

# Deployment-related respiratory symptoms in returning veterans

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In a new study of the causes underlying respiratory symptoms in military personnel returning from duty in Iraq and Afghanistan, a large percentage of veterans had non-specific symptoms that did not lead to a specific clinical diagnosis. Most patients who did receive a diagnosis had evidence of asthma or nonspecific airway hyperreactivity, which may have been due in some cases to aggravation of pre-existing disease by deployment exposures.

"Earlier studies of [military personnel](#) deployed in Southwest Asia have shown increases in non-specific respiratory symptoms related to exposure to increased levels of [airborne particulate matter](#)," said lead author Michael J. Morris, MD, of the San Antonio Military Medical Center in Texas. "Accordingly, we conducted a prospective study of 50 consecutive individuals returning from active duty in Iraq and/or Afghanistan with new onset pulmonary symptoms to assess possible causes."

The study was published in the July 1 issue of the American Thoracic Society's *American Journal of Respiratory and Critical Care Medicine*.

All study subjects completed a questionnaire detailing deployment history, airborne exposures, smoking history, pulmonary symptoms and medical treatment and underwent baseline spirometry, high resolution chest tomography, methacholine challenge testing and fiberoptic bronchoscopy with bronchoalveolar lavage.

Testing did not result in a specific diagnosis in 42% of the patients, including 12% of the patients who had normal testing but an isolated increase in neutrophils or lymphocytes (white blood cells that are increased in asthma). Evidence of airway hyperreactivity was seen in 36% of the sample, including 16% who met criteria for asthma and 20% with nonspecific airway hyperreactivity. Two patients had findings suggestive of airway hyperreactivity secondary to gastroesophageal reflux.

None of the patients had imaging results indicating the need for lung biopsy. Underlying mental health and sleep disorders were present in 66% of the patients.

"Evaluation of military personnel returning from duty in Southwest Asia with new onset respiratory symptoms should focus on airway hyperreactivity, although identifying an underlying cause and establishing a diagnosis may be difficult, and additional testing and follow-up may be necessary," said Dr. Morris. "Pre-existing underlying disease may play a role in [respiratory symptoms](#) in some patients, and mental health and sleep disorders, which were common in our sample, may also play a role in the occurrence of these symptoms."

Provided by American Thoracic Society

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