

A hands-on approach to treating patients with pulmonary disease

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Sherman Gorbis (right), associate professor in the College of Osteopathic Medicine, trains a medical student how to perform an osteopathic manipulative treatment on a patient. Credit: Photo by Ann Cook

Researchers at Michigan State University are working to show how a noninvasive, drug-free form of hands-on medical care can help patients with chronic obstructive pulmonary disease improve their breathing.

The team from MSU's College of Osteopathic Medicine will apply four osteopathic manipulative treatments to a group of patients with moderate to severe [chronic obstructive pulmonary disease](#). One of the most common [lung diseases](#), COPD typically manifests as chronic bronchitis (a long-term cough with mucus) or emphysema (destruction of the lungs over time).

The goal, said lead researcher and associate professor Sherman Gorbis, is to attempt to determine the [biochemical changes](#) in patients' blood following osteopathic manipulation, a treatment where a physician uses his or her hands to diagnose and treat patients.

Osteopathic manipulative treatments have been used throughout the United States since the late 1800s. The techniques can be used to alleviate pain, restore range of motion and enhance the immune system.

However, Gorbis said, much of the evidence of the treatments' success has been anecdotal.

"That's what makes this project exciting," Gorbis said. "This will be one of the first studies to attempt to correlate treatment to pulmonary function and [biochemical markers](#)."

"If we can demonstrate that certain biochemical markers are enhanced with osteopathic manipulative treatment and show patients have increased [pulmonary function](#), this could become a powerful teaching tool."

The study is being paid for with a nearly \$100,000, two-year grant from the American Osteopathic Association in partnership with the Osteopathic Heritage Foundation.

The research team will recruit patients who have enrolled in McLaren-Greater Lansing Hospital's pulmonary rehabilitation program. As part of the trial, one group will undergo the osteopathic treatments, a second group will undergo a "sham treatment" that is hands-on but does not include manipulation and a third group will receive only the protocol normally part of the rehabilitation program with no hands-on treatment.

As patients join the trial, which will last 12 weeks for each enrollee, they

will have blood drawn every two weeks. Those draws will be analyzed and measured. About 60 patients will take part over the two-year trial.

"By learning if certain biomarkers in the blood and plasma are enhanced in the group receiving the manipulation treatment, we hope to identify the physiological changes occurring among the patients," said Gorbis, who noted patients also will undergo exercise tolerance tests and complete questionnaires during the trial.

"While medication helps, there is no cure for COPD. But if we can improve the breathing process, and show how we are doing it, we can improve the quality of life of these patients."

Gorbis is working on the project with fellow osteopathic physicians Donald Sefcik, William Pinal and Aaron Bohrer, as well as fourth-year osteopathic medical student Kerry Melenovsky. Biochemists John Wang and Daniel Jones also are on the research team.

A successful pilot project will allow the team to seek funding from the National Institutes of Health to recruit larger numbers of [patients](#) in a multi-center trial.

Provided by Michigan State University

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