

Trade center's fallout effects still a mystery

Some contents of dust, smoke from towers harmful, but long-term damage unknown.

By ERIC FORMAN
Gannett New Jersey

FISHTAWAY — After four months of analysis, local researchers have found that the cloud of dust and smoke released from the World Trade Center towers on Sept. 11 contained a complex mixture of materials, including some potentially cancer-causing agents.

But it is too early to

determine whether exposure to the measured levels of known carcinogens, such as asbestos and polycyclic-aromatic hydrocarbons found in jet fuel, poses a long-term health risk, said Paul Lioy, associate director of the Environmental and Occupational Health Sciences Institute.

On Sept. 16 and 17, Lioy and other researchers took three samples of thick dust that had settled on cars and window ledges near the trade center.

On Friday, Lioy presented his findings to a crowded auditorium at UMDNJ Robert Wood Johnson Medical School. The institute is a joint program of Rutgers University and the medical school.

The plume contained a "witches' brew of material" of different shapes and sizes, Lioy said. The material included alkaline cement dust, glass fibers from pulverized windows, titanium and lead from paint and a variety of hydrocarbons from jet fuel and plastics.

Much of the particle mass was small enough that it could be inhaled, with some very small particles that could penetrate deep into the lungs. Many particles were irregularly shaped with smaller materials attached to them.

While the dust remained in lower Manhattan for a long time because of an unusually dry fall, by now there are very low levels in the air. "The air quality has

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been improving dramatically since 9-11," Lioy said.

The glass particles could have caused irritation in the lungs because they would act like a "piercing arrow," Lioy said. But over time, these larger particles should naturally be cleared from the lungs.

The cement dust is a likely cause of the so-called "World Trade Center cough" that affected some who spent time at ground zero, said Dr. Michael Gochfeld, director of the occupational medicine

residency program at the institute.

About one-quarter of the 6,500 New York City firefighters involved in rescue and recovery at the trade center have complained of coughs, and 200 are on medical leave. Twenty-five Los Angeles firefighters who volunteered at ground zero have filed workers' compensation claims, citing lingering respiratory problems.

Several firefighters from Elizabeth were sent to ground zero. A couple still

have coughs and are being monitored, said William Lavin, an Elizabeth firefighter and president of the state Firemen's Mutual Benevolent Association.

"We knew when we were there the air was just thick with that construction dust," Lavin said. But with people in need of help, he said, "it isn't something that you think about."

New Jersey hospitals treated more than 1,000 patients in the days after Sept. 11, with many being decontaminated as they arrived from lower Manhattan, said Ron Czajkowski of the New Jersey Hospital Association.

Representatives from several local hospitals say they have not treated

patients with lasting respiratory problems. The state Department of Health and Senior Services has not heard of side effects reported by New Jersey rescue workers, spokesman Dennis McGowan said.

While one or two days of exposure could be enough to trigger a cough, it probably will not increase one's risk of developing cancer, Gochfeld said. However, workers who spent weeks at ground zero without adequate protection may be at an increased risk of cancer, he said.

Though he was not involved in the analysis, Gochfeld visited ground zero to assess the safety precautions taken by rescue workers.