الكلية : الطب

القسم او الفرع :طب الاطفال وحديثي الولادة

المرحلة: الخامسة

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اسم المادة باللغة العربية : طب الاطفال وحديثي الولادة

اسم المادة باللغة الإنكليزية : طب الاطفال وحديثي الولادة

اسم المحاضرة الأولى باللغة العربية: فشل النمو

اسم المحاضرة الأولى باللغة الإنكليزية: FAILURE TO THRIVE

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FAILURE TO THRIVE

is defined as **decelerated or arrested physical growth** (height and weight measurements fall below the third percentile, or a downward change in growth across two major growth percentiles within ashort period) .

It can be divided into organic & non-organic causes:-

Organic FTT; may include any chronic severe illness that affects any system of the body:

Renal : chronic renal failure .renal tubular acidosis .chronic UTI and Diabetes insipidus .

GIT : chronic diarrhea , celiac desease ,PYLORIC STENOSIS ,malabsorption ,cleft lip and palate .

Cardiopulmonary diseases ; heart failre ,CHD , cystic fibrosis ,severe asthma .

Endocrine: hypothyroidism , hyperthyroidism, DM, GH deficiency

CNS ; cp , degenerative brain disease .

Metabolic; inborn error of metabolism

Congenital conditions; chromosomal abn (turner syndrome), congenital infections .

Non-organic FTT ; include:-

- Inadequate diet because of poverty, or errors in food preparation .

- Parental cognitive or mental health problems.

- Child abuse or neglect, emotional deprivation.

• **Classification of FTT according to severity:-**

	Mild	Moderate	Severe
* Weight:	< 90%	< 75%	< 60%
*Height:	< 95%	< 90%	< 85%

(Note: This classification is depend on the percentage from the ideal body weight, height & wt/ht that are taken from appropriate growth charts (according to patient's age & sex) at the 50th percentile. Special growth charts are also available for patients with genetic syndromes e.g. Down & Turner; for premature infants, use either a special chart or the corrected age, for example; if a premature infant is delivered at 30 wk gestational age and the current postnatal age is 10 wk, then postconceptual age = 40 wk, this infant is cosidered in the same age as a fullterm newborn delivered at 40 wk. However, most VLBW infants will achieve weight catch-up with their peers during the 2nd yr and height by 2.5 yr of age.)

Approach to infant with FTT:-

→ **The hx** in any patient with FTT must include a detailed hx with observation of maternal-child interaction.

psychosocial stressors

inadequate caloric intake (obtain a detailed nutritional history.)

intercurrent acute or chronic illnesses .(Obtain a detailed medical history.)

→ **Physical examination** should include all systems of body that may affect growth.

Evaluation of the child's or infant's developmental status , hypotonia or hypertonia…. (CP)

Note signs of neglect or abuse e.g. diaper rash, unwashed skin, uncut and dirty fingernails, or unwashed clothing. A flattened occiput with hair loss may indicate that the infant has being unattended for prolonged periods.

dysmorphic features (cleft lip , palate)

cardiac murmurs…

hepatosplenomegaly ,lymphadenopathy

muscle wasting and the other signs of malnutrition may indicate malabsorption .

→ Measure periodically all **growth parameters** including; weight, length(or height if>2 years) & (weight/height) ratio to measure the degree of FTT. In malnutrition, weight is the 1st to be affected, followed by height, whereas head circumference is lastly affected when malnutrition is seriously affect brain growth.

- → **Inv**. CBP . GUE .GSE , renal and liver function tests & S.Electrolytes **are good initial tests**. Other tests should be relevant to the findings in hx or exam .

Rx. Indications of hospitalization for patients with FTT include:-

For further investigations,

#severe malnutrition.

failure of home management & to evaluate the parent-child feeding interaction (especially when psychosocial FTT is suspected).

Organic causes of FTT should be treated according to the etiology of the organic illness a long with good nutrition.

Inorganic (Psychosocial) FTT should initially be treated at hospital by giving age-appropriate diet. If the infant start to gain weight, this is mostly due to Inorganic FTT. However, children with severe malnutrition must be re-fed carefully to avoid re-feeding syndrome .

