

Assessment of breathing, exercise capacity and breathing-related sleep problems

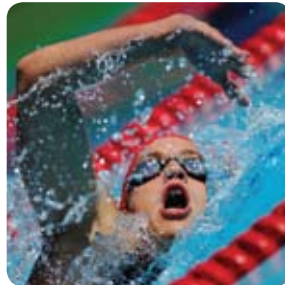


The Cardiopulmonary Centre

The Cardiopulmonary Centre is the dedicated respiratory/ cardiac assessment department of London Bridge Hospital. This unit is focused on the study of breathing – particularly dysfunction associated with breathing problems, specifically:

- **Breathing-mediated sleep compromise**
- **Exercise intolerance**
- **Shortness of breath/respiratory disease.**

Our patients receive recognised and committed service to the highest clinical standards. Our nurses, physiologists and doctors offer professional, friendly assistance using the latest medical equipment and access to consultant physicians. We are a dedicated team drawn together from the world-leading Cardiology and Respiratory Departments of London Bridge Hospital.



Our difference

- Extensive experience in lung function, cardiopulmonary and sleep study work
- Ratified, safe tests
- A single unit service from initial consultation to final treatment
- Integration within HCA, London's number one private hospital group

VO₂ Exercise Testing

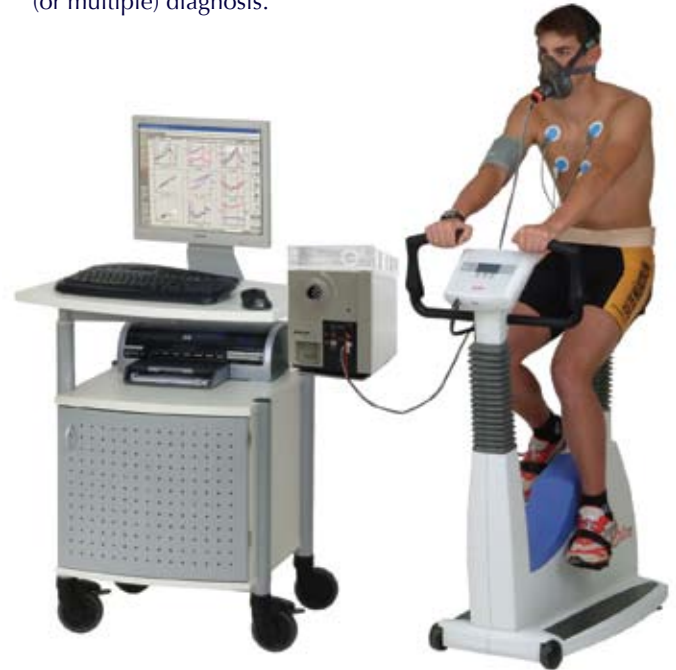
Symptoms such as breathlessness, fatigue and an inability to exercise to the patient's correct level are optimally investigated through CPET (CardioPulmonary Exercise Testing).

CPET helps us to distinguish between the major area causing limitation (cardiovascular, heart, lung, muscular) and within each area, the specific reason causing limitation.

Dyspnoea of unknown cause is optimally investigated with this technique. CPET is also essential in the following areas:

1. Heart failure assessment
2. Pacemaker optimisation
3. Pre-operative assessment
4. Unique diagnosis

All our tests are performed on the latest Viasys Masterscreen CPX system with the option of an ergometry treadmill, bike and rowing machine. Reporting is via our bespoke Cardiopulmonary Centre analysis system – which reduces the complex analysis process to a single (or multiple) diagnosis.



Lung Function

We have many years' experience in lung testing, backed up by some of the most respected respiratory physicians and surgeons in the field. We have built a class-leading reputation for innovative, professional, lung analysis work.

The major tests within respiratory assessment we perform are:

- **Basic spirometry**
- **Bronchial hyper-reactivity tests**
- **Full lung function assessment including diffusion**



These tests, combined with CT and radiographic images, provide detailed analysis of respiratory conditions such as the following:

- **Asthma and bronchial hyper-reactivity**
- **COPD**
- **Emphysema**
- **Extrathoracic airway obstruction**
- **Interstitial lung disease**
- **Pleural lung disease**

We also provide asthma support systems with our PEF (Peak Expiratory Flow) analysis programme, available through our website www.thecardiopulmonarycentre.co.uk



Sleep

Inability to sleep soundly is one of the most important factors contributing to a reduced quality of life; we recognise that and are committed to tackling this widespread problem. There are three elements to our sleep study programme: the survey, the test (with analysis) and the implementation of solutions for the sleep problem.

Patients with sleep problems often show one or more of the following symptoms; black bags around their eyes, confusion, constant yawning, fatigue, throat pain from snoring and the inability to hold a thought. Obstructive sleep problems are common in our cardiac, weight management and respiratory patients – our two sleep analysis methods allow us to quantify these sleep disorders.

Portable sleep study

A small monitor can be used in the patient's home as a screening tool to identify Sleep Disordered Breathing. Two non-invasive sensors are used to record multiple parameters whilst the patient sleeps. Sleep Apnoea can be easily identified by using this basic device.



Full in-hospital overnight sleep study

Nocturnal Polysomnography (PSG) provides an extensive analysis of sleep and is the 'gold standard' for sleep diagnostics. It involves sleeping overnight at London Bridge Hospital with sensors attached to various parts of your body. PSG measures and quantifies multiple physiologic variables such as eye movements (EOG), brain waves (EEG), heart rhythm (ECG), skeletal muscle activation (EMG) and airflow throughout the night.

PSG is used to diagnose Obstructive Sleep Apnoea Syndrome (OSAS) as well as evaluating other abnormalities which have an effect on daytime functioning. If OSAS is detected, a CPAP (Continuous Positive Airway Pressure) can be administered through London Bridge Hospital to reduce apnoeas and alleviate symptoms. Alternative treatment can be provided and is dependent on your PSG outcome.

We also have the necessary equipment and experience to treat these breathing-related sleep problems, whether it be through utilisation of Continuous Positive Airway Pressure (CPAP) or via direct intervention.

Sports Science

Measurement of physiological performance has direct beneficial effects on sports performance. In recent years, there have been significant developments in the measurement and understanding of these physiological measurements and their application for optimising athletic performance.



We are experts in sports science, with the qualifications to match. We offer a wide variety of tests, designed to measure physiological variables particular to specific sporting disciplines. We aim to replicate the physical environment of your sport as closely as possible. Therefore, we have a wide range of equipment for testing, with treadmills, cycle ergometers and rowing machines as well as the latest metabolic assessment equipment.

Other Services

Weight Management

Patients in intensive care (non-intubated) need very careful assessment of resting energy requirements. We can use our Viasys analysis system to accurately assess daily resting metabolic requirements – this is vital information for our dietitians. This same technology can be applied to patients with weight control issues, with a simple 30-minute resting assessment providing accurate baseline measurements for use within a weight-control programme.

Contact Details

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CV Stress

Extreme environments present extreme challenges for the human body. Activities such as air travel, diving or living at high altitude present unique challenges for the human cardiopulmonary system. We offer a range of tests for adequate physiological risk assessment in these environments. For example, we can assess the body's response to stimulated air cabin pressure, where less oxygen is available. This gives patients and their physicians accurate simulation of cardiac and respiratory responses to a hypoxic environment.





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