Memorial Sloan Kettering Cancer Center

PATIENT & CAREGIVER EDUCATION

Pulmonary Function Tests (PFTs)

This information explains pulmonary function tests (PFTs) and why you're having them. It also explains what to expect before, during, and after your tests.

About PFTs

PFTs are breathing tests that measure how your lungs are working. The results will show how much air your lungs can take in and how the air flows into your lungs.

Before surgery, PFTs may be done to:

- See if there are issues with your lungs that could interfere with anesthesia (medicine used to make you sleep during surgery).
- See how much air your lungs can hold.

PFTs may be done to help your care team:

- See if your lungs are working normally.
- Diagnose lung disease.
- Check why you're having trouble breathing.
- Monitor any side effects you have from cancer treatment.
- Check the status of chronic (long-term) lung disease. There are 2 major patterns of lung disease:
  - In **obstructive lung disease**. There is a decrease in air flow of air, such as in emphysema or asthma.
  - In **restrictive lung disease**, how much air can fill the lung is limited. This can be caused by fibrosis (tissue thickening and scarring) or scarring.

Getting ready for your PFTs

Follow these instructions the day of your PFTs.

- Don’t eat a large meal before testing. If you’re hungry, eat a light meal (a small soup or sandwich) a few hours before the test.
- Take all your medicines as usual, unless your care team gives you other instructions.
- Get to your appointment on time.

Write any extra instructions from your care team here:

During your PFTs

A pulmonary technologist will do your PFTs. You will sit in a pulmonary analyzer. This is a machine that will measure the amount, force, and speed of your breathing. You’ll wear a nose clip to keep air from going through your nose while you blow into a mouthpiece.

Your technologist will tell you to take deep, shallow, slow, or quick breaths at different periods during the test. Your care team may ask for a full test or only parts of the test.

Your care team will ask you to repeat sections of the test to get the most accurate results. They may also ask you to inhale (breathe in) a medicine called a bronchodilator to open your airways. Doing this will help your care team see if you need medicine.

PFTs take about 45 minutes to 1 hour.

Pulmonary walk test

You may also have a pulmonary walk test. This test helps your care team see how your heart and lungs respond to physical activity. It also helps them see whether your oxygen level changes with exercise. Your technologist will explain the test and give you instructions before you start.

Before the walk test:

- Wear comfortable shoes.
- Take your regular medicines as prescribed, unless your care team gives you other instructions.
- It's OK to eat a light meal.
- Avoid vigorous exercise for 2 hours.

Tell your technologist if you:

- Have chest pain.
- Feel dizzy or light-headed during your test.
- Feel nauseous (like you're going to throw up) during your test.
- Have severe (very bad) shortness of breath.
- Need to stop during the test.

Arterial blood gas test

Your care team may take some blood at your wrist. This is called an arterial blood gas test. This is to measure the amount of oxygen and carbon dioxide in your blood.

After your blood test, your technologist will place a bandage on your wrist.

After your PFTs

- If you had an arterial blood gas test, keep the bandage on for at least 4 hours after your test. You may feel some tingling or numbness at the site. This should only last until the next morning.
- You may go back to your regular diet.
- You can do your activities as you normally would.
- Your care team will explain the results of your test and what it means for your overall care. If you have any questions or concerns, talk with your care team.

When to call your care team

Call your care team if you:

- Have tingling or numbness in your hand or wrist that gets worse or does not go away the next morning.
- You have bleeding from the ABG site that does not stop with pressure.
- You have other symptoms that concern you after your test.

If you have questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

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