



Pulmonary Function Testing (PFT)

There are several tests that come under this umbrella. Depending on your symptoms, diagnosis, medication and what you Doctor asks for, you may have all or just one of the tests. Pulmonary function tests are designed to measure the volume of air you are able to blow out (exhale), the speed at which you can exhale, the size of your lungs and how well the air that you breathe in is travelling to your blood. There is also a test to see if medication may help relieve your symptoms. The volumes or flow rates that you produce during the tests are compared with what we predict you should be able to exhale. These predicted values are based on several variables including your gender, age, height, weight and race.

Spirometry

This test looks at the volume you are able to exhale and the speed at which you can exhale. This is thought of as the simplest measurement and is therefore performed most frequently. The Respiratory Physiologist, Doctor or Nurse will ask you to blow into a device called a Spirometer. There are two types of Spirometry. Both require you to exhale until there is nothing left in your lungs. One requires you to blow gently at a relaxed pace, the other requires you to blow as hard as you can. Both require you to blow for as long as you can. The Respiratory Physiologist looking after you will explain the test procedure at each stage. This test usually takes about fifteen (15) minutes.

Lung volume measurement

This test looks at the overall size of your lungs and the volume of air that remains once you have exhaled maximally. Regardless of how hard you try, there is always a bit of air left in your lungs, the volume of this can give us valuable information on how well your lungs are working and may indicate the best way to treat you. There are several methods for making this measurement. Here at Maidstone and Tunbridge Wells NHS Trust we use what is known as Body Plethysmograph (body box). This not only allows us to take the measurements mentioned, but also gives us the opportunity to take a few additional measurements as well. These additional measurements tell us how easily air flows in and out of the tubes within your lungs (conductance and resistance). Body Plethysmography requires you to sit inside a see through plastic box. You will be asked to wear nose clips and to breathe through a mouthpiece. If you are unable to sit comfortably within the box, for what ever reason, please inform the respiratory physiologist looking after you. The Respiratory Physiologist looking after you will explain the test procedure. This test usually takes about fifteen (15) minutes.

Gas transfer test

This test looks at how well air that you breathe in to your lungs travels to you blood. Like the previous two tests, you will be asked to breathe through a mouthpiece. The Respiratory Physiologist looking after you will explain the test procedure. This test also takes about fifteen (15) minutes.

Reversibility studies

This test is performed after all the other measurements are taken. For this test the Physiologist will give you a breathing medicine (inhaler). They will then get you to wait, either for fifteen (15) minutes or forty five (45), before asking you to repeat the Spirometry measurement. This enables the doctor

to decide what, if any, medicine will be of benefit to you. This test will take between thirty (30) minutes and an hour and a half (1.5hours).

Additional information

To get the best possible results we ask that you avoid the following:

- No smoking for 24 hours prior to the test
- No alcohol for at least 4 hours prior to the test
- No heavy exercise for at least 15 minutes prior to the test
- No large meals prior to the test (a sandwich is fine)
- Try not to wear tight or restricting clothing on the day of the test.

You may be asked to avoid using any breathing medication that you are currently taking, this advice will be in your letter.

These tests are very safe and there are rarely any issues after testing. There are a few reasons that may require you to postpone your testing. Lists of these are sent to you as part of your appointment letter.

What should I do if I can't attend an appointment?

Please contact the Respiratory Function department on either 01622 224521 (Maidstone) or 01892 634684 (Tunbridge Wells) and let us know as soon as possible if you can't attend an appointment.

Please use this space to write any notes or questions you may have.

Further information and advice can be obtained from:

List any appropriate support groups / telephone / web / email addresses.

NHS Direct

 0845 46 47

NHS Direct online

www.nhsdirect.nhs.uk

British Lung Foundation:

www.lunguk.org

**Association for Respiratory Technology and physiology
(ARTP)**

www.artp.org.uk

MTW NHS Trust is committed to making its patient information accessible in a range of languages and formats. If you need this leaflet in another language or format please ask one of your clinical care team or the PALS Team. We will do our best to arrange this for you.

Patient Advice and Liaison Service (PALS)

If you would like to comment on Trust services, have concerns or need information, you can contact the Patient Advice and Liaison Service (PALS). PALS will listen to your views and using a wide range of contacts and resources, help find ways of resolving any queries or difficulties. The PALS Team can be contacted at Maidstone or Kent and Sussex Hospitals, Monday to Friday 10.00am to 4.00pm.

Telephone: Maidstone Hospital ☎ 01622 224960
Tunbridge Wells at Pembury Hospital ☎ 01892 632953

Issue date: December 2011 Review date: December 2012
Database reference: GOV/LEA/4 © MTW NHS Trust
