

Lean Balance enables a comparison of upper and lower body muscle mass and right and left arms and legs. It is invaluable in planning an exercise programme so as to develop a well balanced physique. By comparing the length of the upper and lower bars, an estimate of muscle strength can be made. Equivalence in the length of the bars signifies normal muscle strength.

Oedema (Edema) is the proportion of extra cellular fluid over total body water. Any score over 0.4 suggests the accumulation of water from drugs or disease.

Visceral Fat Area - Depending on its location, fat can be divided into visceral (around the intestines in the abdomen), subcutaneous (under the skin) and inter muscle fat. Visceral fat is the most relevant and the Inbody 720 is the only machine that gives an estimate of this important parameter without the use of radiation. It calculates this from a regression analysis based on a comparative analysis with CT scanning, the current gold standard. This is the cross-sectional area of visceral fat found in the abdomen. Note that visceral fat increases with age and is a strong indicator of insulin resistance.

Weight Control is the change needed to reach targets. These are unique indexes not calculated simply from height and weight but also take into account measured muscle mass. Two people the same height and weight who have different body compositions will have different target weights. These measurements allow you to see how your treatment brings about changes in your fat and muscle mass.



London Medical
49 Marylebone High Street
London
W1U 5HJ

Tel: +44 (0)20 7467 5470
Fax: +44 (0)20 7467 5471
Email: info@londonmedical.co.uk
Website: www.londonmedical.co.uk

Body Composition Test

Patient Advice and Information



london medical

Body Composition Test

Patient Advice and Information

The **Inbody 720**, the latest technology in body composition analysis, is used to assess, amongst other important parameters, total fat percentage and visceral fat deposition, muscle mass and strength, fluid distribution and metabolic rate. It therefore gives much more relevant medical information than body weight and body mass index alone and serves as a useful tool for weight and fitness management, nutritional assessment and support for diagnosis of various medical conditions.

How Body Composition Analysis Can Help You and Your Doctor

- By looking at the presence of body water in different compartments, subtle fluid accumulation in the legs, abdomen and chest can be measured and monitored regularly.
- The effectiveness of treatment to reduce insulin resistance, which is characterised by increased fat around the abdomen, can be determined by monitoring the reduction in abdominal fat.
- During weight loss programmes, when there are periods of fluid retention masking concurrent fat loss, body composition analysis can help to reassure a patient that their dietary efforts are appropriate.

Before your test:

- **The test should be done prior to a meal (or allow at least 2 hours following a meal). No fluids should be taken within the 2 hours prior either.**
Mass of the food/ fluid is counted as weight and may result in measurement errors.
- **Ensure the bladder is emptied just prior to the test**
Otherwise the volume of retained urine is included in the body weight measurement and may result in errors.
- **Do not exercise immediately prior to the test**
Strenuous exercise or sharp movements can cause temporary artefactual changes in body composition.
- **Ensure you are not sweating profusely during the test**
Sweating post exercise or following a hot shower or sauna causes temporary changes to a person's body composition.
- **Ladies only - Do not do the test if you are menstruating**
Increases in body water occur during the menstrual cycle.
- **For follow up tests**
Ensure the conditions are identical i.e. wearing similar clothes, testing before eating or exercising etc

Understanding your results:

Body Fat Mass is a calculation derived from body weight minus the fat free mass.

Fat Free Mass refers to the (total body water + protein mass + mineral mass) fraction of total body weight.

Soft Lean Mass refers to the skeletal muscle mass of the limbs, internal organs and skin and is calculated by subtracting the mineral found in the bones from the fat free mass.

Visceral Fat, Waist Hip Ratio refers to the non skin fat in the central abdominal area (round the intestines and in the liver) – increase in this parameter is strongly related to insulin resistance and increased heart disease risk.

The Muscle-Fat Analysis graphs show, in simple terms, your fat and muscle (SMM = Skeletal muscle mass) distribution, relating them to "ideal" values. Total muscle is derived from cardiac, visceral (intestinal) and skeletal muscle but it is only the latter that is altered by an exercise programme. A successful fitness programme will therefore show changes in the skeletal muscle mass after a few weeks.

Basal Metabolic Rate (BMR) – indicates the daily kcals required to support basal sleeping existence. This is multiplied by an activity factor to obtain daily resting energy expenditure and helps in determining the energy deficit required to achieve a predicted rate of weight loss. .

Obesity Diagnosis: Uniquely, the Inbody 720 can determine where excess fat is deposited, using its impedance index to provide a scientific estimate of the waist to hip ratio (which is a difficult and awkward measurement to obtain). A desirable waist to hip ratio is less for women (0.75-0.85) than for men (0.8-0.9). This is a powerful indicator of insulin resistance which is treated with exercise, weight loss and the drug metformin.