

Changes in Nocturnal Leptin and Insulin Concentrations in Prepubertal Low Birth Weight Children after Administration of the IGF-I/IGFBP-3 Complex

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Background: There is limited information regarding the effects of IGF-I and/or IGFBP-3 on circulating leptin concentrations. **Aim:** To determine the effects of IGF-I on leptin and insulin concentrations, we examined leptin and insulin nocturnal profiles before and after the administration of the IGF-I/IGFBP-3 complex (Iplex?) to prepubertal, low birth weight children. **Methods:** We studied 20 prepubertal children (11 boys and 9 girls), born after a full-term pregnancy with a mean birth weight below 2.8 kg. They were studied at the mean age of 7.3 ± 0.5 years (range 4-11 years). Their mean height was -1.8 ± 0.3 SDS and their mean BMI was 0.1 ± 0.2 SDS at the time of the study. The children were studied on 2 separate occasions, the first under basal conditions, and the second time after s.c. administration of 1 mg/kg of Iplex? at 21.00 h. Blood samples for determination of leptin and insulin were obtained every 60 min between 23.00 h and 07.00 h, while the children were sleeping. In each pati