

# Paediatrics

World of Revision

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# Contents

## Paediatrics

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<b>Neonatology : Part 1</b>	<b>1</b>
Normal newborn • Growth abnormalities & hypoglycemia • Gestational age • Normal parameters in newborn • Hypothermia • Normal observations in newborn • Head swellings in newborn • Neonatal reflex • Neonatal resuscitation	
<b>Neonatology : Part 2</b>	<b>9</b>
Fluid requirement and APGAR score • Birth asphyxia and HIE • Neonatal seizures • Neonatal sepsis • Ophthalmia neonatorum • Necrotizing enterocolitis (NEC) • Respiratory distress syndrome (RDS) • Transient tachypnea of newborn (TTNB) • Congenital diaphragmatic hernia (CDH)	
<b>Neonatology : Part 3</b>	<b>16</b>
Neonatal jaundice • Physiological jaundice • Pathological jaundice • Miscellaneous conditions	
<b>General Paediatrics : Growth</b>	<b>21</b>
Anthropometry • Growth charts • Puberty • Short stature • Tall stature • Microcephaly • Congenital hydrocephalus	
<b>Development</b>	<b>28</b>
Gross motor milestones • Fine motor milestones • Language milestones • Social milestones • Special milestones • Red flag signs and developmental delay • Nocturnal enuresis	
<b>General Paediatrics : Nutrition</b>	<b>33</b>
Breast feeding • Kwashiorkor & marasmus • Severe acute malnutrition (SAM) • Rickets • Miscellaneous deficiencies	
<b>Childhood Infections</b>	<b>41</b>
Measles • Hand, foot & mouth disease (HFMD) • Erythema infectiosum/5 <sup>th</sup> disease • Varicella/chicken pox • Diphtheria • Pertussis/whooping cough • COVID-19 in children • TORCH infections	
<b>General Paediatrics : Genetics</b>	<b>50</b>
Mendelian modes of inheritance • Mitochondrial inheritance • Down syndrome • Edward syndrome & patau syndrome • Klinefelter syndrome • Turner syndrome • DiGeorge syndrome	
<b>Metabolic Disorders</b>	<b>57</b>
Carbohydrate metabolism related disorders • Amino acid metabolism disorders • Lysosomal storage disorder (LSD) • Disorders of copper metabolism	

<b>Systemic Pediatrics : Cardiology</b>	<b>62</b>
Fetal circulation • Nada's criteria and congenital heart block • Acyanotic CHD • Cyanotic CHD • Acute rheumatic fever • Kawasaki disease • Pediatric resuscitation	
<b>Systemic Paediatrics : Pulmonology</b>	<b>69</b>
Respiratory infections • Foreign bodies in airway • Asthma • Cystic fibrosis (CF)	
<b>Systemic Paediatrics : Gastroenterology</b>	<b>74</b>
Esophageal disorders • Idiopathic hypertrophic pyloric stenosis (IHPS) • Hirschsprung disease • Celiac disease • Acute diarrhoea	
<b>Systemic Paediatrics : Neurology</b>	<b>80</b>
Neural tube defects (NTD) • Febrile seizure • Epilepsy syndromes • Meningitis • Cerebral palsy • Duchenne muscular dystrophy (DMD) • Miscellaneous conditions	
<b>Systemic Paediatrics : Nephrology</b>	<b>86</b>
Congenital abnormalities • UTI • Nephrotic syndrome • Glomerulonephritis • Hemolytic uremic syndrome • KDIGO criteria	
<b>Systemic Paediatrics : Endocrinology</b>	<b>91</b>
Congenital hypothyroidism • Congenital adrenal hyperplasia (CAH)	

# NEONATOLOGY : PART 1

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Neonate : First 4 weeks.

## Normal newborn

00:01:00

### Routine Newborn Care :

Aseptic precaution :

- Clean hands.
- Clean surface.
- Clean cord cut.
- Clean cord clamp.
- Clean cord.

Early skin to skin contact :

- Avoid hypothermia.
- Establishes breastfeeding.

Others 🐘 :

- Inj. vit K 1 mg Im (< 1 kg : 0.5 mg) : Anterolateral thigh.
- Eye care.
- Clear secretions.
- Bathing : Not recommended (After cord falls off).

Key updates 2025 :
<ul style="list-style-type: none"> <li>• Delayed cord clamping : After <b>atleast 60 sec</b> <ul style="list-style-type: none"> <li>- Improves iron stores : ↓ anemia</li> <li>- Smooth CVS transition</li> <li>- Avoids cerebral blood flow fluctuations :                             <ul style="list-style-type: none"> <li>• ↓ Intraventricular haemorrhage (IVH) : Preterm</li> </ul> </li> </ul> </li> <li>• SpO<sub>2</sub> measurement : 2 mins</li> </ul>

