A Fourteen-Year Legacy of Treatment for 9/11 Responders

In the 14 years since the destruction of the World Trade Center (WTC), the Icahn School of Medicine at Mount Sinai has diagnosed and treated more than 20,000 first responders and survivors for 9/11-related physical and psychological issues. Area workers, residents, and responders were exposed to at least 70 carcinogens and other hazardous substances when the twin towers collapsed on September 11, 2001. Many of those involved in the recovery efforts in the days, weeks, and months after the terrorist attacks continue to require long-term medical care for conditions that have gotten worse or are just beginning to develop.

Physicians at the Icahn School of Medicine at Mount Sinai—one of seven Clinical Centers of Excellence established through the World Trade Center Health Program—have been monitoring and treating 9/11 responders since the earliest days. They are acutely aware that people can be affected by contaminants as long as 40 years after initial exposure, based on pioneering research into the diseases caused by asbestos conducted in the 1960s by the late Irving J. Selikoff, MD, at The Mount Sinai Hospital.

Patients are currently being treated for many issues, including asthma, upper respiratory complications, post-traumatic stress disorder, gastroesophageal reflex disease (GERD), and various cancers. Four responders in the program are profiled in this issue of Inside Mount Sinai. Their recollections were compiled by the New York Committee for Occupational Safety and Health (NYCOSH), in collaboration with Mount Sinai, to illustrate the importance of ongoing support for the World Trade Center Health Program. The $4.3 billion James Zadroga 9/11 Health and Compensation Act, which covers treatment for responders and survivors, begins to expire in October 2015 unless Congress votes to extend the bill.

Says Michael Crane, MD, Director of the World Trade Center Health Program Clinical Center, “We keep hearing from patients, ‘I can’t catch my breath,’ or ‘I’m winded.’ But the nagging concern is that another type of illness may emerge in this population that we’re not really prepared for yet. It’s really one of the reasons why we need to watch these patients long term.”

Recollections and Health Issues of the Workers at Ground Zero

DAISY BONILLA
School Safety Agent, New York Police Department
Age: 47
Involvement in 9/11 response efforts: Patrolling and securing the disaster area
Current employment status: In the process of retiring

“On the second day, everyone at NYPD school safety started doing their long shifts. That day, we went down to Ground Zero and I was patrolling. I was with 12 other guys around William Street and Fulton Street. All the debris fell on our arms down there and it was so itchy; we scratched so bad we ripped the skin. I could feel the glass on my skin; all the white stuff was just coming down. Everything that was in the buildings was on us. We didn’t have any masks.”

Profiles continued on pages 2 and 3
PAUL GERASIMCZYK
Police Officer
New York Police Department
Age: 56
Involvement in the 9/11 response efforts: NYPD Rescue/Recovery
Current employment status: Retired

“The day of 9/11, I was working with my partner. We were both assigned to the NYPD bus unit. We were by St. Paul’s chapel when the first building came down. I thought a small nuclear device had gone off because at this point I still didn’t know it was an airliner that went into the building. It sounded like freight trains when the building collapsed. It became like a nuclear dawn.

There was a lot of confusion. The radios went out because the master antenna was up on the World Trade Center towers. The cell phones were out, as well. We were wandering around the area, trying to get a fix on stuff.

That first day someone had gotten some paper masks from somewhere. I had lost my ability to see depth perception from the dust. We worked until midnight that night and then our inspector dismissed us and gave us our orders for the next day.

We worked 4 am to 4 pm shifts six days a week for weeks and months on end. I wasn’t concerned about getting sick at the time.

Everybody was coughing up the stuff they inhaled, kind of like black phlegm, or they were blowing mucus out of their nose, which wasn’t normal. Our clothes were saturated with the dust. Our skin, or my skin, got incredibly itchy from the asbestos and from the fiberglass in the air. I had a pair of shoes, I am sorry I didn’t keep them, but their soles just fell apart, they just deteriorated.

