

World Trade Center responders at increased risk for head and neck cancers

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A Rutgers study has found a significant increase in head and neck cancers among workers and volunteers who responded to the 9/11 terrorist attacks on the World Trade Center (WTC), pointing to newly emerging risks that require ongoing monitoring and treatment of those who were exposed during the initial response.

The study, which is the first to report on head and neck cancers in WTC first responders, found a 40 percent increase in diagnosis of these diseases between 2009 and 2012.

The study appears in the *International Journal of Cancer*.

The findings highlight the need to examine the potentially carcinogenic effects of WTC exposure in the context of other strong risk factors and the need for continued medical monitoring of WTC responders, particularly the police and military.

"Since cancers are diseases of long latency, the findings of significant excess [cancer](#) in this period point to a newly emerging trend that requires ongoing monitoring and treatment of WTC-exposed persons," said lead author Judith Graber, an associate professor at Rutgers School of Public Health and a researcher at Rutgers Environmental and Occupational Health Sciences Institute.

The results were part of a two-year study funded by the U.S. Centers for Disease Control and Prevention examining whether first responders were

at greater risk of human papillomavirus (HPV)—related throat and tongue cancer because of their exposure during recovery efforts in lower Manhattan.

The most prevalent increases were oropharyngeal cancers, which are often associated with HPV infection, and laryngeal cancer, but not oral and nasal cancers. The study also found that head and neck cancers were most associated with responders who were over 55, were non-Hispanic whites or who worked in military or protective service occupations and performed rescue and recovery and maintained the perimeter after the attacks.

The research began when clinicians treating WTC-exposed responders at Rutgers' World Trade Center Health Program became concerned about an unusually high number of patients with cancers of the head and neck. They compared the incidence of head and neck cancers in 73 people among the program's 33,809 WTC responders from 2003 through 2012 to the number of expected cases based on the New Jersey State Cancer Registry.

"This excess occurrence in head and neck cancers is plausible since [first responders](#) inhaled debris clouds containing many known carcinogens," said Graber, who is also an associate member in the Cancer Prevention and Control Program at Rutgers Cancer Institute of New Jersey. "In addition, these carcinogenic exposures might add to or increase the effect of known personal risk factors for some head and neck cancers, such as tobacco smoking, heavy alcohol use and oral HPV infection."

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More information: Judith M. Graber et al, Excess HPV-related head

and neck cancer in the World Trade Center Health Program General Responder cohort, *International Journal of Cancer* (2018). DOI: [10.1002/ijc.32070](https://doi.org/10.1002/ijc.32070)

Provided by Rutgers University

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