

Medical Clinic Brandon

Medical Clinic Brandon - BIA or also known as Bioimpedance Analysis is a straightforward non invasive method used to be able to help calculate body composition. BIA device accuracy will depend on different factors such as the frequency at which measurements are taken and the kind of machine used.

BIA was at first used about 30 years ago to be able to calculate the total water content of a person's body. This method is actually performed by passing an extremely low level electrical current through an individual's body. The impedance to the flow of this current is then calculated.

BIA is primarily based on 2 key ideas. First, the reality which an individual's body has water and conducts electrolytes. Water is found within the cells inside an individual's body, within 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 passes through both the ECF and ICF whereas at low-level frequency, when a current goes through the ECF space it does not enter the cell membrane.

Second of all, 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 can be measured from a fixed level current going through the body. This flow is inversely proportional to the amount of fluid. Total fluid determinations can be made specific for extracellular fluid by appropriate choice of signal frequency.