In 2004, I came to Mount Sinai and it has been very helpful to me. The doctor here, she was the first one [who] told me my coughing spells were asthma. At night, I would start coughing and coughing, and I would break out into little beads of sweat. She told me that I was having asthma attacks. Then I started getting all of the different tests, and they discovered I had chronic obstructive pulmonary disease (COPD) and reactive airways dysfunction syndrome (RADS).

In 2007, they found a tumor in my kidney, which is recognized as one of the 9/11 illnesses. I had one-third of my right kidney removed.

The experience at Mount Sinai has been A+. It’s great—everything from the doctors to the staff. I go to the group meditation therapy here and it’s very good; it helps. I have been doing a lot of reading on meditation. It helps you relax and heal; it helps you not have any negative thoughts.”

DAISY BONILLA (continued from page 1)

We went to the Red Cross that was located at Pace University, and there was a doctor who took care of us. She cleaned us up, gave us tetanus shots and other medications, and she told our lieutenant that we had to rest for eight hours before we could go outside again, so we did. Then they put us back out.

We were patrolling the area because there were people trying to get back into their buildings to retrieve things, but no one could come back at that point. We were helping out the police officers with traffic and we were looking around to see if anyone needed help.

When I got home, I told my mother to bring out a black garbage bag and I took everything off—boots and everything—and then threw it away. School safety told us when we went home to take off our clothes and put them in a black bag and to call them so they could dispose of it. They told us not to bring anything in the house; they told us nobody should touch us. I had a lot of itching. When I was walking in the area, I tried to cover my eyes. We were breathing it in.

We did a lot of overtime. This went on for months. We would walk around the area to Red Cross locations and different schools that were open as shelters wherever anybody needed help. I saw a lot of things, and I never discussed it. When it happened, I was still in shock. I didn’t think about all the stuff that we were breathing in. What I was thinking about was helping the people down there, helping the people [who] were in trouble. I didn’t think about the fact that we looked like ghosts with all the debris.

I used to put my conditions on the back burner. When people would talk about the incident, I would walk away; I didn’t want to deal with it.

I have a lot of muscle pain, and that’s what prevents me from working. I can walk a block and a half, but I have to stop because I get pins and needles, a burning sensation, and it feels like my skin is ripping off. I take a lot of pain medication, but it doesn’t help. I can’t do a lot of the things that I used to do.”
“On 9/11, I was retired from the Port Authority Police Department, but when the incident happened I went into my precinct at the George Washington Bridge. I tried to get down there [to the site of the World Trade Center] on 9/11, but everything was closed off. There were 12 of us retirees [who] came back to work for the rescue/recovery unit. They welcomed us with open arms; they needed all the help they could get.

On 9/12, we reported to the Port Authority headquarters down there and worked the midnight shift. We got in at about 3 pm and worked until about 7 am. For the first month, we worked seven days a week. You’d go home to catch up on some sleep or you’d sleep down there since we had tents set up at the time with cots. Eventually it went down to twelve-hour shifts, and then eight-hour shifts, but pretty much five, six, seven days a week. Paper masks were handed out but [there were] no respirators for about the first two weeks. A lot of the boots that were issued melted. I think I went through four sets of boots. The metal was still so hot that we were walking on.

We didn’t have to go through any training to work on the pit. When they issued respirators, probably about two weeks in, there was still no training about how to use them. I want to say it was about two months in that they issued the respirators with replacement filters. At first they never told us that the filters were only good for eight hours. So we were walking around with filters on for weeks that didn’t fit our faces.

At the time, there was only one thing on our minds and that was getting the job done. It was finding as many people as we could and nobody really thought about their personal health.

Like I said, the best way to find a body was through smell and to do that you had to take your respirator off and the goggles they issued. You couldn’t see anything through them, so I very rarely ever wore my goggles. Looking back, a lot of us were suffering from PTSD (post-traumatic stress disorder) and breathing problems. Everyone developed what they call the WTC (World Trade Center) cough, but we didn’t think anything about it. All we wanted to do was the job at hand. We would leave that place and would cough and spit up black dust, all kinds of crap. It just felt like we had to go back and do it all over again. We put everything on the back burner, so to speak.”

