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Fat trajectory after birth in very preterm infants mimics healthy term infants

Background: Infants born very preterm experience poor postnatal growth relative to intrauterine growth, but at term equivalent age, they have increased percentage body fat compared with infants born at term.

Aim: The aim of this study was to assess body composition in very preterm infants born before 32 weeks postmenstrual age and to compare this with infants born at 32-36 weeks of gestation.

Materials & Methods: Percentage fat, fat mass and fat-free mass were measured in 87 very preterm infants born <32 weeks of gestation and studied at 32-36 weeks and in 88 control infants born at 32-36 weeks of gestation and measured on days 2-5 postnatally.

Results: At 32-36 weeks, very preterm infants were lighter and shorter, had significantly greater percentage fat and absolute fat mass and had a significantly lower absolute fat-free mass than the control group. The trajectory in percentage fat over increasing postnatal age in very preterm infants was closely aligned to that in term infants.

Conclusions: Infants born very preterm accumulate fat rapidly after birth and have a deficit in fat-free mass. Fat accumulation may be triggered by birth or associated events. If this rapid fat accretion is not taken into account, assessment of growth based on weight alone will underestimate the deficit in fat-free mass.

Biography

Nada Al Theyab has completed her PhD in School of Medicine and specialized in Public Health at the University of Queensland in Australia. She was awarded at the 24th Royal Brisbane Women Hospital Symposium for her innovation in predicting body fat in infants from anthropometric measurements. She is interested in perinatal research along with women's health.

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