NEO CAPSULE

GROWTH CHARTS

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Abstract: *Growth monitoring in preterm infants is crucial to neonatal care, guiding nutritional decisions and predicting long-term health. Traditional growth references, such as the Fenton charts, reflect observed populations but are limited by methodological variability. Prescriptive standards, particularly the INTERGROWTH-21st project, provide an international standard for optimal growth. The newborn size at birth standard is used for comparing weight, length and head circumference at birth, while the preterm postnatal growth standards are used for monitoring the postnatal growth trajectories of preterm infants up to six months corrected age. Recent advances emphasize the use of z-score changes and individualized growth trajectories rather than cross-sectional percentiles to identify extrauterine growth restriction (EUGR). Preferably incorporating proportional indices and body composition measures offer a more complete assessment of growth rather than taking weight alone into consideration.*

Keywords: *Growth references, Prescriptive standards, INTERGROWTH 21st project, Optimal growth.*

Points to Remember

- ***Reference vs Standard growth charts - References describe observed growth in specific populations; standards prescribe how infants should grow under optimal conditions.***
- ***Size at birth vs postnatal growth - Size at birth charts classify infants at delivery, while postnatal growth charts track growth trajectories; they should not be used interchangeably.***
- ***Identifying extra-uterine growth restriction should be based on longitudinal monitoring using z-score rather than one-time assessment at discharge based on weight falling below 10th centile.***
- ***Preterm infants have a period of postnatal adaptation and growth at a trajectory that is-0.8 SD below fetal growth. Sicker preterm infants with postnatal morbidities have greater deviation from this trajectory. (Delta z score, growth velocity and weight gain ratio have to be included).***
- ***INTERGROWTH-21st standards are the first prescriptive postnatal growth standards for preterm infants, endorsed by WHO and CDC. These curves merge with WHO growth standards at 6 months corrected age.***
- ***Beyond weight indicators - Comprehensive growth monitoring should include length, head circumference, proportional indices (BMI, ponderal index, MUAC/HC ratio) and body composition measures for a complete(fuller) picture of growth and nutrition.***

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