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**JOHN R. SOLTES**  
Police Officer  
Port Authority Police Department  
Age: 62  
Involvement in the 9/11 response efforts:  
Port Authority Police Department Rescue/Recovery  
Current employment status: Retired

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**DEIDRA MAXWELL**  
Supervisor, Highway Repair  
Age: 64  
Involvement in the 9/11 response efforts:  
Supervised debris removal  
Current employment status: Retired

“I worked for the highway department, [New York City] Department of Transportation. I was down there [at Ground Zero] from November until April for the cleanup. I supervised the men in the trucks [who] were taking the debris to the barge on the West Side Highway. I kept a record of their times and made sure that they were diligently doing their jobs as much as I could. It was one of the most harrowing experiences of my life. It was indescribably morbid. The cleanup took forever. One of the things I remember so vividly is that every time they found a body, a silence came over the whole workplace—everything stood still because of the bodies they were still finding. In November, they were still finding bodies.

There was nothing to prepare you for what happened. As far as safety goes, there was nothing, because all you could do at the time was respond and try to make a difference.

You just wanted to help somebody. Everybody I knew had the same initial reaction to just respond, as opposed to thinking of their own safety first. This was not about safety, it was about thinking, ‘Maybe I can make a difference; maybe I can help somebody.’ I think the human element kicked in more than anything else.

I was down there and I was alone going from point A to point B, but there was interaction in the tent when it was time to eat. I remember we had to wash our feet, like that was going to do something, but all it did was supposedly prevent us from tracking the debris that was out there into the tent so that the tent could be a safe environment for us.

Mount Sinai has been geared to help and the people who work here have a level of empathy with the people who come. I think they see the sadness that we all have, because there’s a lot of sadness with responders. When I first went to group therapy, there were things that I thought only I was experiencing. I found out that others were also experiencing the same things.

My breathing has gotten very bad since being down there and I protected myself as much as I could. I didn’t wear a mask or anything but I stayed in the vehicle I was in as much as I could. Still, there was no running from what was there.

I am more health conscious than I have ever been. When I started therapy, one of the things that helped me mentally was picturing the people [who] passed down there living vicariously through me. It gave me such a greater appreciation for life.”
**Patient Certified for New ReWalk™ System**

Architect Robert Woo, who became paraplegic following a workplace injury in 2007, has become the first person in the United States to be certified to purchase the new ReWalk Personal 6.0 System to use at home. The battery-powered, robotic exoskeleton manufactured by ReWalk Robotics, Inc., enables Mr. Woo to stand up and walk with forearm crutches. The 6.0 system relocates the computer and battery from a backpack to the back pelvic area for greater comfort, and has a redesigned frame that improves knee alignment.

Mr. Woo’s physician/physiatrist, Kristjan Ragnarsson, MD, the Dr. Lucy G. Moses Professor and Chair, Department of Rehabilitation Medicine, Mount Sinai Health System, was instrumental in starting the Exoskeletal training/evaluation program. Mr. Woo participated in a study with Ekso™, a similar device, at The Mount Sinai Hospital’s Rehabilitation Center in 2015, as part of a clinical trial with Allan J. Kozlowski, PhD, Assistant Professor of Rehabilitation Medicine, Icahn School of Medicine at Mount Sinai. He completed ReWalk training at the James J. Peters VA Medical Center, Bronx, and became certified at Icahn School of Medicine to use the device at home.

**Free Eye Screenings for Brooklyn Seniors**

New York Eye and Ear Infirmary of Mount Sinai’s “Eye on Senior Health” program is offering free eye examinations for Brooklyn seniors at the United Senior Citizens Center of Sunset Park. Funded by a grant from the Lavelle Fund for the Blind, Inc., the program’s goal is to widen underserved seniors’ access to health care by delivering free, physician-led ophthalmic health outreach, screenings, and treatment referrals. Eleven screenings and 30 lectures are scheduled through the end of October.