Goals of Rx are to obtain catch-up growth by gaining at least 30 g/day from the 1st wk & also to educate the mother about appropriate food. These children should also be given multivitamins as they usually have deficiency of iron, zinc, & vit D.

there are different types of growth charts based on their methodology, population, and age range, etc for example:

2 to 20 years: Girls
Stature-for-age and Weight-for-age percentiles

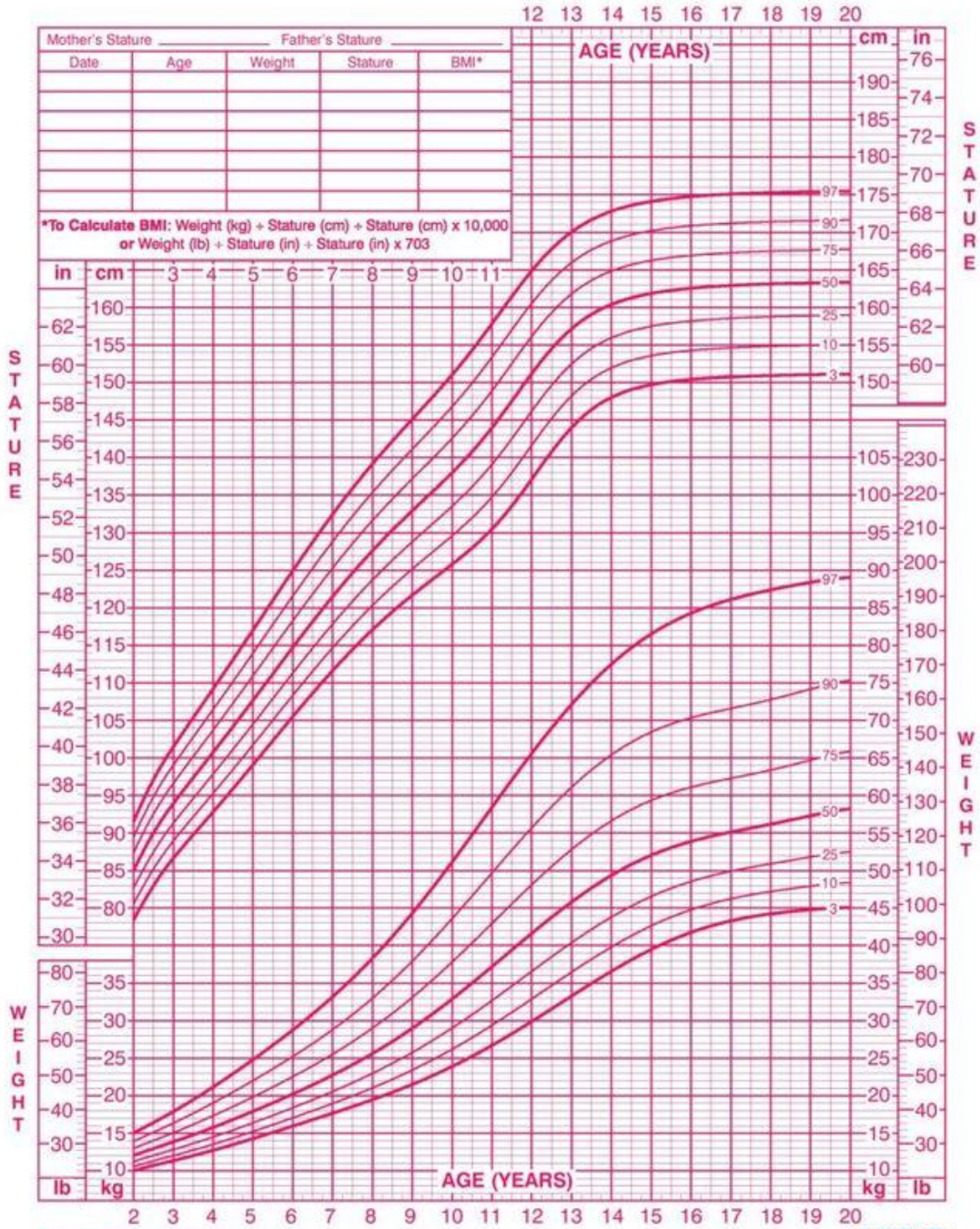
NAME _____

RECORD # _____

Mother's Stature _____ Father's Stature _____

Date	Age	Weight	Stature	BMI*

***To Calculate BMI:** Weight (kg) ÷ Stature (cm) ÷ Stature (cm) x 10,000
or Weight (lb) ÷ Stature (in) ÷ Stature (in) x 703



