

Low Birth weight Baby

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INTRODUCTION

BIRTH WEIGHT

1ST weight of fetus or new born obtained after birth.

Importance of birth weight

- It is single most important determinant for survival, growth and development of infant.
- Reflects health status of mother during adolescence and pregnancy and also quality of antenatal care.

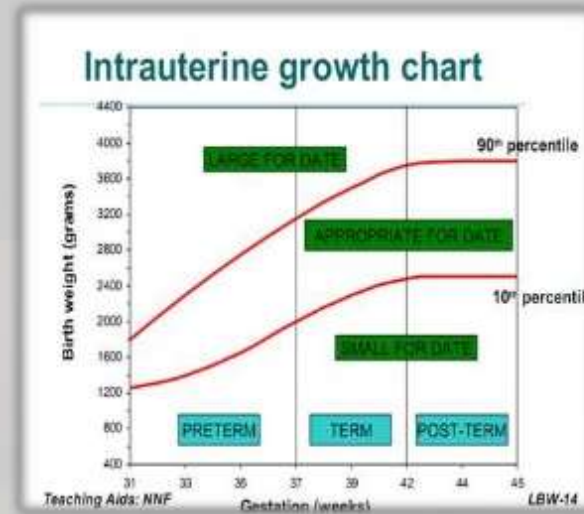


LOW BIRTH WEIGHT

Any infant with a birth weight of less than 2.5 kg with in 1 hr of birth regardless of gestational age.

