

World Trade Center responders might face greater risk of HPV throat and tongue cancer

September 8 2017, by Robin Lally



Credit: AI-generated image ([disclaimer](#))

Researchers at Rutgers University – investigating the causes of head and neck cancers in World Trade Center rescue and recovery workers – will take the lead in a study to determine whether the responders are at a greater risk for human papillomavirus (HPV)-related throat and tongue cancer because of their exposure to toxic dust and debris.

"If we find that the prevalence of HPV is higher in World Trade Center exposed rescue workers it could mean that they have an increased likelihood of infection with HPV or have less of an ability to be able to clear this common infection naturally," said Judith Graber, assistant professor of epidemiology in the School of Public Health.

HPV is the most common [sexually transmitted infection](#) in the United States, according to the Centers for Disease Control and Prevention, with most infections going away on their own. There is also now a vaccine to prevent HPV given to adolescents and teens. This is a new vaccine not given to adults and rates of vaccination have been low in the US.

While HPV-related oropharyngeal [cancer](#), which includes throat, tonsils, back of tongue and soft palate, is relatively small, the number of HPV throat and tongue cancers are expected to increase and surpass HPV-related cervical cancers by 2020.

Graber said oropharyngeal cancer – which has a lower survival rate – is among the diseases which pose great risk for WTC rescue and [recovery workers](#), who appear to have a greater incidence of throat and tongue cancer. Surviving patients, often left disfigured after treatments, are at a higher rate for depression, unemployment and suicide compared with other cancer patients, according to the study.

While the prevalence of HPV in the United States among people age 69 and younger is estimated at less than 10 percent, Graber said research indicates that 80 percent of all tumors found in this type of cancer are infected with HPV, some which can cause cancer.

"The symptoms, risk factors and exposure history could help in early prevention of this very devastating cancer," said Graber.

The new Rutgers study will use tissue samples provided by the World

Trade Center Biorepository at Mount Sinai from WTC workers diagnosed with oropharyngeal cancer and compare to tissue samples of people being treated for the disease at University Hospital in Newark.

This research is a spinoff of a two-year federally funded study examining risk factors for all head and neck cancers among WTC responders. Graber and her colleagues, including co-principal investigator, Mark Einstein, professor and chair department of OBGYN & Women's Health at Rutgers New Jersey Medical School, are hoping to discover opportunities for early detection for these potentially debilitating diseases.

"HPV is very common, but cancers related to HPV are uncommon," said Einstein. "Understanding the relationship between HPV and the development of oropharyngeal cancer is of critical importance so we can prevent and target this cancer better with novel therapies".

What researchers need to determine in this new study, Graber said, is whether the higher incidence of the throat and tongue cancer is due to the fact that this group is being closely monitored, because of respiratory exposure after 9/11 or as a result of an HPV infection that creates a problem for a weakened immune system.

The information is critical, Graber said, in the quest to design a more definitive study to determine how and why these cancers are developing among those exposed during the rescue, recovery and clean-up efforts at the World Trade Center.

Provided by Rutgers University

Citation: World Trade Center responders might face greater risk of HPV throat and tongue cancer (2017, September 8) retrieved 14 May 2024 from

<https://medicalxpress.com/news/2017-09-world-center-greater-hpv-throat.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.