

## Medical Clinic Winnipeg

Medical Clinic Winnipeg - BIA or Bioimpedance Analysis is a really simple non invasive technique used in order to help determine the body's composition. BIA machine accurateness would depend on various things like the frequency at which measurements are taken and the choice of machine utilized.

BIA was at first used over thirty years ago in order to calculate the total water content of an individual's body. This method is actually performed by passing a very low strength electrical current through an individual's body. The impedance to the flow of this current is then calculated.

There are actually 2 major ideas which BIA is primarily based upon. First, the body has water and conducts electrolytes. Water could be found within the bodies cells, within the ICF or intracellular fluid in addition to outside of the cells in the ECF or otherwise known as extracellular fluid. At high frequencies the current goes through both the ECF and ICF while at low-level frequency, when a current passes 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 the ideas together, a fixed value for the impedance could be calculated from a fixed current passing through the body. This current is inversely proportional to the quantity of fluid. Total fluid determinations could be made specific for extracellular fluid by appropriate choice of signal frequency.