

WELCOME TO THE PULMONARY FUNCTION LAB AT MCLAREN GREATER LANSING

Some tests require special instructions that you must follow. Please refer to the specific test your physician has ordered (below) for proper instruction. For all tests, please do not smoke for two hours prior to testing.

Patient registration

Please register in the Admitting department in the Chi Heart & Surgery Center 20 to 30 minutes prior to your testing time.

After registration, you will be escorted up to the Heart station on the second floor for check-in. The lab will be notified when you arrive.

Check the test that you are scheduled for:

- Spirometry
- Spirometry with Pre and Post Bronchodilator
- Diffusion Study (DLCO)
- Plethysmography (Lung Volumes and Airway Resistance)
- Methacholine Challenge Test
- Arterial Blood Gas Analysis
- Exercise Breath by Breath Study
- Exercise Provocation
- Exercise Oximetry
- Indirect Calorimetry (Nutrition Assessment)

For testing questions, please call McLaren Greater Lansing's Pulmonary Function Lab at (517) 975-7041.

For scheduling, please call McLaren Greater Lansing's Cardio-Pulmonary Diagnostics department at (517) 975-6653.



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PULMONARY FUNCTION LAB



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PREPARING FOR YOUR PULMONARY TESTING

Spirometry

Testing time: 15 minutes

This is a breathing test performed to measure the volume of air you are able to breath in and out of your lungs and the speed at which this occurs.

Please do not use breathing medications for four hours prior to this test or as directed by your physician.

Spirometry Pre and Post Bronchodilator

Testing time: 15 minutes

This test performs the same maneuver described above, with the addition of a breathing treatment of albuterol. The spirometry is then repeated 20 minutes after inhaling albuterol to analyze if an improvement is made in your breathing.

Please do not use breathing medications for four hours prior to this test or as directed by your physician.

Diffusion Study (DLCO)

Testing time: 20 minutes

This test measures how gases transfer or diffuse into your blood stream.

Plethysmography (Lung Volumes and Airway Resistance)

Testing time: 20 minutes

This test measures the volume of air left inside your lungs that you cannot blow out and the resistance of your airways during breathing.

Methacholine Challenge Testing

Testing time: 2 hours

This test is to rule out asthma as a lung diagnosis. Methacholine is inhaled in varied concentrations with spirometry and plethysmography performed to assess the airways' response to medication.

Arterial Blood Gas Analysis

Testing time: 20 minutes

A sample of blood is taken out of your artery for analysis of oxygen content, PH of blood, and carbon dioxide level.

Exercise Breath by Breath Study

Testing time: 2.5 hours

This exercise stress test is performed on a stationary bike or treadmill. Computer analysis of your breathing is recorded during this study to determine exercise limitations. Wear comfortable clothing and shoes.

Exercise Provocation

Testing time: 2.5 hours

This test is commonly ordered for children to rule out exercise-induced asthma. Spirometry and plethysmography maneuvers are performed before and after exercising on a treadmill.

Exercise Oximetry

Testing time: 40 minutes

This exercise test is performed to assess your oxygen needs during exertion. This test may be ordered with or without oxygen on.

Indirect Calorimetry (Nutrition Assessment)

Testing time: 1 hour

This test measures your caloric needs at rest. This test is scheduled in the early morning.

Please do not eat for 12 hours prior to testing.

Methacholine and Exercise Provocation Special Instructions

Breathing medications can alter the outcome of methacholine challenge and exercise provocation testing. To provide the most accurate test results, please hold your breathing medications as follows:

- Long-acting inhalers (advair, spiriva, seravant foradil) and all inhaled steroids (oral and nasal) should be held 48 hours prior to testing.
- All prescription and over-the-counter should be held 48 hours prior to testing.
- Medium-acting inhalers (atrovent) should be held 24 hours prior to testing.
- Short-acting inhalers (albuterol, alupent, xopenex) should be held 12 hours prior to testing.
- Breathing tablets (singular) should be held 48 hours prior to testing.
- Provocation testing is best performed when a patient is off prednisone for 48 hours, if possible. Please contact the Pulmonary Function Lab or your physician's office for further guidance regarding this medication.
- Do not drink any caffeinated beverage or eat chocolate for four hours prior to testing.