

- Do not exercise before the test.
- Bring all medicines with you.
- Bring your doctor's prescription with you.

Six-Minute Walk Test

It is a time-limited exercise test for evaluation of exercise capacity and oxygen saturation during exercise. This test measures the distance that a patient can quickly walk on a flat, hard surface in a period of six minutes. It evaluates the global and integrated responses of all the systems involved during exercise, including the pulmonary and cardiovascular systems, blood, neuromuscular units and muscle metabolism.



Special Preparations for the Six-Minute Walk Test

- Comfortable clothing should be worn.
- Appropriate shoes for walking should be worn.
- No restriction on medications.
- A light meal is acceptable before the test.
- Patients should not have exercised vigorously within two hours of the test.

Safety Issues

All tests are very safe and physicians are not required to be present during all tests. This test is performed by a well-trained pulmonary technologist and reported by pulmonary physician.

Important Note

If you have had any surgeries, such as oral surgery, chest or upper abdominal surgery or eye surgery, please consult with the surgeon or your physician. Please inform the staff so that you can be evaluated by the doctor before the test.

Reporting Procedure

When the testing is completed, a computer generated printout and graph of your test results will be given to you. This will be interpreted by pulmonologist (chest specialist).

Pulmonary Services

The Pulmonary Diagnostic Services can be availed at the following locations:
Timings: 8:30 AM to 5:00 PM
(From Monday to Saturday, except public holidays)

Walk-ins (patients without appointments) are also welcome. Please arrive 15 minutes prior to your appointment to get prompt service.

Clifton Medical Services (CMS)

Spirometry services are also provided at Pulmonary Clinic in CMS.
Contact Number: 9925 0051, 3582 2801

Home Service

Spirometry home service can be provided at home upon request during working hours.

For further information:

Cardiopulmonary Diagnostic Services

Aga Khan University Hospital, Karachi
Ground Floor, Nazerali-Walji Building
P.O. Box 3500, Stadium Road
Karachi-74800, Pakistan
Tel: 021 3486 4574
Fax: 021 3493 4294, 3493 2095
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Information for Patients

PULMONARY FUNCTION TESTS



آغا خان یونیورسٹی ہسپتال، کراچی

The Aga Khan University Hospital, Karachi.



A Unit of The Aga Khan Hospital and Medical College Foundation; Licensed under Section 42 of the Companies Ordinance, 1984
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Introduction

The Pulmonary Function lab performs studies that provide information on the functional capacity of the lungs. Pulmonary diagnostic services offer comprehensive evaluation for disorders of the respiratory system. Tests are done to diagnose certain types of lung diseases, especially asthma, bronchitis and emphysema, to determine the cause of shortness of breath, or to measure whether occupational exposure to contaminants or cigarette smoking has affected lung function. They are also used to measure progression of disease and response to therapy.

For the first time in Pakistan Body Plethysmography is now available at AKUH to accurately measure lung volumes.

The Goal of Pulmonary Diagnostic Services

The primary purpose of Pulmonary Services at AKUH is to provide accurate, reliable and reproducible diagnostic services to patients as prescribed by physicians. The services are both available to both inpatients and outpatients.

Services Provided

Diagnostic procedures, such as:

1. Spirometry Pre and Post Bronchodilator
2. Carbon Monoxide Diffusing Capacity (DLCO)
3. Lung Volume Measurement (Body Plethysmography)
4. Complete Pulmonary Function Testing (PFT)
5. Maximal Respiratory Pressure Measurement
6. Six-Minute walk test
7. Pulse Oximetry

Spirometry

Spirometry is a screening test that measures the ability of the respiratory system to inhale and exhale air. The information gathered during this test is useful for diagnosing certain types of lung disorders, but it is most useful when assessing obstructive lung diseases, such as asthma and chronic obstructive pulmonary disease.

Spirometric measurements are made on a special device that is Medgraphics Profiler that registers the amount of air the subject inhales or exhales and the rate at which the air is moved in and out of the lung.



How is the Test Done?

Place your mouth firmly around the mouth piece. Take a normal breath, and then blow into the spirometer as hard, as fast and as completely as possible. Each maneuver is repeated at least three times to ensure reproducible and valid results. The test is done with and without an inhaler. The whole test will take about 15-30 minutes.

Lung Volume/ DLCO

Lung Volume Test permits the detection of restrictive lung diseases. In this set of diseases, a person cannot inhale a normal amount of air. Restrictive lung diseases may be caused by inflammation or scarring of the lung tissue (interstitial lung disease) or by abnormalities of the muscles or the chest wall. Testing the diffusion capacity (also called the DLCO) permits an estimate of how efficiently the lungs are able to transfer oxygen from the air into the bloodstream. It may also be used to identify the effects of certain types of drug therapies. It usually takes 45 -60 minutes.



How is the Test Done?

To do this, first you will place your mouth around the mouthpiece and take normal (tidal) breaths. You will then be asked to hold your breath for a brief period. The technologist will ask you to exhale. At that time you will hear click but continue exhaling with force until all the air is emptied out of the lungs.

MIPs and MEPs (Maximal Inspiratory and Expiratory Pressures)

A device is available that quickly, easily and accurately measures maximal inspiratory and expiratory pressures. MIPS and MEPs are clinically indicated in patients suspected of having reduced ventilatory muscle strength. This includes patients with neuromuscular disease, injury to the diaphragm and severe chest wall deformities.



How is the Test Done?

Determinations of respiratory muscle pressures are a quick and non-invasive means of assessing respiratory muscle strength. It usually takes 20 to 30 minutes.

Preparation for Spirometry/DLCO/MIP, MEP, CV

- Wear loose fitting clothes while coming to the hospital.
- Do not eat a heavy meal before the test.
- Do not smoke for 4-6 hours prior to the test.
- Do not take any inhalers for 4-6 hours prior to scheduled appointment unless symptoms warrant usage or otherwise instructed by physician,
- Will be well rested.