation or question the rescuers stepped into harm's way, putting their health and very lives on the line to do their duty. The rescuers trusted that the health and safety organizations that were present would not endanger their health and lives. That unprecedented level of trust allowed the workers to face the worse terrorist attack in history. Today we know that the public authorities were not forthcoming with truthful information. Today the rescuers are paying the price for that deception, many with their lives.

Rescuers from NYC, all 50 states and even from 27 other countries, responded to the World Trade Center to help bring the lost home. This international crisis showed what is best in America. In the Rescuers community we stand together as family; when we say we have your

back, we mean it. Now there are rescuers from all over the nation who are being affected by their toxic exposure at the World Trade Center disaster. In many cases, their physicians have not been kept up to date on current medical information on World Trade Center health problems.

New York City police officers, firefighters, corrections officers, EMTs, and paramedics, as well as Port Authority police officers, New York State court officers, steel workers, restaurant workers, and volunteers with the Salvation Army or American Red Cross -- all answered the call and stepped into harm's way to help save lives and bring the lost home. On September 11th, 2001 the differences in uniforms and professions disappeared. Firefighters worked alongside police officers who worked alongside corrections officers, who worked alongside paramedics, who worked alongside steelworkers, who worked alongside baristas and busboys. There was one and only one goal, to save our fellow New Yorkers.

First responders know the risks of the job. Just putting on the uniform comes with the understanding that you may not come home. On September 11, 2001 everyone became a first responder. As they toiled in the debris they all knew somewhere in the back of their minds it was a very dangerous place. There could be further collapses, fire could erupt at anytime and toxic fumes might be present. But little did they know the dangers that loomed in their future. Today they face challenges no one of them anticipated. The Founders of the World Trade Center Rescuers Foundation recognized the importance of one central location for everyone to learn about the issues that face every single rescuer or recovery worker regardless of the professional contribution made to the effort. Over the years many agencies have stepped up their efforts and shared their information and resources.

Then in 2008 we heard from Dr. Joan Reibman, Director of Health and Hospitals Corporation WTC Environmental Health Center at Bellevue Hospital, that 43,000 children were being medically monitored due to their toxic exposure on September 11th 2001 and in the months that followed. Slowly and without any headlines, the magnitude of the impact the World Trade Center attack had on the rescuers was being seen in civilians and children. A spike in childhood asthma followed by a rise in children with cancer was starting to mirror the same consequences that were being seen among the World Trade Center rescuers.

This leads to the question, *why?* The answer is simple; it is a Haz-Mat 101 answer. You take all of the materials that you would find in a mid-size city -- every toxic material in the book-- asbestos, dioxin, hundreds of different toxins--along with every non-toxic substance found in a mid-size city—glass, paper, steel, water and thousands of others materials--and pulverize them to as small as 0.05 microns, which is called super pulverized material. Mix them up and cook them in an underground fire that burned until almost Christmas, forming several new and toxic materials that have not even been properly identified, along with just about every chemical and substance found in a Haz-Mat guide. Add them and the remains of the thousands of people lost

on 9/11 to the smoke and dust that billowed and spewed from the pile of the World Trade Center, and you have your answer. Many of these known toxins and substances are found in the Haz-Mat guide. Alone, many are known toxins and known to cause cancer. This is well documented. The World Trade Center mixed toxic and non-toxic materials in new and exotic ways and the end result equaled or surpassed in toxicity and cancer risk the original materials. Mercury, asbestos, and dioxin are still deadly no matter how you want to look at them.

The consequences of this toxic exposure? In 2003 Doctor David J. Prezant of the Fire Department of New York (FDNY) was one of the leaders in diagnosing and treating the rescuers from the World Trade Center. The members of FDNY have annual physicals and their health is monitored from the time they join the department. This allowed for a comprehensive evaluation of the post 9/11 health problems, with well documented medical histories available to the researchers. The toxins were discovered to include mineral wool, fiberglass, asbestos, wood, paper, cotton that was contaminated with polycyclic hydrocarbons. More than 90% of WTC dust particles were larger than 10 microns in diameter and caustic, with alkaline pH greater than 10 noted for particles greater than 2.5 microns. To make it easier to understand it was like breathing in powdered drain cleaner.

There was no previous study of the mixture and type of contaminants that the World Trade Center had produced. All of the centers of excellence were in new and uncharted public health and disaster management territory. The study showed marked increases in bronchial hyper-reactivity soon after acute, massive exposure to WTC dust and fires. Highly exposed rescue workers were still 6.8 times more likely to have bronchial hyper-reactivity as compared with moderately exposed workers and unexposed control subjects. The persistence of hyper-reactivity, as well as the development of RADS and “WTC Cough” demonstrates the need for long-term medical monitoring and treatment for those affected by this disaster.

In 2006 the FDNY center of excellence led by Dr. David J. Prezant had proven that the World Trade Center exposure produced a substantial reduction in pulmonary function in New York City Fire Department rescue workers during the first year following 09/11/2001. Then the Mount Sinai center of excellence published their study showing the rescuers were having serious problems. The Mount Sinai study showed that 76.5% of the first day’s rescuers are sick, 64% of the rescuers who worked until the fires were out in December 2001 have some medical problems, 14% of the rescuers who worked after the fires were out until the end of the recovery operation are also sick. Thousands of World Trade Center rescuers are already disabled, and thousands more are sick and still working.

