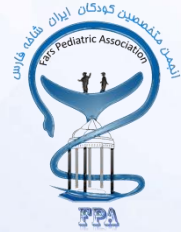




# Neonatal physical exam

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Fars Pediatric Association

**چهارمین کنگره دوسالانه**  
**استاد امیر حکیمی**  
The 4<sup>th</sup> Pediatric Congress  
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Logos of various medical and educational institutions.

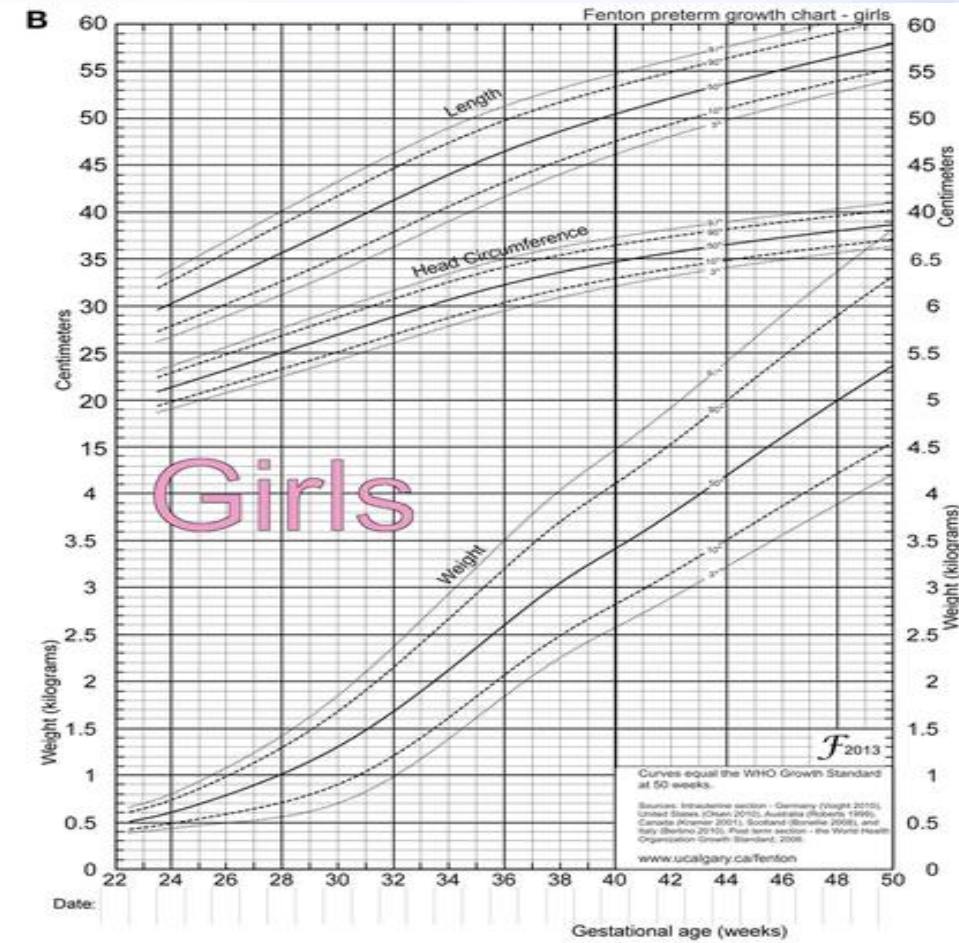
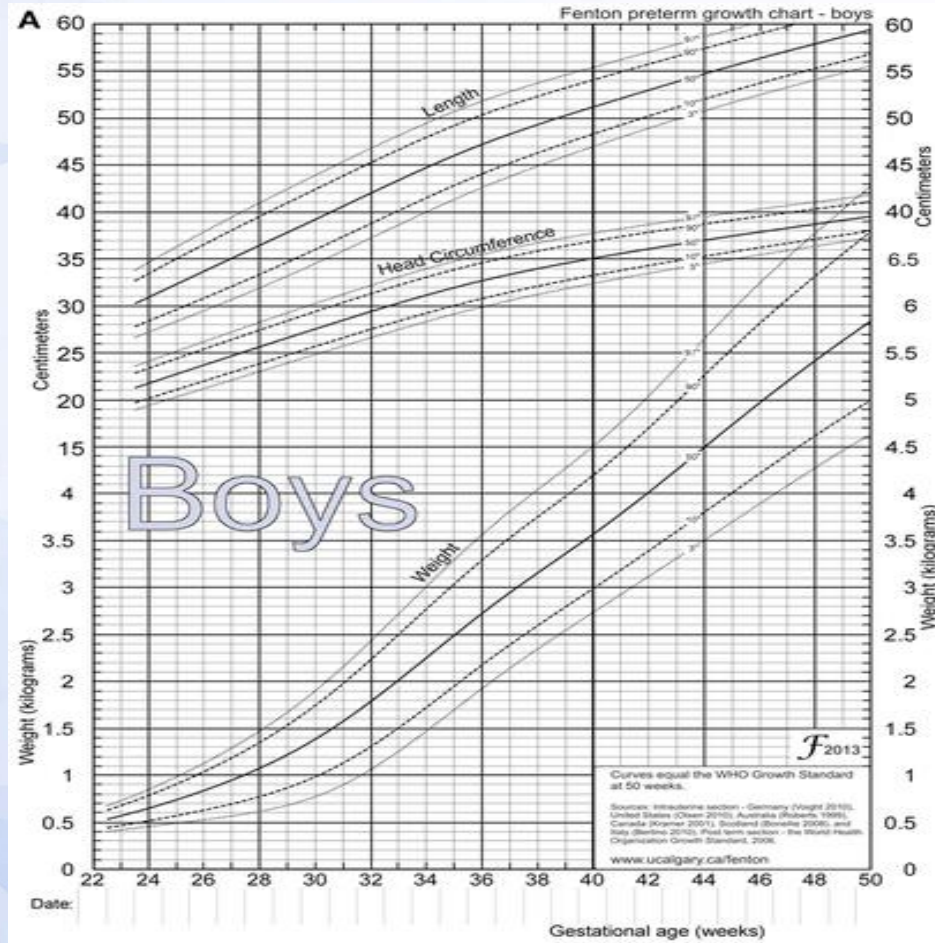
## Growth parameters:

