

# Fitness Assessment at BCOM



**British College of Osteopathic Medicine**  
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# Fitness Assessment Packages available at BCOM

**Whatever your clients' goals it is important to keep them motivated!**

At BCOM we have set up a range of fitness assessments compatible with different fitness goals.

These assessments have been designed to support both trainers and their clients.

Regular fitness testing can objectively measure the effectiveness of exercise programs and can possibly save months or even years of hard work.

The tests enable personal trainers to more efficiently track their clients' progress and also provide positive valuable and quantifiable feedback to their clients.

Fitness assessments are available at the BCOM's Physiology Laboratory at Lief House just across the road from Finchley Road Tube Station. See map on the last page.

We offer 3 fitness assessment packages which can be chosen according to your client's requirements and level of training. Separate tests are available by arrangement, prices on request. Screening questionnaires will be sent out, prior to testing, for completion with the trainer to determine suitability for each test.

**To make an appointment and for further information please contact:**

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## **1 General Fitness Assessment £80**

About 60 minutes

- Blood pressure using digital monitor
- VO2 Max as assessed by submaximal exercise stress test using Metalyser 3B on either bicycle ergometer or treadmill
- Body fat percentage and lean mass assessment using Bod Pod
- Waist / Hip ratio
- Bone scan using CUBAclinical heel ultrasound
- Flexibility using a sit and reach bench

## **2 Advanced Cardiovascular Assessment £60**

About 30 minutes

- VO2 Max assessed by maximal exercise stress test using Metalyser 3B on either bicycle ergometer or treadmill
- Heart rate in response to exercise
- Lung function and efficiency; FVC (Forced Vital Capacity) and FEV<sub>1</sub> (Forced Expiratory Volume in One second) measured using digital spirometer

## **3 Muscle Strength and Endurance Assessment £60**

About 30 minutes

- Maximal force generated, work per repetition and fatigue index using Cybex Norm, usually working the knee, other joints may be selected
- Hand grip strength using Jamar adjustable hand dynamometer

## The BOD POD

Body Composition Tracking System is an Air Displacement Plethysmograph which uses whole-body densitometry to determine body composition (fat and fat-free mass). The system is based on the same principle as hydrostatic (or "underwater") weighing, except that the BOD POD uses patented **Air Displacement Technology**, instead of water, for highly accurate, fast, and safe results. The BOD POD also offers estimates of Resting Metabolic Rate (RMR) and Total Energy Expenditure (TEE) as an optional component of every body composition test. This data is provided without requiring the subject to perform any additional testing manoeuvres, and a complete assessment requires only about 5 minutes.

- Proven accuracy using whole-body density measurement.
- Option to either directly measure a subject's lung volume, or use prediction equations.
- Provides information on fat and fat-free mass, Resting Metabolic Rate (RMR), and Total Energy Expenditure (TEE).
- Subject sits in BOD POD twice for about 50 seconds.
- Accommodates most populations.
- Excellent repeatability.
- Safe, non-invasive, and ideally suited for repeated testing.

Subjects will need to bring along a close-fitting swim-suit. A swim cap (provided) will be worn during the test.



## Cortex MetaLyser 3B

The MetaLyser3B is a stationary metabolic stress test system for pulmonary gas exchange measurements during ergometer or treadmill exercise. The subject wears a mask attached to a volume transducer and oxygen and carbon dioxide analysis cells. Direct measures of gas exchange include  $O_2$  and  $CO_2$  concentration of the expired/inspired air and heart rate. Additional valuable physiological variables can be obtained such as Anaerobic Threshold,  $VO_{2max}$  and Respiratory Quotient. A heart rate monitor is used during the test, providing additional information. The test can be either a Submaximal stress test or Maximal stress test. Improvements in these parameters clearly show the effectiveness of cardiovascular training. Subjects need to wear trainers and exercise clothing for these tests.



## Cyber NORM

This machine allows movement at either a set constant speed (isokinetic) or static (isometric). Parameters that can be measured include peak torque, maximal force generated, work per repetition and fatigue index. The computer keeps the motion smooth and provides acceleration via the dynamometer motor and gear- box.

It can be set up to work on knee, ankle shoulder, elbow hip and wrist and is bilateral. These parameters provide clear evidence of muscle strength improvement through training.

Subjects will be required to wear trainers and comfortable clothing.



