

Growth of children in Greenland exceeds the World Health Organization growth charts

Aim: Previous studies have found high rates of stunted linear growth in Greenlandic children. We measured growth patterns in Greenland and compared them with international growth charts.

Methods: The study cohort comprised 279 healthy children aged 6–10 years in 2012. They participated in two pregnancy and birth cohorts in Greenland and longitudinal growth data as birth was extracted from their medical records. Growth reference ranges were estimated with the lambda-mu-sigma (LMS) method and compared with growth charts from Denmark and the World Health Organization (WHO).

Results: The children's mean length, weight and head circumference were significantly larger than the WHO growth charts ($p < 0.001$). We found that 21–28% of the children aged zero to one years exceeded the WHO growth chart for length by more than two standard deviations. For weight and head circumference, 9–16% of the children aged 0–10 years and 9–11% of the children from zero to two years exceeded the WHO charts by more than two standard deviations. The Danish references were exceeded to a lesser degree.

Conclusion: This study showed that the growth of Greenlandic children up to 10 years was no longer stunted. Major determining factors suggested are genetic admixture, maternal overweight, changes in nutrition and improved health.

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