



WHO Growth Chart Assessment and Counselling – Key Messages and Actions



Measure length/height, weight and head circumference as per local/provincial protocols.

Plot on WHO growth chart as per local/provincial protocols.

Review ALL plotted growth measurements on client's record. If growth is outside of expected parameters or an unexpected shift in growth has occurred, check age calculation, measurements and plotting, and if necessary, re-measure and re-plot.

Growth measurements at or above the 3rd to at or below the 97th percentile (0-5 years), and at or below the 85 th percentile (5-19 years) inclusive (97 th for head circumference) and consistent with previous percentiles	Head circumference-for-age (0-2 years) below 3rd percentile and growing slowly or Above 97th percentile and growing rapidly	Shift in percentile (any sharp changes) and / or growth line is flat	Below 3rd percentile		Above 97th percentile	Above 85th percentile
			0 - 2 years Weight-for-age Length-for-age Weight-for-Length	2 – 19 years BMI-for-age Height-for-age	0 – 5 years 0-2 years Weight-for-length 2-5 years BMI-for-age	5 – 19 years BMI-for-age

Key Message for Families

“Growth pattern appears normal. Child’s own pattern may change.”	“Head circumference is ‘small’ or ‘large’.”	“Growth pattern may be changing.”	“Weight may be low.” “Length/height may be low.”	“Weight may be ahead of length/height.”
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Examine all measures of growth collectively.
 Review standard discussion points with families. (See reverse)
 May recommend a referral and follow-up visit to track growth sooner than next scheduled appointment.
 Discuss relevant community programs.

Reinforce the positives!	This MAY be a normal growth pattern for this child’s genetic potential, however these indicators signal a need for additional assessment and additional monitoring. Arrange for follow-up and a referral to other health professionals for more detailed assessment and counselling - dietitian, family physician, lactation consultant or pediatric specialist (informed consent may be required).
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CORE GROWTH MESSAGES	COUNSELLING: STANDARD DISCUSSION POINTS	
	0-2 years	2-19 years
Measurements are health SCREENING tools: <ul style="list-style-type: none"> • Growth is one of the signs of GENERAL HEALTH. • Growth patterns are assessed for the INDIVIDUAL. • Growth may reflect FAMILY growth patterns. • Growth patterns are not diagnostic. Referrals are needed for child sizes outside of the 3rd to 97th percentiles (3rd to 85th for weight status for children/adolescents older than 5 years) to rule out medical conditions and/or lifestyle factors or normality due to genetics. It is normal for about 6% of children under 5 and 20% of children older than 5 years to have sizes outside of these categories. • Growth pattern OVER TIME is more important than one single measurement. 	<ul style="list-style-type: none"> • BREASTFEEDING pattern and technique • Formula feeding – pattern; technique; preparation • Age-appropriate milk, beverages and introduction to solid foods 	<ul style="list-style-type: none"> • Canada’s Food Guide • Intake of foods high in fat, sugar or salt • Body image issues • Disordered eating pattern
	<ul style="list-style-type: none"> • Child’s overall health • Presence or recent history of acute illness • Presence of chronic illness or special health care needs • Stress or change in child’s life • Family growth patterns • Family meal patterns • Sleep pattern 	<ul style="list-style-type: none"> • Family feeding relationship • Family physical activity routines • Food and activity routines in child care or school • Screen time • Amount of juices and/or sweetened beverages • Food security concerns: availability and access to healthy foods

Recommended Cut-Off Criteria Using the WHO Growth Charts

Cut-off points are intended to provide guidance for further assessment, referral or intervention. They should not be used as diagnostic criteria. It is likely best not to identify a growth concern using the words under the heading of this name in the following table with children/teens or their parents, since it is easily determined if this size is genetically normal for this child. Using these words can be harmful (Hunger 2014).

Growth Indicator	0 – 2 years	2 – 5 years	5 - 19 years	Growth Concern
Weight-for-age	< 3rd	< 3rd	< 3rd	Possibly underweight
Height/Length-for-age	< 3rd	< 3rd	< 3rd	Possibly stunted
Weight-for-length	< 3rd			Possibly wasted
Weight-for-length	> 97th			Possibly overweight
Weight-for-length	> 99.9th			Possibly obese
BMI-for-age		< 3rd	< 3rd	Possibly wasted
BMI-for-age		> 97th	> 85th	Possibly overweight
BMI-for-age		> 99.9th	> 97th	Possibly obese
BMI-for-age			> 99.9th	Possibly severely obese
Head Circumference	< 3rd or > 97th			Expected among 6% of children

Resources available at www.whogrowthcharts.ca

- A Health Professional’s Guide to the WHO Growth Charts
- 2014 WHO Growth Charts Adapted for Canada
- BMI Tables and Calculator
- Self-Instructional Training Program on the WHO Growth Charts Adapted for Canada
- Is My Child Growing Well? Questions and Answers for Parents

Other Resources

- Hunger JM, Tomiyama J. Weight labeling and obesity: longitudinal study of girls aged 10 to 19 years. *JAMA Pediatr.* 2014;168(6):579–80.
- Nutrition for Healthy Term Infants: Recommendations from Birth to 24 months <https://www.canada.ca/en/health-canada/services/canada-food-guide/resources/infant-feeding.html>
- Find a Dietitian www.dietitians.ca/find
- Healthy eating/active living resources available at <https://www.unlockfood.ca/en/default.aspx> and from Health Canada and provincial government websites and local public health centres.