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## Cardiopulmonary Exercise Testing (CPX)

Patient Advice and Education



london medical  
heart

# Cardiopulmonary Exercise Testing (CPX)

## Patient Advice and Education

The CPX team at London Medical consists of a medical consultant team who have pioneered CPX medicine within the United Kingdom. The consultants boast an extensive scope of practice which incorporates the assessment of pre-operative patients, to identifying previously undiagnosed cardiac and respiratory conditions, to the titrating of fitness training. At London Medical, a CPX test is very accessible and does not require a medical referral.

### What is CPX?

Cardiopulmonary Exercise Testing (CPX) is a non-invasive method used to assess the performance of the heart and lungs at rest and during exercise.

### What does the test involve?

During your CPX test you will be required to perform mild exercise on an upright bicycle whilst breathing through a mouthpiece. Each breath will be measured to assess how the body is performing. The capacity and strength of the lungs is measured before and during exercise. Your heart tracing (ECG) will also be recorded prior to, during and post exercise.

The CPX test will last for a total of 40 minutes, however you will only be required to exercise for approximately 10 minutes. The amount of exercise is modest - it does not require you to exert yourself to maximum effort. During the test you will be continuously monitored by the medical team.

### Who might need a CPX test?

- Patients scheduled for major surgery
- Patients taking part in a health check-up for the diagnosis of heart and lung disease
- Patients in rehabilitation following a major illness
- Healthy subjects wishing to assess their fitness prior to training, in order to help meet personal fitness goals and or weight loss targets
- Athletes at all levels needing expert guidance to titrate training programs

### What information will be analysed during the CPX?

- 12 lead ECG
- Lung Function: Spirometry and lung volumes
- Lung Function: Flow volume loops
- Exercise 12 lead ECG
- Oxygen Consumption during exercise (VO<sub>2</sub> max)
- Anaerobic Threshold (Lactate threshold)
- Lung Function during exercise
- Cardiac performance during exercise
- Metabolism during exercise (Fat vs. carbohydrate burning)

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

For the majority of patients, there are no special precautions that need to be taken prior to testing. For those patients who smoke it is advisable to refrain from smoking 8 hours prior to testing, as smoking may produce falsely low results.

### What should I wear for the test?

Comfortable clothing suitable for light exercise, such as walking shoes and loose trousers are recommended. The facilities at London Medical include a changing room and shower if required.

### What facilities will be available for me?

We have changing rooms for changing pre and post testing. There is a shower if required. Tea and coffee is also available.

### I am worried that I may 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. CPX is **not a maximal tolerance test** and the assessments are applicable as much to athletes as to those who are elderly or unfit.

### Are there any risks?

The risk for CPX is the same as for mild-moderate exercise. The number of patients who develop symptoms is low (1:1000), and it is the same as for exercise testing in cardiology. We will be monitoring you closely during the test, with continuous ECG, blood pressure and oxygen measurements. If you develop significant symptoms, the trained staff will stop the testing.

### When will my results be ready?

Because CPX gives a more advanced Cardiopulmonary assessment than traditional tests, it is advisable to allow 48 hours for the CPX Consultant to report on your test results.

### How is my test paid for?

All of the major insurance companies recognise CPX testing as a valid method to assess Cardio-pulmonary fitness. However, it is advised that you check with your insurance company prior to your appointment. We are also happy to facilitate those patients who wish to self pay or those who are sponsored.