

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** and 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 but 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) - also known as CPX or MVO₂ is an exercise test performed on a static bicycle while you are breathing. 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

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.

We start the appointment by checking your medical history and the reason for the test. This is to make sure that not only is the test safe to perform, but also allows us to interpret the results with as much detail as possible.

You will be monitored throughout the test with an ECG and blood pressure monitor which we attach 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 required.

We will also put a clip on your finger or ear to measure your oxygen levels. To measure your breathing, you will wear a mask during the test. Whilst it does not restrict your breathing, it does need to fit well with a good seal. You will be able to talk to us with the mask in place, but we ask that you only speak when necessary during the test as this can affect the measurements being taken.

The test starts with a short breathing exercise to measure your lung capacity. You will then sit on the bike whilst we make some baseline measurements. The exercise part of the test involves a short period of cycling with no resistance, but then the resistance will gradually

increase until you reach a 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. When it becomes too difficult for you to continue, you can stop cycling but stay on the bike, allowing us to monitor you for a few minutes whilst 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.

How to prepare for the test

What to wear

Please wear comfortable clothing that does not restrict your leg movement or breathing capacity. You will be able to change before and after the test if required. Wearing supportive, flat-soled shoes or trainers will also help with your ability to pedal.

Food and drink

Eating a light meal a couple of hours before your appointment will ensure that you have enough energy for the test. If you are unsure of what to eat, please ask us for advice on the number below. We ask that you avoid caffeinated drinks for four hours before the test, and do not consume any alcohol on the day of the test. Once the test is completed, you can eat and drink as normal.

Medications

Unless we have contacted you directly, you should take all your medications as normal on the day of the test. Please bring a list of your medications with you for us to review.

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

If you have had any changes in your health in the six weeks leading up to the test, please contact us to discuss these because we may need to rearrange your test. Examples of this would be admission to hospital, recent surgery, episodes of chest pain, collapsing or dizziness on exertion, a significant increase in breathlessness or chest infections requiring antibiotic treatment.

If you have any lower limb restrictions that may impact your ability to pedal (e.g. knee or hip replacement) please contact the lab on the number shown on your appointment letter to discuss.

Getting the test results

After the test we have to analyse the data. It is then reported by one of our consultants and 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 ahead of the appointment on the number below, or with 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 undertake.

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 3313 0088** (Charing Cross, Hammersmith and Queen Charlotte's & Chelsea hospitals), or **020 3312 7777** (St Mary's and Western Eye hospitals). 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

Department name
Published: April 2021
Review date: April 2023
Reference no:1604CPET
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