## Weight :

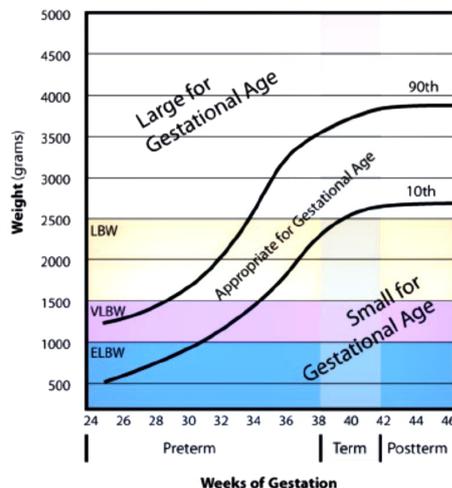
Classification :

macrosomia : > 4 kg

Low BW : < 2.5 kg

very low BW : < 1.5 kg

Extremely low BW : < 1 kg



Classification by percentile :

- LGA → • Large for gestational age : > 90<sup>th</sup> percentile
- AGA → • Appropriate for gestational age : 10<sup>th</sup> - 90<sup>th</sup> percentile
- SGA → • Small for Gestational age : < 10<sup>th</sup> percentile

Allms Intrauterine growth chart

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**Growth abnormalities & Hypoglycemia**

00:09:46

**Intrauterine Growth Restriction (IUGR) :**

SGA + evidence of wasting (Loose skin folds).

Types :

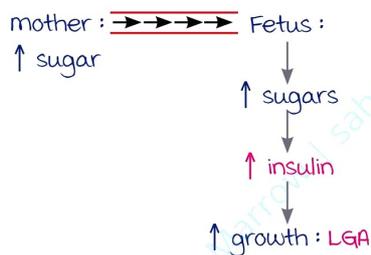
	Asymmetric IUGR	Symmetric IUGR
Cause	maternal : uteroplacental insufficiency	Fetal : Anomalies
Brain	<ul style="list-style-type: none"> <li>Brain sparing effect</li> <li>Ⓝ head size, small body</li> </ul>	<ul style="list-style-type: none"> <li>Involved</li> <li>Head &amp; Body small</li> </ul>
Ponderal index	< 2	> 2

Ponderal Index :

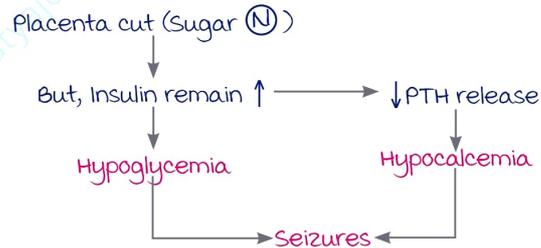
$$PI = \frac{\text{Weight (g)}}{\text{Length (cm)}^3} \times 100$$

**Infant of Diabetic mother  :**

Gestation :



After birth :

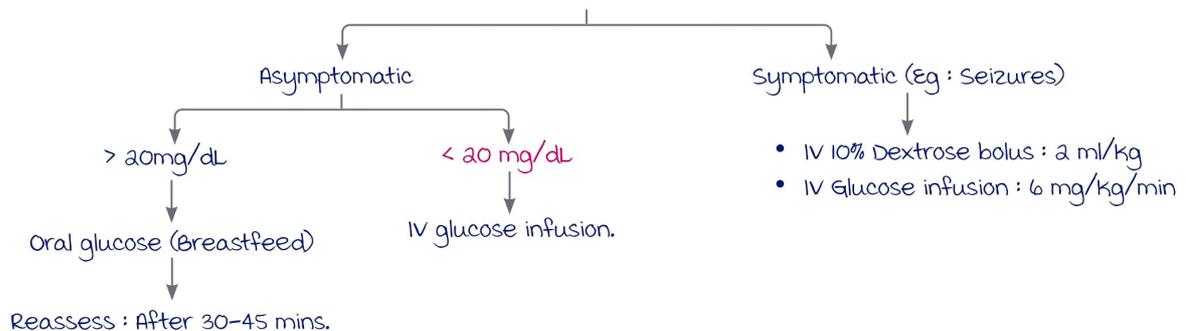


Note :

Growth hormone :

**management of Hypoglycemia in Newborn  :**

Hypoglycemia : Blood glucose &lt; 45 mg/dL.





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	Normal limit
meconium 	Passed : $\leq 48$ hrs Greenish black (Biliverdin)
urine	Passed : $\leq 24$ hrs ↓ Not passed Assess feeding : → Bladder size : → Fluid challenge : ↓ breast feeds (Clinical / USG) : Renal anomalies Obstruction
SpO <sub>a</sub> 	<ul style="list-style-type: none"> <li>Pulse oximeter : <b>R</b> upper limb (Preductal blood)</li> <li>Target SpO<sub>a</sub> :                             <ul style="list-style-type: none"> <li>- 2min : 60-70%</li> <li>- 3min : 70-75%</li> <li>- 5min : 80-85%</li> <li>- 10min : 85-95%</li> </ul> </li> </ul>
Temperature	<ul style="list-style-type: none"> <li><b>N</b> : 36.5 - 37.4°C</li> <li>Site : Axilla</li> </ul>

