

Medical Clinic Charlottetown

Medical Clinic Charlottetown - BIA or also known as Bioimpedance Analysis is a simple non invasive method used to be able to help ascertain the body's composition. BIA device accurateness will really depend on various factors like for example the frequency at which measurements are taken and the particular kind of instrument used.

BIA was originally used over 30 years ago in order to determine the total water content of a person's body. This technique is actually made by way of passing an extremely minimal level electrical current through the body. The impedance to the flow of this current is then calculated.

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

The next concept 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 concepts together, a fixed value for the impedance can actually be calculated from a fixed current passing through an individual's body. This flow 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.