



Lung Problems Found in Iraq, Afghanistan Veterans



By Gene Emery
NEW YORK | Thu Jul 21, 2011 8:17am EDT

(Reuters Health) - Shortness of breath and reduced fitness among some military veterans returning from Iraq and Afghanistan may be caused by lung damage from smoke, sandstorms and toxins, a new study suggests.

Researchers who performed lung biopsies on 38 veterans with unexplained breathing problems found a form of tissue damage -- called constrictive bronchiolitis -- that is rare in young adults and doesn't show up in standard tests.

In all but one case, a "lacy black pigment" also coated the delicate lung surfaces.

Dr. Robert Miller of the Vanderbilt University Medical Center said the cases, which he has been gathering for years, are apparently caused by exposure to airborne toxins during deployment.

"We believe they're deployed to some pretty toxic environments. They're exposed to burning solid waste, burning human waste (particularly in Iraq), and consistently exposed to fine particulate matter that's easily inhaled deep into the lungs at a level that's above what's desirable," Miller told Reuters Health in a telephone interview.

Dust storms and combat smoke may also be a factor. Previous research has suggested that service in the Middle East increases the risk of breathing problems.

Among the volunteers examined in the new study -- primarily members of the 101st Airborne Division in Fort Campbell, Kentucky -- most had long-term exposure to a sulfur-mine fire that burned for 30 days in 2003 near Mosul, Iraq, Miller and his colleagues write in the *New England Journal of Medicine*.

In all, Miller's team tested 80 previously fit soldiers who no longer met the Army's physical fitness standards.

Forty-nine agreed to undergo an invasive lung biopsy procedure after chest X-rays and other standard tests did not reveal the cause of their problems.

All 49 had tissue samples that were judged to be abnormal. The diagnosis of constrictive bronchiolitis -- a thickening of the walls of the smallest lung passages, the bronchioles -- was made in 38 cases (35 men and three women). Seven were active smokers and six were former smokers.

PROBLEMS UNDETECTED IN STANDARD TESTS

The condition doesn't show up in standard tests of breathing capacity, according to Miller, because the soldiers probably begin their deployment with so much extra lung function -- perhaps 115 percent of normal -- that their damaged lungs still perform in a range that's considered normal for non-athletes.

But when compared to a sample of 69 unaffected active duty soldiers, the soldiers Miller examined had weaker lung function -- averaging 87 percent in a test of how much of the air in their lungs they could expel in one second, compared with 99 percent in the control group.

Of the 38 diagnosed with constrictive bronchiolitis, half left the service with a disability rating and 58 percent reported having shortness of breath after climbing one flight of stairs.

"My concern is there are too many people whose symptoms are being dismissed because their X-rays and pulmonary function tests are normal or near normal," he said. "My personal agenda is to get these guys seriously evaluated."

The lung biopsies performed in Miller's study require more than a month of recovery time and cost \$50,000 to \$60,000. And there is no treatment for the soldiers' condition, Miller said. "It's a fixed scarring of the small airway. It's not irritation, inflammation or swelling."

Nonetheless, Miller wants doctors to keep his findings in mind.

"If you have someone with unexplained shortness of breath who served in the Middle East, you have to consider constrictive bronchiolitis as a possible cause, even if X-rays and pulmonary function tests are normal," he said.

Earlier results with a smaller number of cases were reported in 2008 at a meeting of the American Thoracic Society.

"Now we feel we have enough patients to say, 'This is real,'" Miller said.

<http://www.reuters.com/article/2011/07/21/us-veterans-idUSTRE76J78720110721?feedType=nl&feedName=ushealth1100>