- should be interpreted in the context of gestational age
- **gestation-specific growth charts**

**Olsen** birth weight charts

**Fenton** growth charts

# Fenton growth charts



## weight

- 10th to 90th percentile at 40 weeks' gestation

**2.8 - 4.2 kg**

female is **2.85 - 4.07** kg (mean, 3.45 kg)

Male is **2.9 - 4.23** kg (mean, 3.58 kg).

## head circumference

- can change markedly in the first few days because of **molding** of the head during delivery.
- The 10th to 90th percentile at 40 weeks' gestation is:  
**32.5 to 36.5 cm**  
32.6 to 36.2 cm for females  
32.8 to 36.8 cm for males



## infant's length

- upper segment / lower segment

a normal ratio is **1.7**

# Syndromes

- appearance of **face** is central to many syndromes,
- pronounced **hypotonia**,
- **flat occiput**,
- **short neck**,
- Bilateral **single transverse palmar creases**,
- a pronounced **sandal gap** (an abnormal spacing between the first two toes),

## Café au lait spots





## Café au lait spots are common

- **more than 3 lesions** or **one large lesion** may indicate an underlying disorder such as neurofibromatosis type 1 or McCune-Albright syndrome.
- A family history which includes:  
learning disabilities,  
attention-deficit disorder,  
seizures

