

Lung Function Laboratory, Hammersmith Hospital

Cardiopulmonary exercise test (CPET)

Information for patients, relatives and carers

Introduction

This leaflet has been designed to give you information about **lung function tests**. We hope it answers some of the questions that you or those who care for you may have. It is not meant to replace the discussion between you and your medical team. It aims to help you understand more about what is discussed. If you have any questions about the information below, please call **the Lung Function Lab on 020 3313 2352**

The cardiopulmonary exercise test (CPET)

Cardiopulmonary exercise test (CPET) is an exercise test performed on a static bicycle. It is also known as CPX or MVO₂

Your blood pressure, oxygen blood level and electrocardiogram (ECG) are all recorded. The aim of the test is to see how well the heart, lungs and muscles are working, both together and independently during your best exercising effort.

What to expect on the day

Your test will be at our Lung Function Laboratory at Hammersmith Hospital. This is the only place we do CPETs.

You will be seen by 2 members of staff, usually a respiratory physiologist and a doctor.

The appointment is scheduled for an hour, but you will only be exercising for about 15 minutes of this time. The rest of the time is to allow for an explanation of the test, consent, examination and recovery.

1. We start the appointment by checking your medical history and the reason for the test. This is to make sure that the test is safe to perform. It also allows us to interpret the results with as much detail as possible.
2. We ask for your verbal consent before performing any tests. This is always done.
3. We'll attach an ECG and blood pressure monitor to your chest, shoulders and arm. This lets us monitor you throughout the test. Please wear a loose T-shirt or top to allow us to do this. You can wear this over the top of the wires during the test. You will be able to change beforehand if required.
4. We will put a clip on your finger or ear to measure your oxygen levels.

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5. You'll wear a mask during the test. This will measure your breathing. Though it does need to fit well with a good seal, it **does not** restrict your breathing. You will be able to talk to us with the mask on. But please only speak when necessary during the test as this can affect the measurements being taken.
 6. The test starts with a short breathing exercise to measure your lung capacity.
 7. You will then sit on the bike while we make some baseline measurements. You start the exercise part of the test with a short period of cycling with no resistance (easy to pedal).
 8. We will gradually increase the resistance (making it harder to pedal) until you reach your maximum effort (maximal limit). We aim to match the test to your level of fitness, but you will be in control of how much exercise you do and can stop at any point.
 9. When it becomes too difficult for you to continue, you can stop cycling but stay on the bike. This allows us to monitor you for a few minutes while you recover

Sometimes at peak exercise it is necessary to take a blood sample from the artery in your wrist. You will be able to discuss this with the clinical team at the start of your appointment.

A family member, carer or friend can accompany you for the test if you would like them to. A chaperone can also be provided. If you have any questions about this, or think you may need a translator, please **call the Lung Function Lab on 020 3313 2352**

How to prepare for the test

What to wear

- wear comfortable clothing that does not restrict your leg movement or breathing capacity. Remember to wear a loose T-shirt or top
- you will be able to change before and after the test if required
- wear supportive, flat-soled shoes or trainers. It will be easier to pedal
- avoid wearing any nail varnish or false nails if possible. These can affect the measurement of your oxygen levels

Food and drink

- eat a light meal no less than 2 hours before your appointment. This will make sure you have enough energy for the test. If you are unsure of what to eat, please call the Lung Function Lab for advice
- do not have caffeinated drinks or alcohol before the test
- after the test, you can eat and drink as normal

Smoking

- please avoid smoking for at least 8 hours before the test

Exercise

- please do not do any exercise on the day of the test. Make sure you are well-rested.

Medications

You should take all your medications as normal on the day of the test, unless we have told you otherwise. Please bring with you:

- a list of your medications for us to review
- any rescue medications such as inhalers and GTN (glyceryl trinitrate) spray you currently use

Are there any reasons why I should not do the test?

If you have had any changes to your health in the **4 to 6 weeks** leading up to the test, it may be necessary to rearrange your appointment. To talk about anything you think may affect your test performance, please call using the telephone number on your appointment letter or below.

Examples of this include:

- recent surgery to your chest, abdomen or eyes (cataract or laser eye surgery)
- a collapsed lung or broken ribs
- episodes of chest pain or a heart attack
- chest infections requiring antibiotic treatment
- recent (ongoing) cold, flu or COVID symptoms
- coughing up blood
- a lot of runny poo (diarrhoea) or being sick (vomiting)

Please contact us if you have any lower limb or weight bearing restrictions that may impact your ability to pedal. For example, knee or hip replacement or current pregnancy.

How do I get the test results?

After the test, we analyse the data. It is then reported by one of our consultants. A report will be sent to the consultant who referred you for the test. They will contact you to discuss the results.

Risks and side effects

As with all medical tests, there is a possibility of complications. The risks of these are about the same as for moderate strenuous exercise. Complications during the test include abnormal blood pressure, fainting and irregular heart rhythms. These are rare and the risk is about one in

10,000. You can discuss any concerns you have before the appointment – call the Lung Function Lab number below. You can also talk to the clinical team on the day of your test.

You may notice some stiffness in your legs on the day after the test. This is a normal response to the level of exercise that we are asking you to do.

Useful contacts

CPET is only performed at Hammersmith Hospital. You must go there for your appointment.

Lung Function Lab – Hammersmith Hospital 020 3313 2352

If you need to change an outpatient appointment with the doctor or nurse, call the outpatient booking office on 020 3313 5000.

For information about accessing our hospital sites, including public transport and parking information, please visit the Trust's website: www.imperial.nhs.uk

How do I make a comment about my visit?

We aim to provide the best possible service, and staff will be happy to answer any of the questions you may have. If you have any **suggestions** or **comments** about your visit, please either speak to a member of staff or contact the patient advice and liaison service (**PALS**) on **020 3312 7777** (10.00 – 16.00, Monday to Friday). You can also email PALS at imperial.pals@nhs.net The PALS team will listen to your concerns, suggestions or queries and is often able to help solve problems on your behalf.

Alternatively, you may wish to complain by contacting our complaints department:

Complaints department, fourth floor, Salton House, St Mary's Hospital, Praed Street
London W2 1NY

Email: ICHC-tr.Complaints@nhs.net

Telephone: **020 3312 1337 / 1349**

Alternative formats

This leaflet can be provided on request in large print or easy read, as a sound recording, in Braille or in alternative languages. Please email the communications team: imperial.communications@nhs.net

Wi-fi

Wi-fi is available at our Trust. For more information visit our website: www.imperial.nhs.uk