### Hypothermia

00:38:19

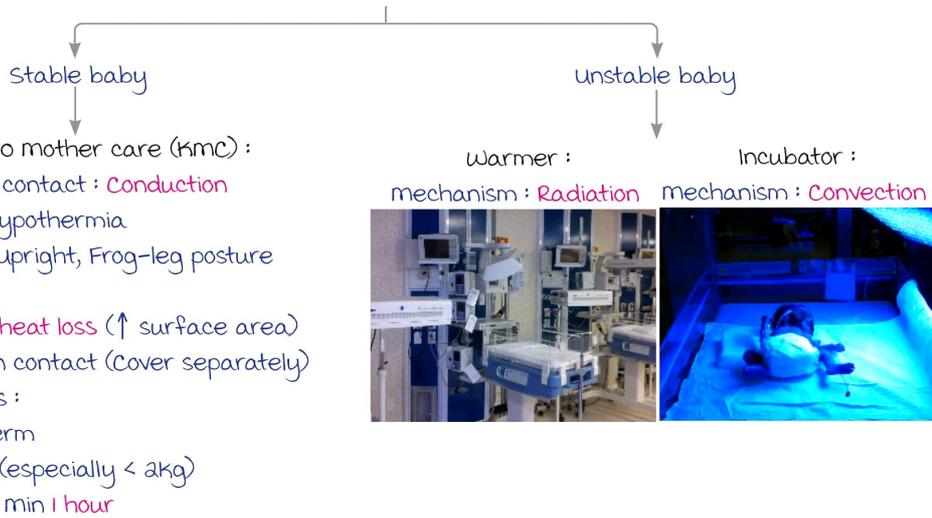
Stages :

	Features	Temp
Cold stress	Extremities cold, body warm	36 - 36.4°C
moderate hypothermia	entire body cold	32 - 36°C
Severe hypothermia		< 32°C

### management of Hypothermia :



Frog-leg posture



**Normal Observations in Newborn**

00:45:00

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	Features / Cause	
Erythema Neonatorum 	misomer (Erythema toxicum) <ul style="list-style-type: none"> <li>• m/c Rash</li> <li>• Red papules + Pustules</li> <li>• Appears &gt; 24 hrs after birth</li> <li>• microscopy : Eosinophils</li> </ul> 	
milia (milk spots)	Whitish spots : Face & nose	Ⓝ inclusion / Retention cysts
Epstein pearls	Pearly white lesions : Palate	
Mongolian spots (Dermal melanocytosis)	Hyperpigmented macules (Greenish-black) : Back	
Small subconjunctival bleeds	d/t stress during delivery	
Stork bite	Benign capillary malformation 	

Note :

Clotting factor XIII deficiency  :

- Delayed bleeding from umbilical stump + Ⓝ PT & APTT.
- Factor XIII : Clot stabilizing factor.
- Test : urea clot solubility test.

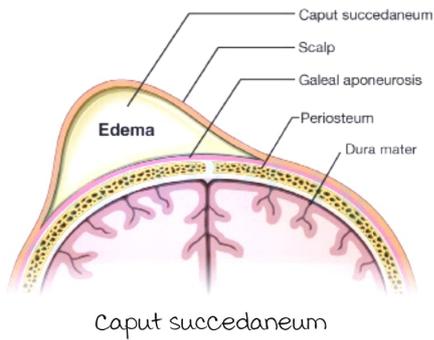
**Head Swellings in Newborn**

00:54:18

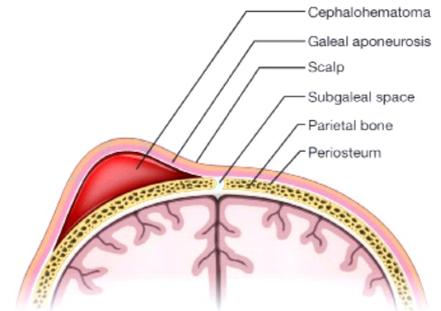
Caput vs. Cephalhematoma :

	Caput succedaneum (m/c)	Cephalhematoma
Cause	Scalp vein congestion d/t prolonged delivery	Trauma d/t instrumental delivery
Content	Fluid	Blood (Subperiosteal area)
Characteristic	Superficial, diffuse	Deep, localised
Appearance	At/Immediately after birth	12-24 hrs after birth
Complications	-	<ul style="list-style-type: none"> <li>• Jaundice (D/t heme breakdown)</li> <li>• Linear skull fracture</li> </ul>

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Caput succedaneum



Cephalhematoma

## Neonatal reflex

00:58:10

### moro's reflex :

- Sudden dropping action :  
Extension & Abduction  $\xrightarrow{f/b}$  Flexion & adduction.



ATNR



moro's reflex

### Asymmetric tonic neck reflex (ATNR) :

Head turned to one side :

- I/L upper & lower limb extension.
- C/L upper & lower limb flexion.

### Developmental Timeline of Neonatal Reflexes :

Reflex	Appearance	Fully developed	Duration (PN)
moro 	28 - 32 wks	37 wks	5-6 months
ATNR	35 wks	1 month (PN)	4 months
Parachute (Postnatal reflex)	7-8 month (PN)	-	Persists throughout life
Palmar grasp	28 weeks	-	3 months
Rooting	32 weeks	-	1 month

PN : Postnatal.