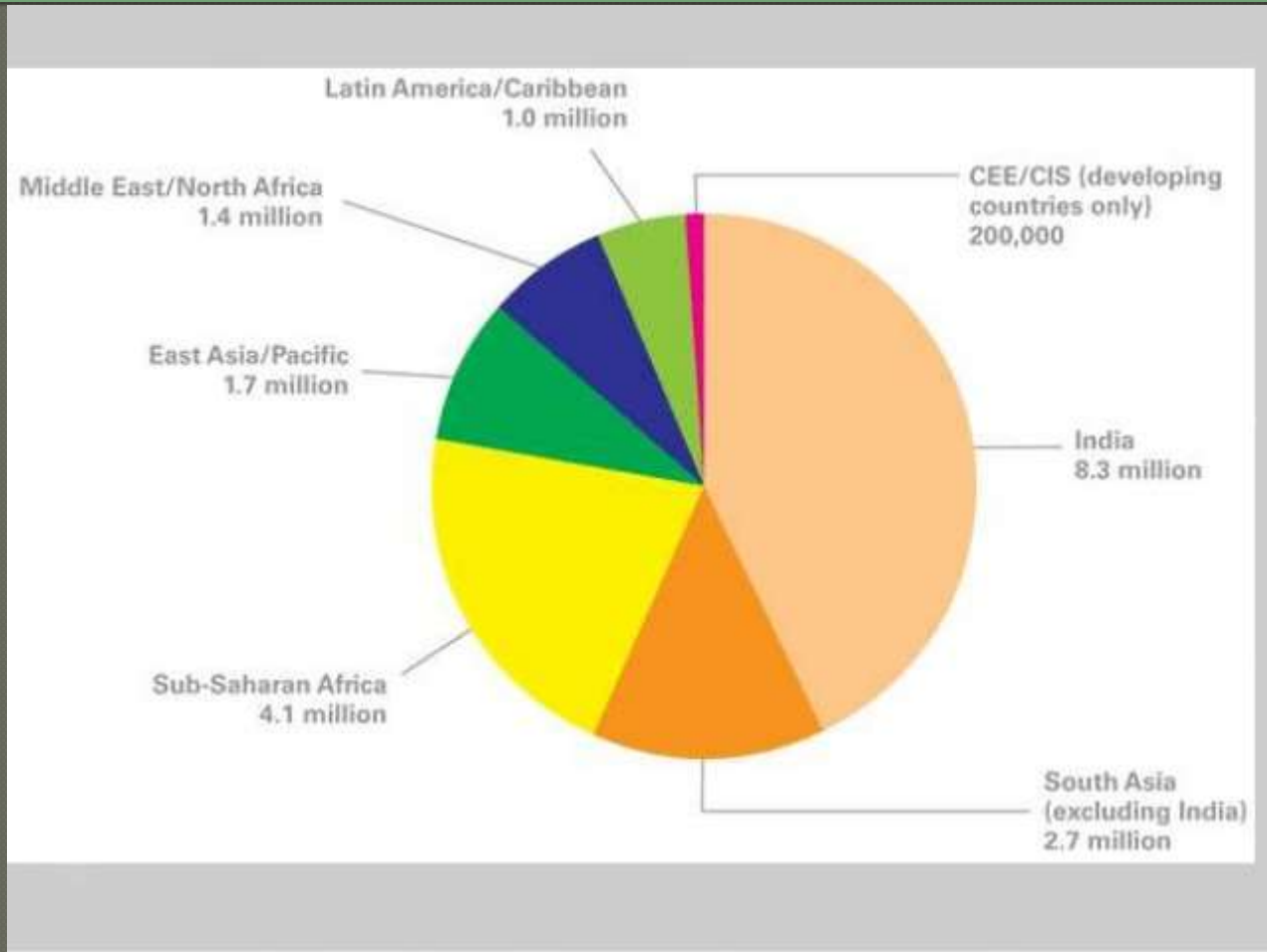
GRADING

Birth weight	Grade
2500 – 2000 gm	Low birth weight
2000 – 1000 gm	Very low birth weight
< 1000 gm	Extremely low birth weight



PROBLEM STATEMENT

- More than 20 million infants worldwide, representing 15.5 % of all births are born with low birth weight.
- As per WHO criteria, incidence of LBW in India is 33% each year.
- Prematurity is the worlds single biggest cause of new born deaths and 2nd leading cause of all child deaths after pneumonia.



Types of LBW

2 types based on the origin

Preterm

- < 37 completed weeks of gestation
- Account for **1/3** of LBW

Small-for-date (SFD) / intra uterine growth retardation (IUGR)

- < 10th centile for gestational age
- Account for **2/3** of LBW neonates

CAUSES of LBW

Low birth weight includes 2 groups

- 1) Preterm babies(<37 wks)
- 2) IUGR

In nearly 50% of cases of LBW the cause is not known. In remaining 50% the causes are grouped into

- a) medical
- b) social



a) Medical causes

1. Maternal causes : all high risk mothers except Diabetics
2. Placental causes : Placenta previa , Congenital defects of placenta etc,
3. Fetal causes : Multiple gestation, Hydramnios, intrauterine infections etc.

