

Medical Clinic Kitchener

Medical Clinic Kitchener - Bioimpedance Analysis or BIA is a simple and noninvasive method used so as to determine the body's composition. The accurateness of a BIA machine is dependent upon different things like the kind of machine and on the number of frequencies at which measurements are taken.

At first utilized over 30 years ago, BIA devices measure the total water content of an individual's body. By way of passing an extremely minimal level electrical current through the body the impedance to the flow of the current can be measured.

BIA is based on two main concepts. First of all, the truth that an individual's body has water and conducts electrolytes. Water is found inside the cells within a person's body, within intracellular fluid or ICF as well as outside the cells within the extracellular fluid or otherwise known as ECF. At high-level frequencies the current passes through both the ICF and ECF whereas at low-level frequency, when a current goes through the ECF space it does not penetrate the cell membrane.

The next idea relates to the impedance of a geometrical system related to conductor length or its signal frequency over a cross sectional area. Putting all of the ideas together, a fixed value for the impedance can be measured from a fixed current going through a person's 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.