



azithromycin (Zithromax) was associated with a significantly lower risk of death and a slightly increased risk of heart attack

2016 – Developed a [blood test](#) to determine the causes of upper respiratory illness, to help ensure antibiotics are used appropriately

2019 – [Learned](#) that artificial intelligence techniques can improve the ability to diagnose lung cancer

2020 – [Found](#) that wearing face masks to prevent infection does not increase the amount of carbon dioxide in the blood stream

RECENT STUDIES: SELECTED HIGHLIGHTS

• **Wearing a face mask does not affect oxygen and carbon dioxide levels in the blood**, found a Miami VA study. During the COVID-19 pandemic, some individuals suggested that wearing face masks could cause health risks. Researchers measured gas exchange levels in subjects during a walking test. They concluded that wearing a face mask to prevent infection does not pose a risk to breathing, even in subjects with severe lung impairment. ([Annals of the American Thoracic Society](#), March 2021)

• **A study by VA researchers revised how risk of death from pulmonary hypertension is measured.** Pulmonary hypertension is a type of high blood pressure that affects the arteries of the lungs. It is measured by Wood units,

the amount of resistance against blood pushing through the lungs. Previous standards set 3.0 Wood units as the threshold at which patients were in danger, but the VA study found that patients with a score of 2.2 Wood units or higher are at risk for death and heart failure. ([Lancet](#), Sept. 2020)

• **Gastroesophageal reflux disease (GERD) may accelerate COPD progression**, found a study by Minneapolis VA researchers. In GERD, stomach acid flows back into the esophagus, which can cause damage. GERD commonly occurs along with COPD. Patients with GERD showed small but significant increases in decline of COPD measures, compared with those without GERD. ([Respiratory Research](#), Aug. 3, 2020)

• **HIV-positive men were more likely to have abnormal lung functioning** than men without HIV, found a Minneapolis VA study of 1,100 men. HIV-positive men showed lower capacity to transfer oxygen to the blood during breathing tests. Low diffusing capacity has been linked to poorer quality of life and health problems. The reasons for the difference are not yet clear. ([AIDS](#), July 1, 2020)

• **Many Iraq and Afghanistan Veterans may have undiagnosed breathing problems**, according to a study by VA New Jersey researchers. The researchers tested the breathing of 24 Veterans without asthma who were not seeking treatment for breathing problems. They found the rate of exercise-induced

bronchoconstriction (EIB)—narrowing of the airways in the lungs—was 17%, similar to that in the general population. However, an additional 42% of participants had a probable constriction response that did not meet the full diagnostic criteria for EIB. ([Military Medicine](#), March 2, 2020)

• **A study by the VA Office of Patient Care Services did not find a link between herbicide exposure in Vietnam and restrictive pulmonary disease.** While participants who sprayed herbicides during their service showed more lung restriction than those who did not, the difference was not statistically significant. Race and waist circumference were much more predictive of restrictive pulmonary disease. ([International Journal of Environmental Research and Public Health](#), Aug. 28, 2019)

• **Artificial intelligence programs can diagnose lung cancer better than physicians**, found a study including a Palo Alto VA researcher. The researchers used computer software to review nearly 8,000 computed tomography (CT) scans and compared the results with readings by six lung cancer specialists. The computer accurately detected cancer in 5% more cases than the specialists, and reduced false positives by 11%. ([Nature Medicine](#), June 2019)

For more information on VA studies on respiratory health and other key topics relating to Veterans' health, please visit www.research.va.gov/topics

VA research over the decades has made important advances in respiratory health, such as helping to establish the link between smoking and lung cancer, and determining the best way to treat tuberculosis with antibiotics.

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