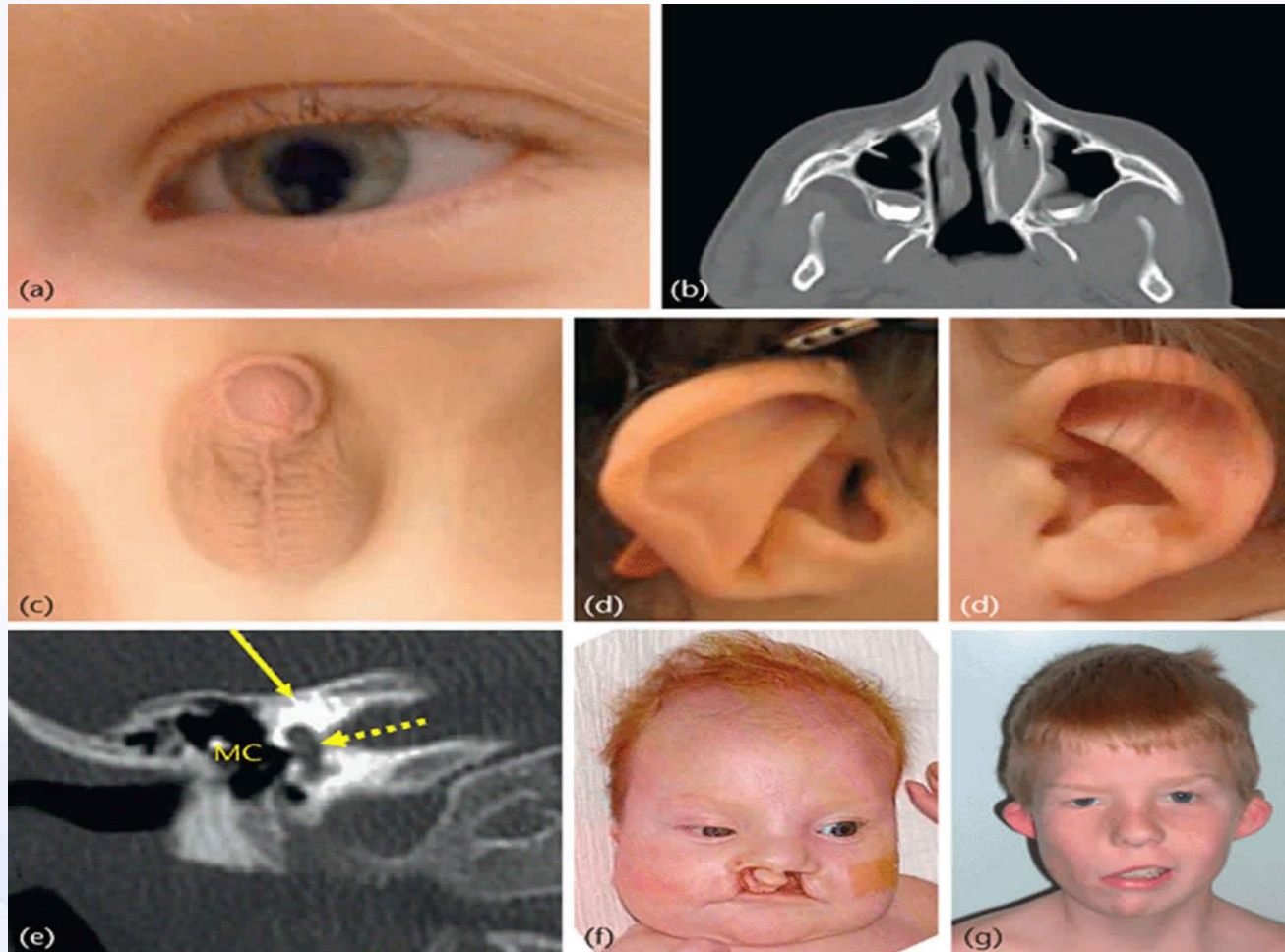
# strawberry nevus



# infantile hemangiomas (strawberry nevus)

- The most common benign tumors of infancy
- They are not usually apparent at birth, but they become visible from proliferation of blood vessels in the first few weeks of life,
- gradually **increase in size until 3 to 15 months** of age,
- then slowly regress as they involute.
  
- Lesions around the nares and beard distribution may indicate airway involvement,
- lesions near the tragus may raise concerns for involvement of the deeper structures of the ear.
- lesions on the midline spine should be investigated for involvement of the spinal canal.
- present at areas prone to mechanical irritation, painful breakdown may occur.
  
- If the concern is cosmetic, **topical propranolol** may be given to hasten their regression.
- If they cause airway compromise or gastrointestinal bleeding, they may require treatment with **oral propranolol, and/or laser therapy**.
  
- Diffuse liver hemangiomas can cause **profound hypothyroidism**,

# CHARGE syndrome



# CHARGE syndrome

- *coloboma,*
- *heart disease,*
- *atresia choanae,*
- **restriction of growth or development,**
- *genitourinary tract abnormality,*
- *ear anomalies.*

## Features of an **Innocent Murmur**

- • Soft (grade 1/6 or 2/6) murmur at left sternal edge
- • No audible clicks
- • No parasternal heave or pulsations
- • Normal pulses
- • Otherwise normal vital signs and clinical examination

## Features Suggesting a **Hemodynamically Significant Murmur**

- • Pansystolic
- • Loud ( $\geq$  grade 3/6)
- • Harsh quality
- • Best heard in the upper left sternal edge
- • Abnormal second heart sound
- • Femoral pulses difficult to feel
- • Other abnormality of vital signs or clinical examination

# Developmental dysplasia of the hip (DDH)

- The most common congenital hip abnormality
  - At birth, an involved hip is rarely dislocated; instead, it is **dislocatable**
- 1- **typical**, in a neurologically normal infant,
- 2- **teratologic**, in an infant with an underlying neuromuscular disorder, such as myelodysplasia, arthrogryposis multiplex congenita, or a complex of syndromes.  
(in utero and truly congenital in origin)
- genetic factors include a positive **family history** (20%) and generalized ligamentous laxity, an inherited trait. **Congenital muscular torticollis** and **metatarsus adductus** can be associated with DDH
  - physiologic factors include **female** predominance (ration of 9:1), maternal estrogen, and other hormones associated with pelvic relaxation during labor and delivery.
  - mechanical factors include primigravida status, **breech** presentation, and postnatal positioning.

# Ortolani maneuver / Barlow maneuver





# Limitation of hip abduction



- Allis or Galeazzi sign
- asymmetric thigh skin folds
- After 2 months of age, the Ortolani test usually becomes negative
- selective ultrasonography (6 wk old) is as effective as universal screening
- The **Pavlik harness** is approximately 95% successful for Barlow-positive hips and 80% successful for Ortolani-positive hips.
- If a spontaneous reduction does not occur, **closed reduction by surgery** will be necessary. The indications for an open reduction in the neonate up to the first 6 months of life are limited.