
Cardiopulmonary Exercise Testing (CPET)

**Admissions and
Pre-assessment Unit (APU)**

Patient information



Introduction

You have been referred for a cardiopulmonary exercise test as part of your pre-assessment before surgery. This leaflet provides some useful information for you to consider prior to your test. Please ask a member of staff if you have any questions or concerns.

What is CPET?

Cardiopulmonary exercise testing is used to assess your current level of fitness prior to surgery and is the most accurate way to do this. CPET allows us to measure how well your heart, lungs and muscles are functioning under stress when you cycle up a hill.

CPET is not a pass or fail test. Instead, it helps the anaesthetists and surgeons make decisions about your surgery and plan the care that you may need before, during and afterwards. In addition, CPET helps us diagnose untreated heart and lung problems which may require further assessment prior to surgery.

What does the test involve?

Prior to exercising, we will ask you to perform a breathing test to assess your lung function.

Afterwards, we will ask you to cycle on an upright bicycle while breathing through a mouthpiece that is attached to a facemask. This allows us to determine your level of fitness. An electrocardiogram (ECG) will also be recorded before, during and after

exercise to look at how your heart responds during cycling. In addition, we will measure your blood pressure every few minutes during the test and the level of oxygen in your blood using a fingertip sensor.

The CPET appointment will last for around 40 minutes, however you will only be exercising for between 6-10 minutes. During the test you will be continuously monitored by the medical team, consisting of either an exercise physiologist or a consultant anaesthetist who are trained in CPET.

You will be asked to cycle at a comfortable speed throughout the test and will be encouraged to cycle for as long as you can up the hill until you are too tired to continue.

Are there any special precautions I need to take before the test?

Please do not eat a heavy meal within four hours of the test. You should also avoid carbohydrates (such as bread, croissants) four hours before the test. However, it is important that a light meal such as fruit, juice, and / or unsweetened cereal can be consumed to maintain adequate blood sugar levels. You should avoid alcohol, caffeine and tobacco within eight hours of the test.

Be sure that you are adequately hydrated. Drink plenty of water during the hours before your test and take all your regular medicines unless you have been asked by a doctor to stop for any reason.

What should I wear for the test?

Please wear comfortable, unrestrictive clothing suitable for exercise. Trainers and loose trousers are recommended, although not essential. Changing facilities will be provided. Remember that we will need to attach monitoring equipment to your chest and arms during the test.

I am worried that I might not be fit enough to perform the test

Many patients worry that because they do not participate in regular exercise, they may not be able to complete the test. CPET is suitable for all regardless of your level of fitness. We find that in most cases, people can cycle for longer than they think and you will be encouraged to do as much cycling as you feel able to do. This is important so that we can obtain an accurate assessment of your fitness. Please inform us before the test if you have any difficulties that may prevent you from cycling, such as arthritis or mobility issues.

Are there any risks?

CPET is a relatively safe procedure. The number of patients who develop symptoms is low (one in 1000). The rate of death during exercise testing is two to five per 100,000 clinical exercise tests, so extremely low. All testing is performed by experienced and trained staff and we will be monitoring you

closely during the test, with continuous ECG, and regular blood pressure measurements. In some rare cases, we may stop the test if necessary.

Is there anything I can do before my surgery that may help improve my fitness?

We know that fitter patients tend to recover faster after surgery. Therefore, if there is time before your operation and you feel well enough to do so, when you are at home, you may want to think about the following:

- Stopping smoking (if applicable)
- Weight loss (if applicable)
- Increasing the frequency, duration and intensity of physical activity/ exercise that you undertake.

Depending on the results of your CPET and the timeframe until your surgery, you may be referred to The Royal Marsden exercise prehabilitation service. A member of the physiotherapy team will contact you on the day or via telephone to discuss how to best improve your fitness leading up to surgery. The service offers supervised sessions at both sites of The Royal Marsden, as well as guidance on exercise to be done at home.

When will my results be ready?

As CPET provides a more thorough cardiopulmonary assessment than other

tests, it is advisable to allow up to 48 hours for the CPET team to report your test. However, we will give you an indication of how you performed on the day.

Contact details

The Royal Marsden Macmillan Hotline:

020 8915 6899

(available 24 hours a day, 7 days a week)

If you have any questions about this test or your results you can contact the Admissions and Pre-assessment Unit (APU) on:

020 7808 2405 or 2406

References

This leaflet is evidence based wherever the appropriate evidence is available, and represents an accumulation of expert opinion and professional interpretation.

Details of the references used in writing this leaflet are available on request from:

The Royal Marsden Help Centre

Freephone: 0800 783 7176

Email: patientcentre@rmh.nhs.uk

No conflicts of interest were declared in the production of this leaflet.

Should you require information in an alternative format, please contact The Royal Marsden Help Centre.

Reviewed February 2022. Planned review February 2025
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Radiotherapy and
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F538021 & F538022

