

Medical Clinic Stratford

Medical Clinic Stratford - Bioimpedance Analysis or also known as BIA is a really simple and noninvasive method used to determine body composition. The accuracy of a BIA device is dependent upon various factors like for example the particular choice of device and on the number of frequencies at which measurements are taken.

BIA was initially utilized over thirty years ago to be able to measure the total water content of an individual's body. This particular technique is actually made by passing a very minimal level electrical current through an individual's body. The impedance to the flow of this current is then determined.

BIA is based on two key ideas. Firstly, the fact which the body contains water as well as conducts electrolytes. Water is found inside the cells in a person's body, inside intracellular fluid or also known as ICF as well as outside the cells inside the extracellular fluid or otherwise known as ECF. At high frequencies the current goes through both the ECF and ICF while at low-level frequency, when a current goes through the ECF space it does not enter the cell membrane.

Secondly, the impedance of a geometrical system is related to conductor length, its signal frequency and cross sectional area. Utilizing these concepts, a value for impedance could be measured from a fixed level current being passed through an individual's body. This current is inversely proportional to the quantity of fluid. Total fluid determinations could actually be made specific for extracellular fluid by appropriate choice of signal frequency.