

Medical Clinic Saskatoon

Medical Clinic Saskatoon - Bioimpedance Analysis or BIA is a straightforward and noninvasive technique used so as to determine the body's composition. The accuracy of a BIA device depends on various factors such as the particular type of device and on the number of frequencies at which measurements are taken.

BIA was originally utilized about thirty years ago in order to determine the total water content of an individual's body. This technique is actually made by way of passing an extremely low level electrical current through an individual's body. The impedance to the flow of this current is then measured.

There are two major concepts which BIA is primarily based upon. First, an individual's body contains water and conducts electrolytes. Water could be found inside the bodies cells, within the ICF or also known as intracellular fluid in addition to outside of the cells inside the ECF or otherwise known as extracellular fluid. At high-level frequencies the current goes through both the ICF and ECF whereas at low frequency, when a current passes through the ECF space it does not enter the cell membrane.

Secondly, the impedance of a geometrical system is related to conductor length, its cross sectional area and signal frequency. Making use of these ideas, a value for impedance could actually be measured from a fixed level current going through a person's body. This flow is inversely proportional to the amount of fluid. Total fluid determinations could be made specific for extracellular fluid by appropriate choice of signal frequency.