

# Important information - Advanced cardio-respiratory exercise test

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The Advanced cardio-respiratory exercise test is included in the Bupa Advanced Health assessment.

The test assesses the efficiency of the cardiovascular, respiratory and muscular systems in response to exercise. Certain responses can also be used to indicate the presence of cardio-respiratory disease.

The test reveals:

- cardiovascular efficiency - how the heart and circulation responds to exercise
- respiratory efficiency - how the lungs respond to exercise
- metabolic efficiency - how well the muscles burn fat for energy
- aerobic capacity - the maximal uptake and use of oxygen by the body (a measure of fitness)
- anaerobic threshold - the point at which energy demands outstrip available oxygen supply
- we monitor the heart tracing during exercise for safety. Changes in the shape of the ECG complex may indicate coronary artery disease.

## What does the test involve?

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The test involves cycling on an electronically braked bicycle so that the workload can be carefully controlled. Every two minutes the workload is increased. The average length is about 8 minutes. We aim to get the heart rate up to 85% of maximum predicted heart rate.

A number of parameters are monitored during exercise. These include:

- heart rate, blood pressure and 12 lead ECG trace
- oxygen consumption and carbon dioxide output
- subjective levels of effort

If you have had a previous bike test like the Barbican Premier, Bupa basic bike test or the Bupa treadmill test the numerical results are not directly comparable because the equipment and protocols used are different, but the overall level of fitness indicated will be similar.

## Before, during and after the test

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Before the test your health assessment doctor will review your medical history, test results and will examine your heart and lungs. A resting ECG will be taken and blood pressure will be checked.

During the test we monitor the ECG trace and breathing via a specially designed mouthpiece. The blood pressure cuff will inflate every 2 minutes. The health adviser will regularly check how you are feeling throughout the test.

If you develop symptoms of chest pain, light headedness, stomach discomfort, unusual fatigue, an uncomfortable level of shortness of breath or palpitations (abnormal racing of heart) or any other feelings of pain or discomfort you must tell the health adviser who will take steps to end the test. You can stop the test at any time if you want to.

The test finishes with a 2 to 4 minute cool-down period.

All your results are collated into a detailed report, which will normally be given to you on the day. The health adviser will explain the results to you. This information is also very useful in planning future fitness activities and calculating training heart rate zones.

The ECG tracing is reported by a consultant cardiologist. Changes in the ECG may be indicative of coronary artery disease. If there are changes that suggest this, we will advise you accordingly, but you should be aware that this test is not infallible and may produce false positive or false negative results. The predictive value of the test for coronary artery disease is lower in women than in men.

## What are the risks of exercise testing?

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Research studies have shown that the risk of dying during or after an exercise test can be as high as 1 in 10,000 people in an unselected population, but to minimise this risk Bupa uses a series of exclusion criteria to ensure that high-risk clients do not exercise. These include:

- raised resting blood pressure above 160/100mmHg
- recent fever or infection
- any current or previous history of cardiac problems
- some current or previous lung problems
- other serious medical conditions e.g. uncontrolled diabetes and asthma.
- significant abnormality on the resting ECG trace



Some drugs interfere with the response to exercise. You will be unable to do the test if you are taking.

- beta blockers
- cold and cough remedy drugs containing ephedrine and pseudoephedrine
- digoxin for heart problems
- tricyclic antidepressants

Musculo-skeletal injuries also occur during exercise but these are reduced by avoiding exercising with injuries and ensuring that warm-up and cool-down periods are completed.

It is very important for you to tell us about any recent symptoms and give us full details of your medical history so we can assess your health risks for exercise.

If you have any questions please ask the Doctor or the Health Adviser.

I have read and understood the contents of this factsheet, and I am happy to perform the cardio-respiratory exercise test.

Signed (client) \_\_\_\_\_ Date \_\_\_\_\_ Name (printed) \_\_\_\_\_

The above named client has read the information sheet and had an opportunity to ask questions.

Signed (Health Adviser) \_\_\_\_\_ Date \_\_\_\_\_ Name (printed) \_\_\_\_\_

