

Pulmonary hypertension a silent killer

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Millions of Americans take medication to treat hypertension. Although hypertension may be called the silent killer, it is widely recognized and commonly treated. Pulmonary hypertension, however, is poorly understood, difficult to diagnose, and often unrecognized.

"Pulmonary [hypertension](#) is a widespread problem, but even in the [medical](#) community it is largely under recognized" said Brett Fenster, MD, cardiologist at National Jewish Health.

Hypertension is high blood pressure throughout the body, whereas pulmonary hypertension occurs when pressure builds up only in the arteries leading to the lungs. That pressure makes it more difficult for the right side of the heart to pump blood through the lungs. Over time, the right side of the heart may weaken and can eventually fail.

Each year approximately 250,000 people in the United States are hospitalized with pulmonary hypertension, and 15,000 people die. Symptoms of pulmonary hypertension include shortness of breath, chest pain, dizziness, fainting, fatigue, and leg swelling.

For 90 percent of patients, pulmonary hypertension is a complication of their existing lung disease. Patients who already suffer from lung disease should talk to their physician about pulmonary hypertension.

"We need to catch pulmonary hypertension early - once later stages of this disease develop, the prognosis is not good," said Dr. Fenster.

A major obstacle to early detection and management of the disease is the difficulty of diagnosis.

"We measure blood pressure in every doctor's office with a simple blood-pressure cuff on the arm. In contrast, the only way to definitively diagnose pulmonary hypertension is with an invasive cardiac catheterization," said Dr. Fenster. "The holy grail is

to find a non-invasive way to diagnose pulmonary hypertension."

Currently National Jewish Health is investigating an imaging technique to diagnose pulmonary hypertension. Dr. Fenster and National Jewish Health radiologist Joyce Schroeder, MD, are using a cutting-edge four-dimensional cardiac MRI sequence to study complex blood flow patterns in the lung arteries and right side of the heart. They believe those flow patterns can be used to differentiate [pulmonary hypertension](#) from normal circulation.

"If we can use non-invasive imaging instead of catheterization, we may be able to detect disease early in its course, monitor treatment more frequently and effectively, and do so with less risk and expense," said Dr. Fenster.

Provided by National Jewish Health

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