Published May 30, 2000 (modified 11/21/00).
SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).
http://www.cdc.gov/growthcharts

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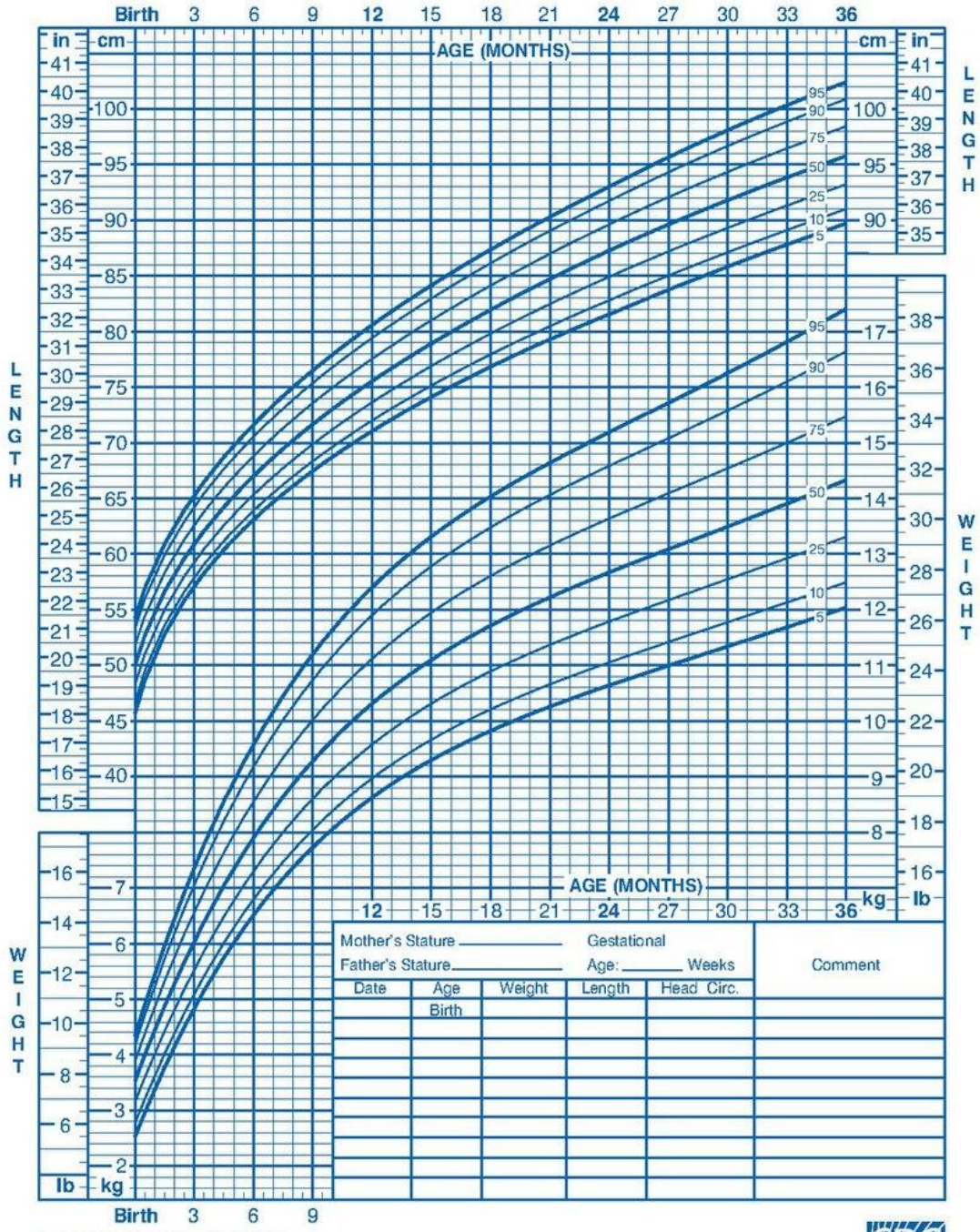
Birth to 36 months: Boys
Length-for-age and Weight-for-age percentiles

NAME _____

RECORD # _____



Mother's Stature _____			Gestational Age: _____ Weeks		Comment
Father's Stature _____					
Date	Age	Weight	Length	Head Circ.	
	Birth				