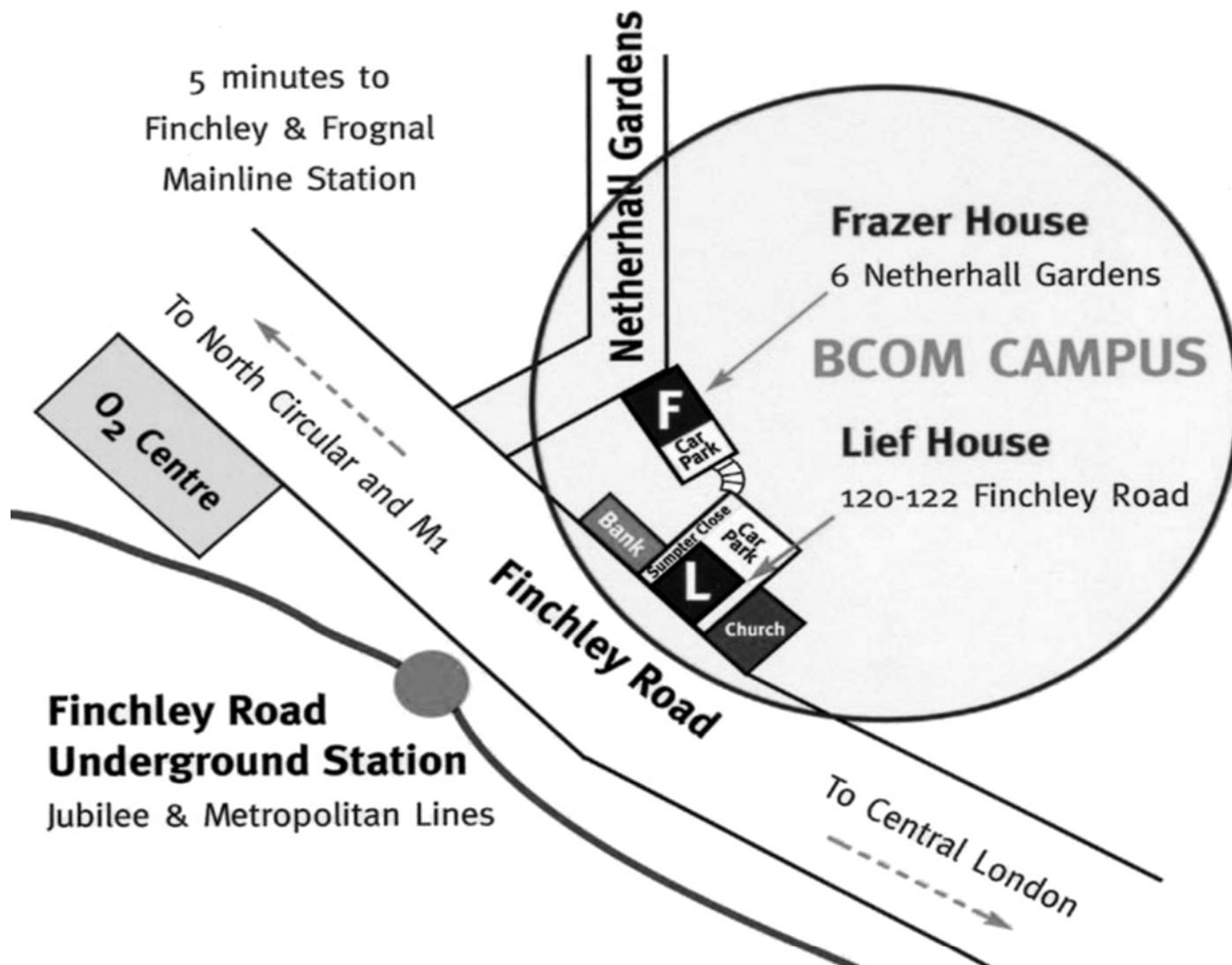
## CUBA clinical - Quantitative Ultrasound Bone Scans

This machine assesses bone density at the heel bone by measuring the attenuation of ultrasound which is passed through the heel while the foot is held between transducers in the CUBA clinical. Ultrasound gel is used between the heel and the transducers to exclude air.

The quantity of the ultrasound absorbed by the bone depends on the complexity of structure of the bone and also its mineral content. Quantitative Ultrasound Sonometry is therefore a good predictor of fracture.

This is a non-invasive and non-radiological method. Results are given in terms of risk of fracture for the subject's age and gender and also compared to the average for a normal young adult (peak bone mass). Exercise and diet are important factors in the prevention of osteoporosis and advice on these and other life-style factors can be given at the time in conjunction with the trainer. The subject will have to remove shoes and socks or stockings for this test.





The college is situated on the Finchley Road near Swiss Cottage in London NW3 and benefits from good road and public transport links into and out of the Capital. It is immediately opposite Finchley Road Underground station, which is on the Metropolitan and Jubilee London Underground lines. Bus routes 82, 13, 113, C11 and C12 are also close by.

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