

PG 1 - Multifrequency bioelectrical impedance analysis in normal and hypertensive pregnancy^{1,2}

OBJECTIVE: The aim of the present study was to assess longitudinal changes in body water compartments in pregnant women and to correlate these measurements with the course of pregnancy.

DESIGN: An increase in total body water is common in normal pregnancy. It is thought to be an important mechanism of maternal adaptation to pregnancy.

SUBJECTS / METHODS: One hundred seventy-three pregnant women with apparently normal, single pregnancies participated in this longitudinal study. Anthropometric measurements and multifrequency bioelectrical impedance were performed during the first, second, and third trimesters of pregnancy.

RESULTS: One hundred three of the women completed all of the measurements; 50 of the women had a normal pregnancy and 13 had gestational hypertension. Total body water, extracellular water, and intracellular water values in normal pregnancies showed a significant, progressive increase throughout pregnancy. In women with gestational hypertension, total body water, extracellular water, and intracellular water values showed an opposite trend, suggesting a lack of plasma volume expansion through fluid-retention mechanisms.

CONCLUSION: Our results show that multifrequency bioelectrical impedance analysis can be used to monitor variations in body water compartments in normal pregnancy and detect gestational hypertension.

PUBLISHED: *Am J Clin Nutr* 2000;72:780-3.

ORGANISATION: ¹From the Department of Obstetrics and Gynecology and the Human Nutrition Unit, University of Tor Vergata, Rome. ²Address reprint requests to A De Lorenzo, Human Nutrition Unit, University Tor Vergata, Via di Tor Vergata, 135 00133, Rome, Italy. E-mail: delorenzo@uniroma2.it.

RESEARCHES: Herbert Valensise, Angela Andreoli, Stefano Lello, Francesca Magnani, Carlo Romanini, and Antonino De Lorenzo

