



Information for  
patients and  
carers

Cardiopulmonary Exercise Test  
(CPET)

The Cardiopulmonary Exercise Test (CPET) is a test of your aerobic fitness which will help us predict risks associated with major surgery, and also help us plan your care. The exercise is easy to perform, set well within your own personal capability and conducted under expert supervision. The exercise involves cycling which lasts up to ten minutes depending on your ability.

## What happens during the test?

CPET involves performing an exercise on a fixed exercise bicycle. The exercise intensity will begin at a low level and will be advanced in stages depending on your fitness level. The effects on your breathing and heart rate and oxygen saturation are continuously monitored and blood pressure is taken at regular intervals. To test the capacity and strength of your lungs you will be asked to breathe through a mask and an electrocardiogram (ECG) is used to assess the effect of the exercise on your heart. The measurements are taken before, during and for a short time after you stop exercise.

During exercise it is quite normal to feel a little out of breath and for your legs to hurt. You may ask to stop the test anytime because of feelings of fatigue or any other discomfort. We may stop the test if we notice signs of fatigue or changes in your heart rate, ECG, and blood pressure, or other symptoms you may experience.

Having a joint replacement should not stop you being able to perform the test, but if you do develop any discomfort or pain we will stop the test.



## Why do I need to have this test?

The results obtained from CPET have proven to be good predictors of the risks associated with anaesthesia and major surgery. The results will allow us to determine what level of care you will require after your operation, for example whether you require admission to the Intensive Care Unit or can be looked after on a surgical ward. There may be occasions when the results suggest that undergoing

an operation would be very high risk, and this may require further discussion with the surgical team looking after you

## Who supervises the test?

The test will be conducted by a Consultant Anaesthetist with an assistant. He / She will give an explanation of what is expected of you during the test, will monitor you closely throughout the test, and will advise you of the test result.

## How should I prepare for the test?

Attend your appointment in good time and wear comfortable clothing. Soft sole shoes or trainers are recommended, with trousers or shorts for men or with a loose skirt or trousers for women. If your test is scheduled for the morning you can eat a light breakfast such as cereal, toast and tea. If scheduled for the afternoon you can eat a light lunch such as a sandwich. Please do not eat anything heavy for at least an hour prior to the test.

Take all medication as normal and bring all your current medication with you (including non-prescription).

The Consultant Anaesthetist will take a full medical history before the test. If you experience the slightest shortness of breath with low-level activity, pain, pressure, tightness, heaviness in the chest, neck, jaw, back or arms with physical effort please inform us. Please feel free to discuss any worries that you have before the test.

If you feel unwell prior to the day of the test, please inform pre-op clinic and do not come in. This includes coughs, colds and high temperatures.

## What happens after the test?

You can eat and drink as usual. Depending on how you feel, you may go about your normal routine or take it easy if you feel tired.

Do not take a hot shower for at least an hour after the test. Your blood vessels expand with exercise and need to return to normal. A hot shower may expand them more, causing low blood pressure and dizziness.

After you leave the hospital, if you have chest pain that lasts more than 15 minutes, or if any GTN spray/tablets you have do not relieve the pain, you should dial 999.

## Could there be a problem during or after the test?

**The risk for CPET is no greater than for any other moderate exercise regardless of your current health or fitness.**

You may experience some side-effects during the test, and these could include breathlessness, possible chest pain, feeling faint and pain in your legs. It is important you let us know if you experience any of these symptoms during the test. You will be monitored very closely and the test will be stopped if you feel unwell or the doctor has any other concerns.

There exists the possibility of certain changes occurring during the test. These include abnormal blood pressure, irregular, fast or slow heart rhythm, and in very rare instances, heart attack, stroke or a life threatening rhythm disturbance.

Every effort will be made to minimise these risks by evaluation of preliminary information relating to your health and fitness and by

careful observations during testing. Emergency equipment and trained personnel are available to deal with unusual situations that may arise.