**Mount Sinai Launches New Kidney Center and Home Dialysis Program**

The Mount Sinai Health System Division of Nephrology recently opened the Mount Sinai Kidney Center at East River Plaza, located at East 117th Street in East Harlem. (See photo). The 18,000-square-foot facility—which replaces The Mount Sinai Hospital’s dialysis clinic on East 94th Street—offers patients a complete range of services, including hemodialysis, peritoneal dialysis, and home hemodialysis. It features a state-of-the-art water filtration system, an increased number of stations, and easy access to public transportation. In addition, space has been allocated for an interventional suite to perform radiological procedures on-site.

On the same day, Mount Sinai held a ribbon-cutting to launch a new Home Hemodialysis Program that is available to physically able patients undergoing in-center hemodialysis or peritoneal dialysis. After four to five weeks of individualized training, patients are sent home with an easy-to-operate home dialysis machine.
Exposing Young Minds to Science and Medicine

It was a special summer of learning for the 120 area high school and college students who participated in Mount Sinai’s Center for Excellence in Youth Education’s (CEYE) research courses, clinical internships, and career preparatory programs. Established in 1975, CEYE aims to increase the presence of historically underrepresented groups in science and medicine by providing students with a wide variety of opportunities for career exploration. CEYE is housed in the Center for Multicultural and Community Affairs in the Icahn School of Medicine at Mount Sinai.

More than 10,000 students have taken part in year-round and summer CEYE programs over the past 40 years, one of the longest sustaining educational pipeline initiatives in the nation. Each year, they are mentored by more than 100 Mount Sinai physicians, researchers, allied health professionals, and postdoctoral trainees.

To mark its fortieth anniversary this year, CEYE launched The Lloyd Sherman Scholars Science Research Preparation and Enrichment Program to develop biomedical lab-based skills among African American and Latino male high school students. “This was named in honor of CEYE’s founding director, the late Lloyd Sherman, EdD, and is a direct response to the significant underrepresentation of African American and Latino males in science,” says Gary Butts, MD. Dr. Butts is Director of the Center for Multicultural and Community Affairs and leads the Mount Sinai Health System’s Office for Diversity and Inclusion. The program is a partnership with the Eagle Academy Foundation, which supports a network of six all-male public schools in New York City and Newark, N.J., and provides a rigorous college-prep program for inner-city young men.

On one summer morning, 10 inaugural scholars, with requisite white lab coats, were busy studying a core technique—which is used to detect the presence of a specific protein within a complex protein mixture—when Dr. Butts brought a visitor to the classroom: Dennis S. Charney, MD, Anne and Joel Ehrenkranz Dean, Icahn School of Medicine at Mount Sinai and President for Academic Affairs, Mount Sinai Health System.

“We want you to have a great experience here—use it as a stepping-stone to careers in science and medicine,” Dr. Charney told the students. “You can accomplish anything you want and become a person who makes a difference.”

Many graduates of the CEYE program have attended medical school, including Nicole Pacheco, a second-year student at Icahn School of Medicine and a current CEYE student volunteer instructor. Ms. Pacheco recently guided participants through a fish dissection in the summer research course, “Introduction to Environmental Health: Zebrafish Toxicology,” in which students evaluated the effects of toxicants on a living organism. Ms. Pacheco looked on as students dissected a four-pound fish, ready to help: “Watch your fingers,” she told one group, as they handled scalpels, and she instructed them how to cut safely through bone.

One student she helped, Elijah Jackman, later said he found the overall course “phenomenal” and noted, “It showed me the large number of career choices in the science community, and how interesting it can be.” Ms. Pacheco reflected on her own experiences as a CEYE student, “It truly was a life-changing experience that offered a clear roadmap on how to pursue medicine as a career.”

Student Omoyele Okunola had a clinical internship with Tamiesha Frempong, MD, Assistant Professor of Ophthalmology, and Pediatrics.

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Dennis S. Charney, MD, encourages students from the Eagle Academy Foundation to pursue careers in science and medicine.

Second-year medical student Nicole Pacheco, center, guides Nneoma Stanley and Elijah Jackman through a fish dissection.

