

Neonatal Examination



Pediatrics

Clinical Examination

Neonatal Examination

Characteristics of the healthy full term newborn

1. Clinical vital signs:

- **Pulse** : Normally 120 to 160 beats per minute
- **Respiratory rate.** Normally 40 to 60 breaths per minute

2. Body measurements:

- a. **Weight:** The average weight for term babies (born between 37 and 41 weeks gestation) is about 3kg. Newborn babies may lose as much as 10 percent of their birth weight. in the first few days.
- b. **Head circumference:** Normally it is about 35 cm
- c. **Length:** Normally it is about 50 cm

3. Skin:

- The skin may be covered by a white, greasy, easily removable material called **vernix caseosa**.
- **Mongolian spots** over the back are normal findings



Vernix caseosa

4. Head and Neck:

- **The fontanels** (size and tension) and sutures should be assessed.
- **Caput succedaneum** due to scalp edema that crosses the midline
- It should be distinguished from **Cephalhematoma** , which does not cross the midline and is caused by subperiosteal bleeding.
- Unusual facies suggests dysmorphic syndromes.



Mongolian spots

5. Chest:

- **Enlargements of the breasts** may be a **normal finding** due to hormonal withdrawing



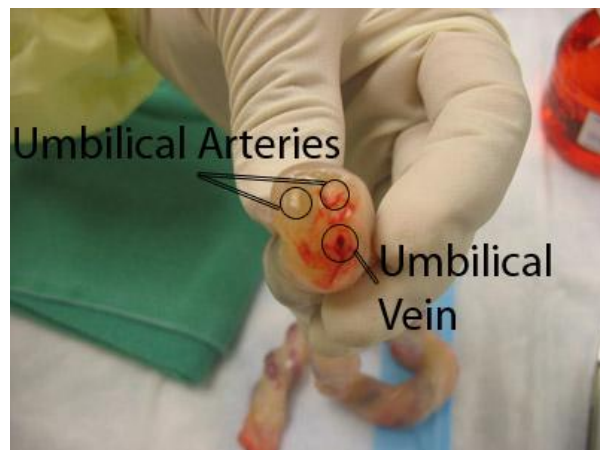
- The chest of the newborn normally is **barrel-shaped and smooth at birth**, and expands symmetrically.
- Occasional irregularities in respiratory rate with apnea up to 10 seconds can be normal.

6. Heart and blood vessels

- Maximal cardiac impulse is felt in the left fourth intercostal space . . .
- Murmurs are present in a large number of normal newborns, but the lack of a murmur does not eliminate a diagnosis of congenital heart disease.

7. Abdomen

- The liver's edge usually is felt 1 to 2 cm below the costal margin.
- The umbilical cord contains two arteries, which are small and thick-walled, and one vein, which is larger and thin-walled.
- Umbilical hernia is a common finding . . .



Umbilical cord

8. Genitalia

- The baby should urinate within 24 hours.
- Testes normally are in the scrotum of term infants.
- The newborn's penis is greater than 2cm in length. . .

- A mucoid vaginal discharge is present in nearly all mature female infants
- Mild scrotal hydrocele is a common normal finding.

9. Anal area

- Normal newborn should defecate within 24 hours.

10. Neurologic Examination

✓ **Moro's reflex:**

➤ ***Who to illicit:***

- The Moro reflex is obtained by placing the infant in a semi-upright position. The head is momentarily allowed to fall backward with immediate re-support by the examiner's hand. (Fig 72)
- The child will symmetrically abduct and extend the arms(shoulders & Elbows), fingers opening, followed by flexion and adduction of the arms(shoulders & Elbows)in an embrassement-like action.
- It can also be produced by loud noise or sudden motion.



➤ ***Timing:***

- It appears at birth & disappear by 4 month.
 - ***An asymmetric response (unilateral absence):***
- May signify a fractured clavicle, brachial plexus injury, or hemiparesis.
 - ***Bilateral Absence:***
- Suggests significant dysfunction of the CNS.
 - ***Persistent moro reflex beyond 4 month:***
- In cases of cortical brain damage.

✓ **Other neonatal (primitive) reflexes**

include:

- 1- Palmer and planter grasp reflex
- 2- The parachute reflex
- 3- Rooting reflex
- 4- Suckling reflex
- 5- Placing reflex
- 6- Stepping or walking reflex
- 7- Tonic neck reflex
- 8- Neck rightening reflex



Milia

11. Physiological phenomena of the newborn:

- Physiological weight loss loss (5-10 %)
- Overriding (moulding) of the bones of cranial vault
- Vernix caseosa.
- Acrocyanosis.
- Physiological jaundice
- Lanugo hair
- Mongolian spots
- Milia (plugged sweat glands of the nose)
- Erythema toxicum (vesicles on red base)
- Bluish sclera
- Divercation of recti
- Mucoid vaginal discharge, may be blood tinged (pseudomenses)
- Breast engorgement
- Periodic breathing
- Jitteriness



Erythema toxicum