

Maternal body composition near term and birth weight

Mardones-Santander, Francisco

Salazar, Gabriela

Rosso, Pedro

Villarroel, Luis

Objective: To assess the relative influence of maternal body composition at late gestation on birth weight. **Methods:** Maternal body composition was estimated in 224 women near term using a deuterium dilution technique. Using a stepwise multiple linear regression analysis, we studied the association with birth weight of eight factors, including maternal fat-free mass and fat mass. **Results:** Maternal fat-free-mass was the most important variable influencing birth weight ($R^2 = .144$, $P < .001$), followed by maternal fat mass ($R^2 = .051$, $P < .001$). Gestational age at delivery was the third strongest influence on birth weight ($R^2 = .047$, $P < .001$). **Conclusion:** In late pregnancy, fat-free mass was the most important maternal body component associated with birth weight. The implementation of longitudinal studies could shed more light on the influence of maternal body composition on birth weight.