



# Prematurity & Low Birth Weight

**Dr. Hina Sattar**

M.B;B.S (K.E), FCPS (Pediatrics)

Assistant Professor

Rawalpindi Medical University





## **Low birth weight LBW**

- Birth weight of  $< 2500$  g

## **Preterm**

- $< 37$  weeks of gestation

## **IUGR**

- birth weight  $< 10^{\text{th}}$  centile for gestational age

## Appropriate for gestational age AGA

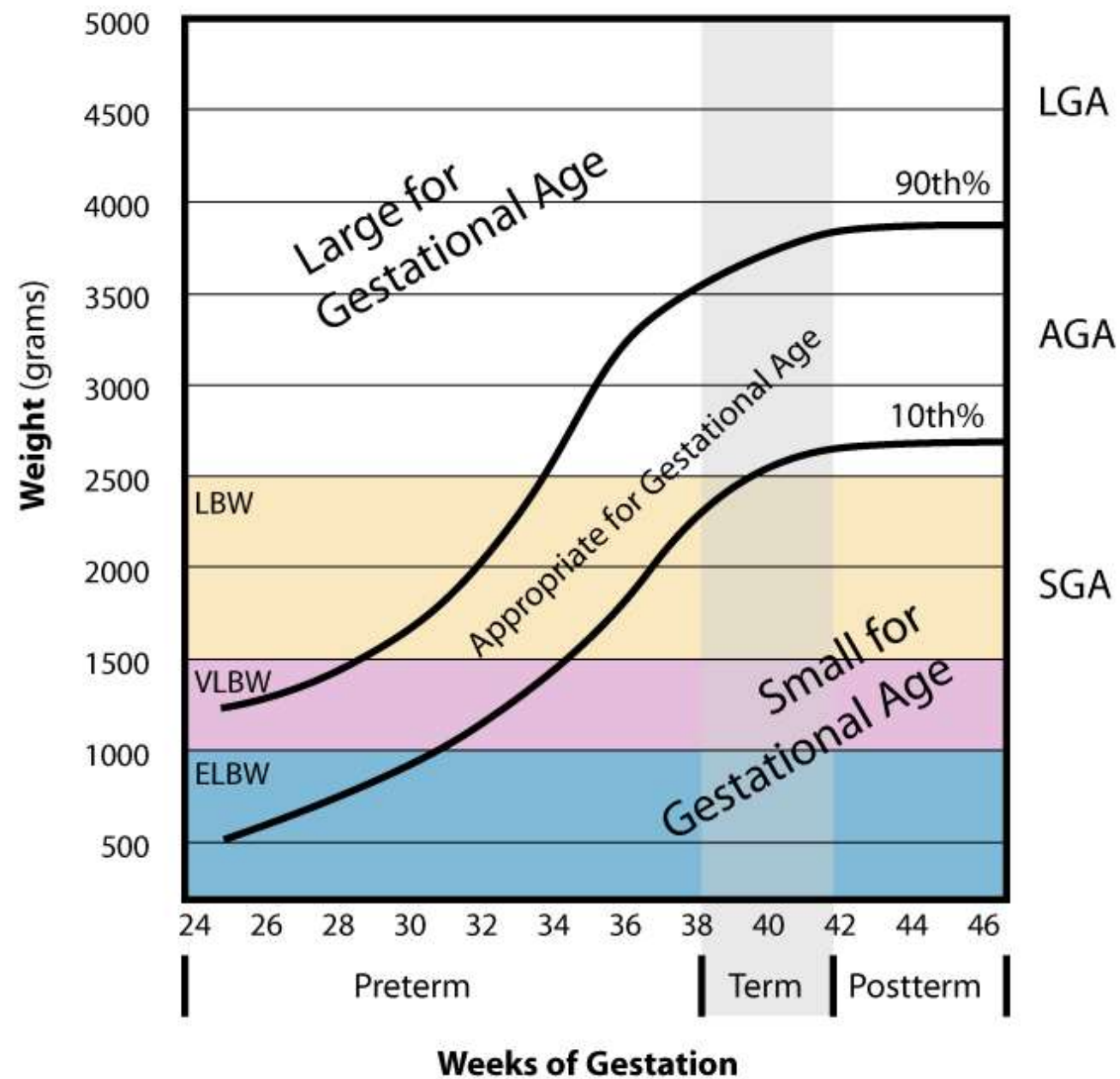
- Birth weight between 90<sup>th</sup> and 10<sup>th</sup> centile for gestational age

