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Post-Traumatic Stress Disorder Still a Concern for New York City Firefighters Who Arrived First at World Trade Center After September 11, 2001 Attacks

CHICAGO -- A new study finds probable post-traumatic stress disorder (PTSD) continues to be associated with early arrival at the World Trade Center for New York City firefighters who participated in rescue and recovery efforts on September 11, 2001. The article is being posted online by *Disaster Medicine and Public Health Preparedness*, a journal published by the American Medical Association. This special theme issue has several articles related to the 10th anniversary of the September 11 attacks in the United States and is available online at the journal's website, <http://www.dmph.org>.

In background information in the article, the authors write: "The terrorist attack on the World Trade Center (WTC) on September 11, 2001 (9/11) killed 2,974 residents and workers in lower Manhattan, including 343 rescue workers (341 firefighters and 2 paramedics) from the Fire Department of the City of New York (FDNY). After the towers collapsed, rescue/recovery workers endured hazardous and chaotic working conditions for up to ten months. Since 9/11, post-traumatic stress disorder (PTSD) has been of major interest, as it is arguably one of the most prevalent and debilitating consequences of terrorism-related incidents." The authors note that previous studies have estimated the prevalence of probable PTSD to be anywhere from 11 percent to nearly 20 percent.

In this study, Jackie Soo, M.P.H., from the Montefiore Medical Center, New York, and colleagues analyzed data from 11,006 firefighters who completed 40,672 questionnaires during the nine years since 9/11 (through 2010). A formal Medical Monitoring Program (FDNY-WTC-MMP) has been in place for all FDNY rescue/recovery workers that includes monitoring visits scheduled every 18-months of physical examinations and self-administered questionnaires that collect information on exposure to the WTC site, physical and mental health symptoms. The researchers used the FDNY-WTC-MMP Exposure Intensity Index and divided the firefighters into groups based on initial arrival times at the World Trade Center. "Arrival Group 1" included those who arrived during the morning of 9/11; those who arrived during the afternoon of 9/11 were "arrival group 2"; those who arrived on day 2 were in "arrival group 3"; and those

who arrived at any time between days 3 through 14 were in “arrival group 4.” The main outcome measure was current symptoms indicative of probable PTSD, as of September 11, 2010. The researchers also looked at PTSD risk factors, including change in alcohol intake, change in exercise and smoking status.

“Nine years after the WTC attacks, in the longest longitudinal study to date, we found that about 7 percent of the WTC-exposed firefighters met the criteria for current probable PTSD, a decrease from the almost 10 percent prevalence in the first year post-9/11,” the authors report. They note that by comparison, the current national statistic for 12-month prevalence of PTSD in the U.S. male population is 1.8 percent. “Arrival group was significantly associated with delayed onset of probable PTSD, with individuals in arrival group 1 more likely to experience delayed onset of probable PTSD compared with individuals in arrival groups 3 and 4.”

“We found that nine years after 9/11, PTSD continues to be a significant concern in the WTC-exposed FDNY population. Factors associated with the persistence or onset of PTSD symptoms include early arrival at the WTC site, decreases in exercise, increases in alcohol intake, and concurrent symptoms of respiratory or gastroesophageal illness. PTSD may thus persist, or may arise, not solely due to the intensity of the event experienced, but also due to physical injuries or illnesses sustained during the event, as well as changes in health behaviors after the event. A full comprehensive treatment approach that addresses the physical, behavioral, and mental health consequences of WTC exposure is of critical importance,” the authors conclude.

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