In 2007, a FDNY WTC center of excellence study showed sarcoid-like Granulomatous Pulmonary Disease in New York City Fire Department rescue workers. FDNY had identified an emerging pattern in the lung disease among the rescuers.

By 2010 the news was only getting worse, with an ever increasing mortality among the rescuers from medical problems including cancers and mental health issues. Dr. David J. Prezant had shown the rescuers from the World Trade Center attack had lost 12 years of respiratory function due to their exposure to the dust and toxins. Exposure to World Trade Center dust led to large declines in “forced expiratory volume in 1 second” (FEV1) for FDNY rescue workers during the first year. Overall, these declines were persistent, without recovery over the next 6 years, leaving a substantial proportion of workers with abnormal lung function. The mental health problems continued to plague the rescuers. It is a little known fact that 98% of FDNY rescue workers lost someone they knew on 9/11/01, 68% lost close FDNY friends, 7% lost relatives, and 23% lost non-FDNY relatives and friends. FDNY is only one of multiple agencies and organizations that had been present at the World Trade Center site. The rescuers still have a hard time admitting their medical problems, and even a harder time admitting to mental health problems like PTSD. Studies show that PTSD from the September 11th, 2001 attacks has been far reaching and persistent even until today.

On September 3rd, 2011, The FDNY WTC center of excellence published in *The Lancet* an article titled “Early assessment of cancer outcomes in New York City firefighters after the 9/11 attacks: an observational cohort study.” Dr. David J Prezant, Dr. Kelly and several other doctors had established that “the WTC-exposed firefighters had about 10% higher overall cancer incidence ratios than those expected in a similar demographic mix from the general male population in the USA and about 32% higher than in non-exposed firefighters.” Dr. Prezant and the others now have a clearer understanding that showed modest increases in all cancer sites combined for WTC-exposed firefighters compared with non-exposed firefighters. There were now patterns that showed a relationship between FDNY arrival time and the common WTC-exposure categories.

The Lancet also published an article called “Persistence of multiple illnesses in World Trade Center rescue and recovery workers: a cohort study.” This study showed that the rescue and recovery workers from World Trade Center attack had reported multiple health problems in the early years after the disaster. The study also indicated physical and mental health disorders in the nine years since the attacks. Asthma, sinusitis, and gastro esophageal reflux disease, mental health disorders, depression, post-traumatic stress disorder [PTSD], panic disorder, and respiratory problems were affected by the level of exposure, how many days worked on the WTC site, and exposure to the dust cloud. The study concluded with the finding that nine years after the September 11th attacks, rescue and recovery workers continued to have physical and mental health problems. Their findings emphasized the need for continued monitoring and treatment of the WTC rescue and recovery.

The Lancet also published a "Short-term and medium-term health effects of 9/11." Dr. Stephen Friedman and several other doctors found strong evidence that experiencing or witnessing events related to 9/11 was associated with post-traumatic stress disorder and respiratory illness. Dr. Friedman showed a correlation between prolonged, intense exposure and increased overall illness and disability. Prevalence of "PTSD and respiratory illness, including irreversible loss of pulmonary function, were substantial and were strongly associated with direct exposure to the 9/11 attacks in adults."

Other groups have completed multiple studies of the World Trade Center attack on September 11th 2001. The consistent finding is that the air was toxic with multiple known toxins and carcinogens present. The answers, they say, are written in the dust. We know that benzene is a carcinogen, known to cause diseases such as leukemia, along with mercury and all of its compounds, which are toxic. Exposure to excessive levels can permanently damage or fatally injure the brain and kidneys. Dioxin is known to cause cancer and thyroid problems. There are multiple rescuers who have had thyroid cancer or thyroid problems post-9/11. All types of asbestos fibers are known to cause serious health hazards in humans, and the EPA acknowledged that asbestos was present in the buildings. Styrene was present. The International Agency for Research on Cancer considers styrene to be "possibly carcinogenic to humans" and it is normally seen as a product of the combustion of plastics, notably polystyrene. Other chemicals such as ethylbenzene, propylene, and toluene were present in air samples. Alone these toxins are bad, and together they can only be worse.

Dr. David J. Prezant has been there since the beginning. If not for the dedication of Dr. Prezant and his colleagues, many more would have perished from the World Trade Center toxic disaster. The mortality among rescuers and civilians of the Sept 11, 2001, World Trade Center surpasses 600. The exact number is not known. Different agencies report different numbers. That is one of the problems with this disaster.

On September 11th, 2001 the rescuers rushed in not for fame or for glory but to help you. Your friend, neighbor, family member, fellow human was in harm's way. Knowing the risks and the price that might need to be paid that day, they still rushed in. Hundreds of rescuers were lost and since 9/11 hundreds more have become sick. There is an ever increasing number of World Trade Center rescue and recovery workers who are paying the ultimate price for doing their duty on September 11th and in the following months, bringing the lost home. The centers of excellence and organization such as the World Trade Center Rescuers Foundation are dedicated to helping the rescuers. They need our help. They need a federal health care program that will ensure medical care that is complete and uncontested. The rescuers and all the victims need medical monitoring and care for the rest of their lives.

On September 11th, 2001 the rescuers put the needs of others and the nation before their own. We called them heroes, but they felt that they were just doing their job. Now they need someone to be their heroes.

It is a matter of honor.

Gregg Fishman