## Any questions?

Any questions about the procedures used in the exercise test or the results of the test are encouraged. If you have any concerns or questions, please ask us for further explanations. Our contact details are on the back page.

## References

1. Levett, D (2018) Perioperative Cardiopulmonary Exercise Testing (CPET): consensus clinical guidelines on indicators, organization, conduct and physiological interpretation. BJA, 120(3): pp. 484--500  
<http://poetts.co.uk/downloads/CPET%20guidelines.pdf>
2. POETTS (2020) Guidance on Perioperative Cardiopulmonary Exercise Testing during the COVID-19 pandemic  
[http://poetts.co.uk/downloads/POETTS\\_cpets%20and%20covid.pdf](http://poetts.co.uk/downloads/POETTS_cpets%20and%20covid.pdf)
3. Swart M, Carlisle J.B.(2012) Case-controlled study of critical care or surgical ward care after elective open colorectal surgery.Br J Surg.99(2): pp.295-9
4. West M, Jack S, Grocott M P (2011) Perioperative cardiopulmonary exercise testing in the elderly. Best Pract Res Clin Anaesthesiol. 225(3):427-37.
5. Snowden CP, Prentis JM, Anderson HL, Roberts DR, Randles D, Renton M, et al. (2010) Submaximal cardiopulmonary exercise testing predicts complications and hospital length of stay in patients undergoing major elective surgery. Ann Surg. 251(3):535-41
6. Reilly CS (2008) Can we accurately assess an individual's perioperative risk? Br J Anaesth. 101(6):747-9
7. Older P, Hall A, Hader R (1999) Cardiopulmonary exercise testing as a screening test for perioperative management of major surgery in the elderly. Chest 116(2):355-62

## Contact details

Should you require further advice or information please contact

CPET Pre-op Assessment clinic at RPH  
01772 522922  
01772 523927

## Sources of further information

[www.lancsteachinghospitals.nhs.uk](http://www.lancsteachinghospitals.nhs.uk)  
[www.nhs.uk](http://www.nhs.uk)  
[www.patient.co.uk](http://www.patient.co.uk)  
[www.accessable.co.uk](http://www.accessable.co.uk)

All our patient information leaflets are available on our website for patients to access and download:

[www.lancsteachinghospitals.nhs.uk/patient-information-leaflets](http://www.lancsteachinghospitals.nhs.uk/patient-information-leaflets)

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If you want to stop smoking you can also contact the Quit Squad Freephone 0800 328 6297.

Please ask if you would like help in understanding this information. This information can be made available in large print and in other languages.

**Cantonese:**

如果你希望以另外一種格式接收該資訊，請和我們聯絡，不必猶豫。

**Gujarati:**

જો તમને આ માહિતી બીજી રચના કે ફોર્મેટમાં મેળવવાની ઈચ્છા હોય, તો કૃપા કરી અમારો સંપર્ક કરતા અચકાશો નહિ.

**Hungarian:**

Kérjük, vegye fel velünk a kapcsolatot, ha más formában kéri ezt az információt.

**Polish:**

Jeżeli chciał(a)by Pan/Pani otrzymać niniejsze informacje w innym formacie, prosimy o kontakt.

**Punjabi:**

ਜੇ ਤੁਸੀਂ ਕਿਸੇ ਹੋਰ ਫਾਰਮੈਟ ਵਿਚ ਇਹ ਜਾਣਕਾਰੀ ਲੈਣਾ ਚਾਹੁੰਦੇ ਹੋ ਤਾਂ ਸਾਡੇ ਨਾਲ ਸੰਪਰਕ ਕਰਨ ਤੋਂ ਨਾ ਝਿਜਕੋ।

**Urdu:**

اگر آپ اس معلومات کو کسی اور صورت میں حاصل کرنا چاہتے ہیں تو برائے مہربانی ہم سے رابطہ کرنے میں ہچکچاہٹ محسوس نہ کریں۔

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