

IGF-I and growth in early childhood in VLBW infants versus term born infants

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Background:

- growth restriction in early childhood is common in VLBW infants
- IGF-I regulates growth

Objective:

- to compare IGF-I and growth in early childhood in VLBW infants to term born AGA infants

Study design:

- 41 VLBW infants participating in NIRTURE (GA 27.9 ± 1.3 wks, BW 1059 ± 231 g)
- 64 term born AGA infants (GA 39.3 ± 1.2 wks, BW 3529 ± 393 g)
- anthropometry at 0, 3, 6, 12 and 24 months (corrected) age
- IGF-I in serum at 6 and 24 months (VLBW)/ 3, 12 and 24 months (term)

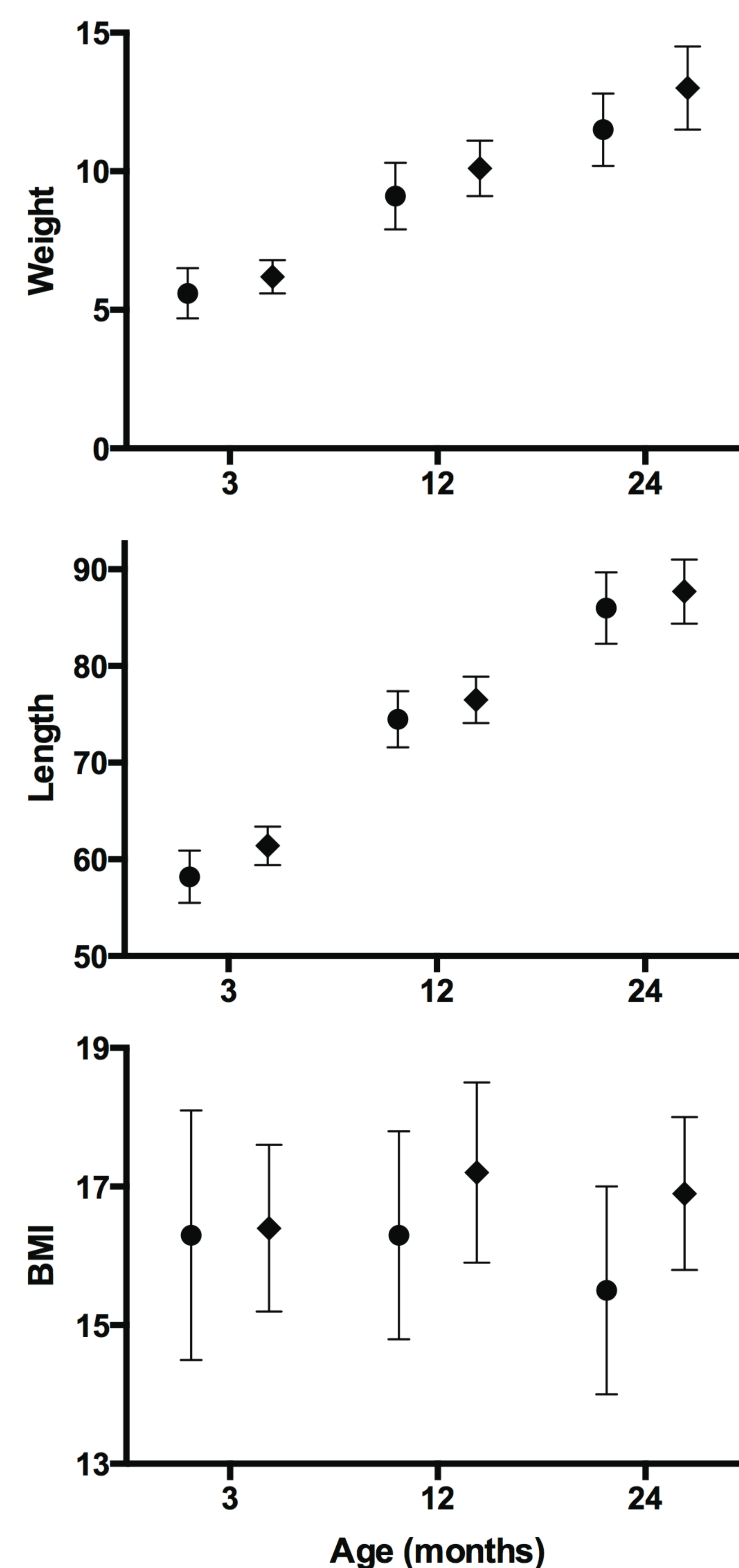
Results:

- VLBW children are shorter until 1 year CA and lighter/thinner during the first 2 years
- in VLBW children IGF-I at 2 years CA is higher ($p=0.021$)
- IGF-I in VLBW and term children at all ages correlated to
 - growth parameters at the corresponding age
 - change in growth parameters in the preceding period

IGF-I (nmol/l) median (range)	VLBW (21M/20F)	Term (35M/29F)
3 months		7.7 (3.7-14.4)
6 months	10.2 (2.3-30.9)	
12 months		6.8 (2.0-19.0)
24 months	11.6 (3.5-26.8)	9.5 (4.2-21.0)

Conclusions:

- the role of IGF-I in early childhood is apparent from the relation to preceding growth
- higher IGF-I in VLBW children could indicate an important role in catch-up growth in length



Abbreviations: AGA appropriate for gestational age; BW birth weight; CA corrected age; GA gestational age; IGF-I insulin-like growth factor I; NIRTURE Neonatal Insulin Replacement Therapy in Europe; VLBW very-low-birth-weight

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