



الكلية : الطب

القسم او الفرع : طب الاسرة والمجتمع

المرحلة: الرابعة

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اسم المادة باللغة العربية : صحة الطفل

اسم المادة باللغة الإنكليزية: **Child Health**

اسم المحاضرة الأولى باللغة العربية: مراقبة نمو الطفل

اسم المحاضرة الأولى باللغة الإنكليزية: **Child Growth Monitoring**

Child Growth Monitoring

- Normal growth is the progression of changes in height, weight, and head circumference that are compatible with established standards for a given population.

Growth and Development

- Growth refers to increase in the physical size of the body and Development refers to increase in skills and functions.
- Both are considered together. because a child grows and develops as a whole.
- Include not only physical aspect but also intellectual, emotional and social aspects.
- Take place only in the presence of optimal nutrition, freedom from recurrent infections, freedom from adverse genetic and environmental influences.

Importance of Growth Monitoring

- Early Detection: Identifies deviations from normal growth early.
- Prevention: Helps prevent malnutrition-related complications.
- Parental Awareness: Educates caregivers on child nutrition and care needs.
- Public Health Impact: Aids in reducing malnutrition prevalence, especially in developing countries.

Methods of Growth Monitoring

1. Weight-for-Age

Average birth weight: 3.25 kg +/-0.5 at birth

Neonates may lose 5%-10% of birth weight in the first few days of life and regain their birth weight by (10 - 14 days)

Infants gain approximately:

30 g/day	<input type="checkbox"/>	0 - 3 months
20 g/day	<input type="checkbox"/>	3 - 6 months
10 g/day	<input type="checkbox"/>	6 - 12 months

((Infants “double” their birth weight by 6 months of age and “triple” their birth weight by 1 year))

- Reflects changes in nutritional or health status.
- Tracks changes in weight, suitable in infancy.
- Procedure:
 - Weight should be measured monthly, ideally during routine immunization visits (e.g., in Iraq).
 - Use birth weight as the first reading.
 - Plot weight on WHO growth charts according to age and gender.
 - Connect points to form the growth curve.
- Interpretation of the Growth Curve:
 - Upward Curve → Normal weight gain.
 - Flat Curve → No weight gain; potential concern.
 - Downward Curve → Weight loss; requires immediate action.

2. Height (Length)-for-Age

The average length at birth for a term infant is (50cm)+/-2cm

Use term of height after 2 years.

Infants grow (25 cm) 50% 1st year of life(75cm) Toddlers grow (10 cm)
(1st - 2nd year) ~88cm

3 years: 96 cm

((Children “double” their length by 4 years of age))

Estimated weight after first year is: AGE (YR) X 2 +8

Estimated height after first year is: $\text{Age (years)} \times 6 + 77$

- Definition: Indicator of stunting – reflects chronic malnutrition.
- Procedure:
 - For children <2 years: Measure length lying down.
 - For children ≥ 2 years: Measure height standing, without footwear.
- Tools: Stadiometer or wall-mounted measuring scale.
- Interpretation:
 - Low height for age = stunted (dwarfing).
 - Height is less influenced by recent illness and better reflects long-term nutritional status, so it detects stunting (chronic malnutrition).

3. Head Circumference

The average at birth is (35 cm) \pm 1.5cm- .at 1yr: 47 cm- .at 2yr: 49cm

1st 3months -----2cm/mo. 4 -6 months-----1cm/mo

It reflects brain growth; important in infancy (up to 36 months).

4. Weight-for-Height

- Definition: Reflects acute malnutrition (wasting).
- Interpretation:
 - Low weight for height = wasting (emaciation).
 - $<70\%$ of expected weight for height = severe wasting.
- Significance:
 - Good indicator of current nutritional status (acute malnutrition).
 - Can detect both underweight and overweight children.

Other Growth Indicators

Indicator	Use
BMI-for-Age	Used for school-age children and adolescents to classify underweight/overweight.
Skinfold Thickness	Measures subcutaneous fat, indicating body fat content. Sites: biceps,

Indicator

triceps.

Use

Uses of Growth Chart

1. For growth monitoring which is of great value in child health care
2. Diagnostic tool: for identifying “high risk” children .
3. Planning and policy making: by grading malnutrition, it provides an objective basis for planning and policy making in relation to child health care .
4. Educational tool: for mothers .
5. Tool for action: helps health worker on the type of intervention needed
6. Evaluation: of the effectiveness of corrective measures and the impact of the program or of special intervention
7. Tool for teaching

V. The Iceberg Phenomenon of Malnutrition

- Visible tip: Only 1–2% of children show clinical signs (marasmus, kwashiorkor).
- Invisible base: Majority of malnourished children are not clinically obvious.
- Global Impact: ~190 million under-5 children are malnourished worldwide, although majority of cases are mild; most of them are mis- diagnosed until it developed into moderate ;which seems more prevalent than mild cases, .
- Solution: Early detection and caregiver education can prevent over 50% of malnutrition, even with existing family resources.