

Growth Assessment in Children

Useful Resources and also quick rules of thumb to quickly assess growth if the red book is not available

Growth Charts

<http://www.rcpch.ac.uk/child-health/research-projects/uk-who-growth-charts/uk-growth-chart-resources-2-18-years/uk-2-18-yea>

Height

Mid childhood age 3 to 10 - approx. 6-7 cm per year

Prepuberty Nadir - approx. 5cm per year

Weight Rule of thumb (Age +4) x2 i.e approx. 2kg weight gain per year

4 stages of growth

Stage	Main Driver	Key Area to Assess
Intrauterine	Complex	Correction on growth chart
Infancy	Nutrition	Assess Calorie intake
Childhood	Growth hormone	Check growth velocity
Adolescence	Sex Steroids	Tanner Staging of puberty

Poor Nutrition can affect growth at any time as nutrition also stimulates IGF-1

Formula Fed infants requirements- 150ml/kg/day

BMI - Use centile charts

If the BMI is in the adult normal range- likely to be overweight as BMI gradually increases through childhood

Overweight or obese- use Childrens weight Management Pathway

Mid Parental Height- (available in the margin on the growth chart or can be calculated)

- In a boy: Mid-parental height (cm) = (Father's height + (Mother's height + 13)) divided by 2.
- In a girl: Mid-parental height (cm) = ((Father's height - 13) + Mother's height) divided by 2.

Refer if projected height varies from mid-parental height by more than 5 cm

Puberty (Tanner Staging) - it is abnormal not to be in puberty by age of 14

Breast Enlargement usual first sign of puberty- Menarche comes 2-3 years later

Testicular Enlargement usual first sign of puberty in boys

<http://patient.info/doctor/normal-and-abnormal-puberty> - Normal puberty and Tanner Staging

<http://www.aafp.org/afp/1999/0701/p209.html> - Disorders of Puberty