

Breathing technique can reduce frequency, severity of asthma attacks

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As the health care reform debate turns to cutting costs and improving treatment outcomes, two professors at Southern Methodist University in Dallas are expanding a study that shows promise for reducing both the expense and suffering associated with chronic asthma.

Thomas Ritz and Alicia Meuret, both in SMU's Psychology Department, have developed a four-week program to teach asthmatics how to better control their condition by changing the way they breathe.

With the help of a four-year, \$1.4 million grant from the National Institutes of Health, they plan to engage 120 Dallas County patients in four weeks of breathing training by the study's projected end in July 2011. Their co-investigators include David Rosenfield, also of SMU's Psychology Department, and Mark Millard, M.D., of Baylor University Medical Center in Dallas.

More than 22 million Americans suffer from [asthma](#) at an estimated annual economic cost of more than \$19 billion, according to the American Lung Association. The number of cases doubled between 1980 and 1995, prompting the U.S. Department of Health and Human Services to classify the disease as an epidemic in 2000.

During an attack, sufferers tend to hyperventilate, breathing fast and deep against constricted airways to fight an overwhelming feeling of oxygen deprivation.

Unfortunately, this makes the problem worse by lowering the body's carbon dioxide levels, which restricts blood flow to the brain and can further irritate already hypersensitive bronchial passages.

Patients who "overbreathe" on a sustained basis risk chronic CO₂ deficiencies that make them even more vulnerable to future attacks. Rescue medications that relieve asthma symptoms do nothing to correct breathing difficulties associated with hyperventilation.

As part of SMU's "Stress, Anxiety and Chronic Disease Research Program," Ritz and Meuret use their biofeedback-based Capnometry-Assisted Respiratory Training (CART) to teach asthma patients to normalize and reverse chronic overbreathing. A hand-held device called a capnometer measures the amount of CO₂ exhaled. Using this device, patients learn how to breathe more slowly, shallowly and regularly.

CART techniques could have a positive impact on quality of asthma treatment even as they reduce the need for acute care, Ritz says.

"The research shows that this kind of respiratory therapy can limit both the severity and frequency of asthma attacks," he says. "That means fewer doctor visits and less frequent use of rescue medications, with the associated savings of both time and money."

And for those who count any year without a trip to the emergency room as a year with a good treatment outcome, that means a higher quality of life, says Meuret, who lives with asthma herself.

Source: Southern Methodist University ([news](#) : [web](#))

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