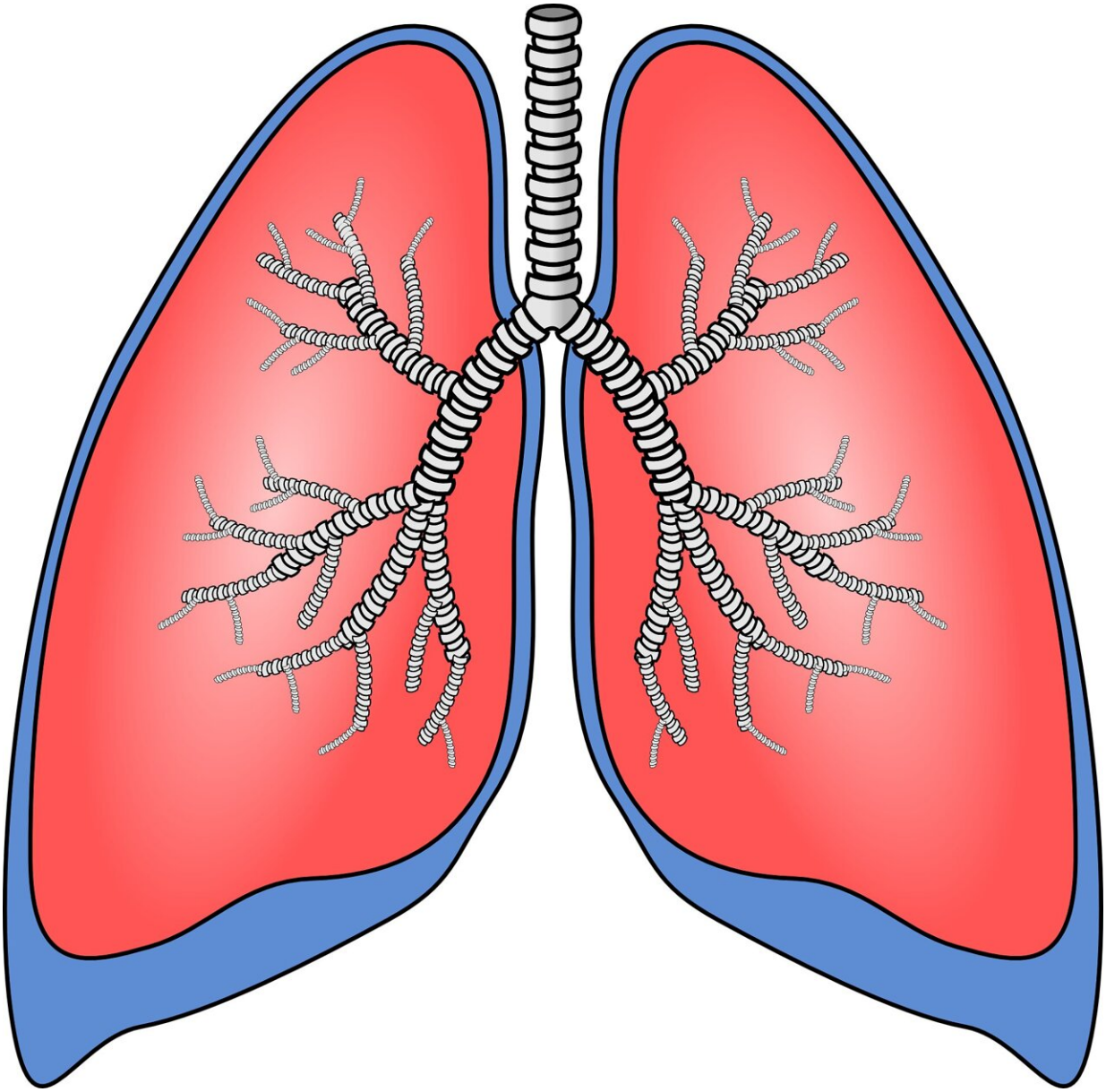
Resistance-breathing training found to lower blood pressure

September 23 2022, by Bob Yirka



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A team of researchers with members from the University of Colorado, the University of Arizona and Alma College, all in the U.S., has found that resistance-breathing training can lower blood pressure as much as some medicines and/or exercises. The study is published in the *Journal of Applied Physiology*.

Hypertension, also known as chronic high blood pressure, can lead to a wide variety of health problems, from loss of vision to strokes and heart attacks. For that reason, doctors take it seriously. Typically, patients are directed to modify their diet and to exercise more. If that does not fix the problem, medications are prescribed. In this new effort, the researchers looked into a new type of therapy to reduce blood pressure levels—resistance-breathing training.

Resistance-breathing training involves breathing in and out of a small device, called, quite naturally, a POWERbreathe, every day for several minutes. The device forces the patient to use their breathing muscles to push and pull air through it, making them stronger. And that, the researchers found, also reduces blood pressure. The device has been in use for several years as a means to assist athletes, singers and people with weak lung muscles.

Several groups of healthy volunteers practiced the training for a few minutes every day for six weeks. Each was breathed in and out with the device 30 times each session. Each of the volunteers had their blood pressure measured before and after the training.

The researchers found a sustained average drop of 9 mmHg in systolic blood pressure (the top number in blood pressure readings)—normal

pressure is defined as 120/80. They describe the change as significant, as much as some patients see with medication. They also note that it is similar to changes in many patients who begin an aerobic exercise regimen, such as walking, cycling or running. They suggest such training could be used by patients of all ages who are unable to exercise to lower their blood pressure.

More information: Daniel H. Craighead et al, A multi-trial, retrospective analysis of the antihypertensive effects of high-resistance, low-volume inspiratory muscle strength training, *Journal of Applied Physiology* (2022). DOI: 10.1152/japplphysiol.00425.2022