## Large for gestational age LGA

- Birth weight >90<sup>th</sup> centile for gestational age

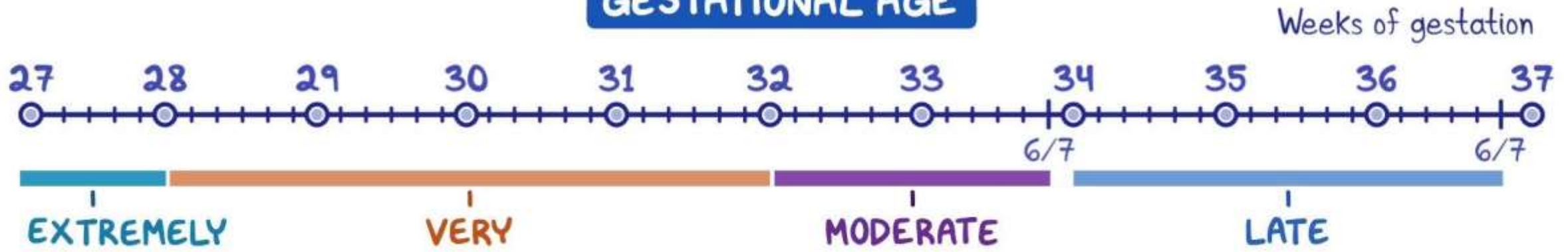
## Small for gestational age SGA

- Birth weight <10<sup>th</sup> centile for gestational age



## PRETERM INFANT: Before 37 COMPLETED WEEKS of GESTATION

### GESTATIONAL AGE



### BIRTH WEIGHT



LOW: < 2500 g

VERY LOW: < 1500 g

EXTREMELY LOW: < 1000 g

## Six parameters each:

## Physical maturity

[illegible]

# Quick gestational age assessment

	<b>36 wks &amp; earlier</b>	<b>37-38 wks</b>	<b>39 wks &amp; beyond</b>
<b>Creases in sole of feet</b>	One or 2 transverse creases posterior $\frac{3}{4}$ of sole smooth	Multiple creases; anterior $\frac{2}{3}$ of heel smooth	Entire sole, including heel covered with creases
<b>Breast nodule</b>	2mm	4mm	7mm
<b>Scalp hair</b>	Fine & wooly; fuzzy	Fine & wooly; fuzzy	Coarse & silky; each hair single stranded
<b>Earlobe</b>	No cartilage	Moderate amount of cartilage	Stiff ear lobe with thick cartilage
<b>Testes &amp; scrotum</b>	Testes partially descended; scrotum small with few rugae	Testes fully descended; scrotum normal size with prominent rugae	Testes fully descended; scrotum normal size with prominent rugae





## Prevalence of Prematurity and LBW in Pakistan

18-21% Premature in different studies as compared to 7% worldwide

>30% LBW one of the highest in the world (16% worldwide)

High neonatal mortality rate 58/1000 live births

### Risk factors for preterm birth

**Previous history** of preterm birth

**Age:** Adolescent or older mother

**Lifestyle factors:** Smoking, excess alcohol, recreational drugs, excess physical work or activity

**Multiple pregnancies:** Twins or more

**Infections:** E.g. urinary tract, malaria, HIV, syphilis, bacterial vaginosis

**Chronic conditions:** E.g. diabetes, hypertension, anaemia, asthma, thyroid disease

**Nutritional status:** Undernutrition, obesity

**Some conditions might require health provider-initiated preterm birth**

**Maternal health and pregnancy complications:** E.g. cervical incompetence, pre-eclampsia, complications such as uterine rupture

**Maternal psychological health:** E.g. depression, violence against the woman

**Foetal health:** E.g. growth restriction



# Complications of Prematurity & LBW

Respiratory	apnea, respiratory distress syndrome, bronchopulmonary dysplasia
Neurologic	perinatal depression, intraventricular hemorrhage, periventricular leukomalacia
Cardiovascular	hypotension, patent ductus arteriosus
Hematologic	anemia, hyperbilirubinemia
Nutritional	osteopenia (rickets), poor weight gain
Gastrointestinal	necrotizing enterocolitis
Metabolic	hypo, hyperglycemia, hypocalcemia
Renal	acute renal failure, fluid and electrolyte imbalance
Temperature regulation	hypo, hyperthermia
Immunologic	neonatal infection/sepsis
Ophthalmologic	retinopathy of prematurity



# Management

---

Temperature and humidity

---

Fluid & Electrolyte

---

Glucose

---

Calcium

---

Nutrition

---

Respiratory support

---

Patent Ductus Arteriosus PDA

---

Infections

---



*together for the babies born too soon...*



Sometimes it's ok  
if the only thing  
you did today was

Breathe



Premature Babies & Beyond

# Discharge Criteria

- \*When the infant is feeding orally
- \*Maintaining body temperature
- \*Apnea<sup>o</sup>/ Bradycardia<sup>o</sup>
- \*Weight > 1800g & gaining weight 30g/d



# World Prematurity Day

November 17



**Around the world 1 in 10 babies  
are born prematurely**