Published May 30, 2000 (modified 4/20/01).
SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).
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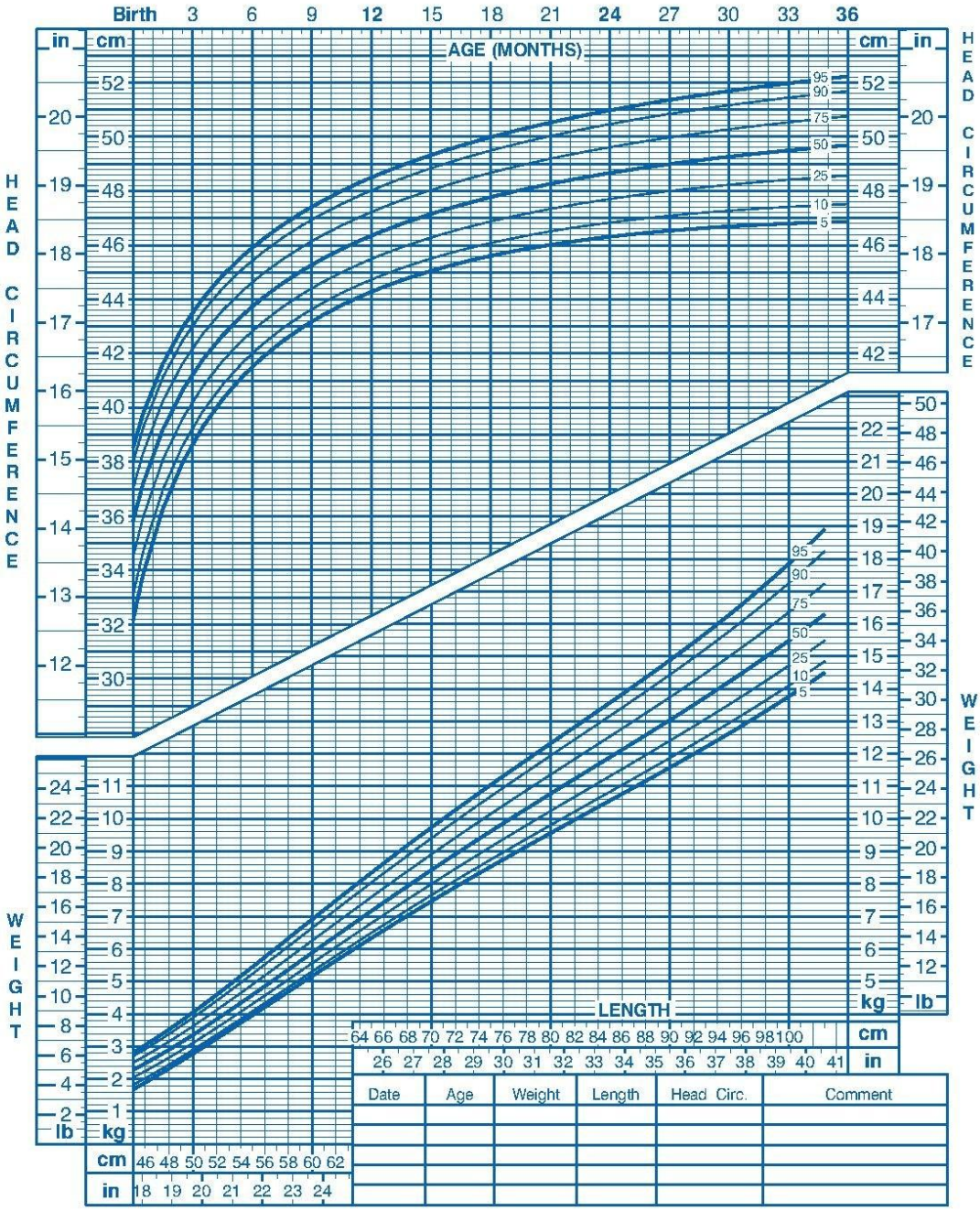
Birth to 36 months: Boys
Head circumference-for-age and Weight-for-length percentiles

NAME _____

RECORD # _____



Date	Age	Weight	Length	Head Circ.	Comment

Published May 30, 2000 (modified 10/16/00).
SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).
http://www.cdc.gov/growthcharts

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