Second-year medical student Nicole Pacheco, center, guides Nneoma Stanley and Elijah Jackman through a fish dissection.
EVENT

Cardiovascular Grand Rounds
Allan Klein, MD, Director, Cardiovascular Imaging Research, Center for the Diagnosis and Treatment of Pericardial Diseases, Cleveland Clinic, presents “Controversies in Cardiology: Heart Failure with Preserved Ejection Fraction.”
Monday, September 21
5 – 6:30 pm
The Mount Sinai Hospital Campus
Hatch Auditorium

Grand Rounds / Surgery
Wednesday, September 16
7:45 – 9 am
The Mount Sinai Hospital Campus
Hatch Auditorium

Structural and Chemical Biology / Seminar Series
Christopher Vakoc, PhD, Assistant Professor, Cancer, Molecular Biology, Cold Spring Harbor Laboratory, presents “Chromatin Regulators as Cancer Dependencies.”
Thursday, September 17
11 am – Noon
The Mount Sinai Hospital Campus
Hess Center, Seminar Room B

Grand Rounds / Medicine
Ioannis Oikonomou, MD, Director, Inflammatory Bowel Disease Program, Mount Sinai Beth Israel, presents “Current Strategies in the Management of Crohn’s Disease.”
Tuesday, September 22
8:30 – 9:30 am
Mount Sinai Beth Israel
Podell Auditorium, Bernstein Pavilion

Developmental and Regenerative Biology / Seminar Series
Ruth Lehmann, PhD, Director, Skirball Institute, Chair, Cell Biology, New York University School of Medicine, presents “Mechanisms of Mitochondrial Inheritance and Function in Germ Line Stem Cells.”
Thursday, September 24
Noon – 1 pm
The Mount Sinai Hospital Campus
Annenberg 25-51

Are You Ready for the ICD-10 Transition?
On Thursday, October 1, the Mount Sinai Health System, along with every health care institution in the United States, is required to transition to ICD-10 from ICD-9. The new levels of specificity, detailed data, and improved information work flow will make it possible to more accurately quantify patient encounters and enhance clinical and financial workflows. Get ready now:

- Educational modules are located on the Portal for Education and the Advancement of Knowledge (PEAK), http://peak.mountsinai.org/. The modules are located under Online Courses.
- Have a question for the ICD-10 project team?
  Send an email to: Icd10.information@mountsinai.org.

Rx in the App Store: Current Issues in Health Care Apps
Speakers: Nicolas Genes, MD, PhD, Associate Professor, Emergency Medicine, and Genetics and Genomic Sciences, Icahn School of Medicine at Mount Sinai; Sudipto Srivastava, Senior Director of eHealth, Mount Sinai Health System; and Laura Schimming, Deputy Library Director, Mount Sinai Health System Libraries. For more information and to register, call 212-241-1095 or email Robin.Milford@mssm.edu. Sponsored by Levy Library

Tuesday, September 22
9 am – 1 pm
The Mount Sinai Hospital Campus
Annenberg, Room 12-01

ANNOUNCEMENT
6th Annual Postdoctoral Symposium
The theme of this year’s event is “Education and Outreach.” The program will feature career panelists and award-winning Mount Sinai postdoctoral fellows; a postdoctoral “data blitz” consisting of a number of short scientific presentations; a keynote address; and a networking reception. The keynote speaker is Gregory Petsko, PhD, Director of the Helen and Robert Appel Alzheimer’s Disease Research Institute and Arthur J. Mahon Professor of Neurology and Neuroscience at Weill Cornell Medical College. To receive updates about the symposium, follow Twitter handle (@MtSinaiPostdocs). Presented by the Office of Postdoctoral Affairs and Postdoctoral Executive Committee

Friday, September 18
9 am: Registration and breakfast
4:15 pm: Keynote presentation
5:15 pm: Networking reception
Icahn School of Medicine at Mount Sinai
Hess Center, Davis Auditorium

INSIDE MOUNT SINAI
Marketing & Communications
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