

Nutrition type affects endocrinology in SGA infants

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Small-for-gestational-age (SGA) infants who are formula-fed have elevated endocrine levels of high-molecular-weight adiponectin and insulin growth factor-I compared with breastfed SGA infants, according to research published in the August issue of *Diabetes*.

(HealthDay) -- Small-for-gestational-age (SGA) infants who are formula-fed (FOF) have elevated endocrine levels of high-molecular-weight (HMW) adiponectin and insulin growth factor-I (IGF-I) compared with breastfed (BRF) SGA infants, according to research published in the August issue of *Diabetes*.

Francis de Zegher, M.D., of the University of Leuven in Belgium, and colleagues conducted a study comparing 72 control infants born appropriate-for-gestational-age with 46 BRF and 56 FOF infants who had been born SGA. FOF infants received either standard formula or [protein](#)-rich formula. At birth and at 4 months of age, [body composition](#) and HMW adiponectin and IGF-I levels were measured.

In the first four months, the researchers found that the SGA infants catch-up growth was primarily confined to lean mass, regardless of whether the infant was BRF or received formula. SGA-BRF infants had normal HMW adiponectin and IGF-I levels compared with BRF infants born appropriate-for-gestational-age. In contrast, SGA-FOF infants had increased HMW [adiponectin](#) (particularly after receiving standard formula) and increased levels of IGF-I (particularly after receiving protein-rich formula).

"In conclusion, neonatal nutrition seems to influence endocrinology more readily than body composition of SGA infants," the authors write. "Follow-up will disclose whether the endocrine abnormalities in SGA-FOF infants can serve as early markers of an unfavorable metabolic course and whether they may contribute to design early interventions that prevent subsequent disease, including [diabetes](#)."

More information: [Abstract](#)
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