

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 your **exercise tests**. It answers some of the questions that you or those who care for you may have. It's not meant to replace the discussion between you and your medical team. Instead, it aims to help you understand more about what is discussed. If you have any questions about the information below, please contact us.

The cardiopulmonary exercise test

Cardiopulmonary exercise test (CPET) is an exercise test performed on a static bicycle while you are breathing. It's also known as CPX or MVO₂.

The CPET records your:

- blood pressure
- oxygen blood level
- electrocardiogram (ECG)

The test aims to see how well your heart, lungs and muscles are working, together and independently during your best exercising effort.

What to expect on the day

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

The appointment is due to last for an hour. You'll only be exercising for about 15 minutes of this time. The rest of the time is to allow for:

- us to explain the test to you
- you to give consent
- an examination
- your recovery

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 lets us interpret the results with as much detail as possible.

Consent

We will always ask for your verbal consent before performing any tests.

Monitors

You will be monitored throughout the test. This will be done by an ECG and blood pressure monitor. We attach this to your chest, shoulders and arm.

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 you need to

We will also put a clip on your finger or ear to measure your oxygen levels.

Mask

To measure your breathing, you will wear a mask during the test.

The mask does not restrict your breathing. But it does need to fit well with a good seal.

You will be able to talk to us with the mask in place. Please only speak when necessary during the test as this can affect the measurements being taken.

The test

1. The test starts with a short breathing exercise to measure your lung capacity.
2. You will then sit on the bike while we make some baseline measurements.
3. The exercise part of the test involves a short period of cycling with no resistance. Then the resistance will gradually increase until you are cycling as hard as you can (reaching your maximal limit).
4. We aim to match the test to your level of fitness. **You'll be in control of how much exercise you do and can stop at any point.**
5. When it becomes too difficult for you to continue, you can stop cycling. You stay on the bike, so we can 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.

Request chaperone or translator

A chaperone can be provided. If you have any questions about this, or think you may need a translator, please contact us on 020 3313 2352.

How to prepare for the test

What to wear

- you will be able to change before and after the test if required
- wear comfortable clothing that does not restrict your leg movement or breathing capacity
- wear supportive, flat-soled shoes or trainers as this will help you 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 to make sure you have enough energy for the test
- if you are unsure of what to eat, please ask us for advice on the number below
- avoid caffeinated drinks and alcohol before the test
- after the test, you can eat and drink as normal

Smoking

- please do not smoke for at least 8 hours before the test because it can affect the results

Exercise

- do not exercise on the day of the test
- make sure you are well rested

Medications

- take all your medications as normal on the day of the test unless we have contacted you about this
- bring a list of your medications with you for us to review
- if you use rescue medications like inhalers and glyceryl trinitrate (GTN) spray, please bring these with you.

Reasons why you should **not** do the test

If you've had any changes to your health in the **4 to 6 weeks** leading up to the test, we may need to rearrange your appointment. So, if you think anything may affect your test performance, please contact us and we can discuss it. Use the telephone number on your appointment letter or in this leaflet.

Examples of health changes 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, COVID symptoms
- coughing up blood
- diarrhoea or being sick (vomiting)

Also, please contact us if you have any lower limb or weight bearing restrictions that could make it hard for you to pedal. For example, if you you've had a knee or hip replacement, or if you're pregnant. Call and we can discuss it,

Getting the test results

After the test we must analyse the data. One of our consultants will then report on these findings. 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. The risk is about one in 10,000.

You can discuss any concerns you have:

- before appointment on the number below
- with the clinical team on the day of your test

Your legs might feel stiff 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. So, this is where you need to go for your appointment.

Lung Function Lab number: 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. 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**). The PALS team will listen to your concerns, suggestions or queries. They are often able to help solve problems for you.

call: **020 3313 0088** email: imperial.pals@nhs.net

Or, if you need to **complain**, contact the Complaints department.

call: **020 3312 1337 / 1349** email: ICHC-tr.Complaints@nhs.net

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

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

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