b) Social causes

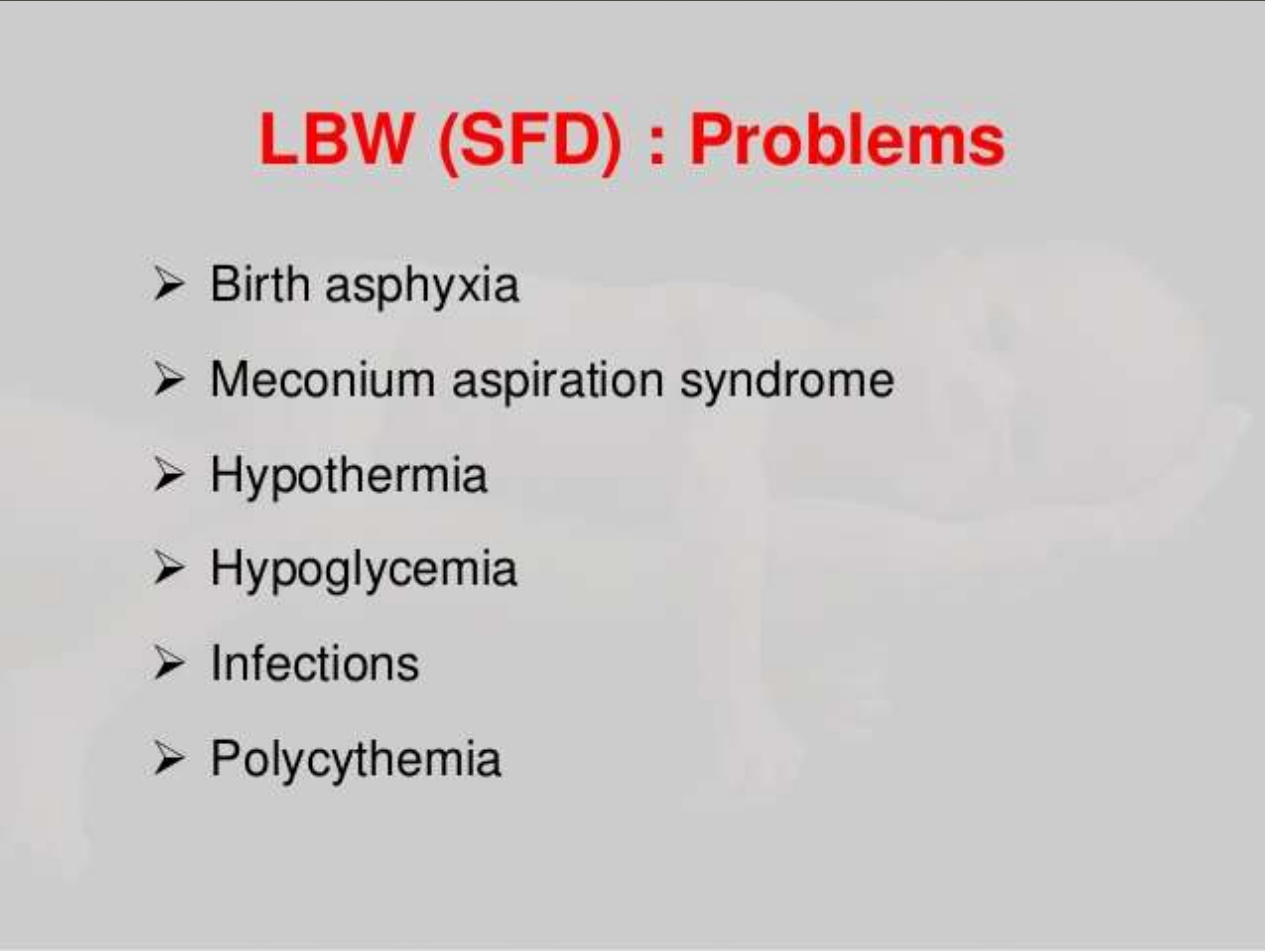
Poverty, Illiteracy, Ignorance,
Poor standard of living,
lack of knowledge on family
planning, early marriages,
smoking etc



LBW (Preterm) : Problems

- Birth asphyxia
- Hypothermia
- Feeding difficulties
- Infections
- Hyperbilirubinemia
- Respiratory distress
- Retinopathy of prematurity
- Apneic spells
- Intraventricular hemorrhage
- Hypoglycemia
- Metabolic acidosis

LBW (SFD) : Problems

- Birth asphyxia
 - Meconium aspiration syndrome
 - Hypothermia
 - Hypoglycemia
 - Infections
 - Polycythemia
- 

Care of LBW babies

Depends upon birth weight

- | | | |
|--|---|-----------------------------------|
| 2500 – 2000 gm | - | Requires special care at home |
| <2000 gm | - | Requires special care at hospital |
| <2000 gm &
>1800 gm & stable
Hemodynamically | - | Requires kangaroo mother care |

Special care at Home

Principles: Prevention of infections
Prevention of hypothermia
Correction of malnutrition

1.Prevention of infections

- Gentle and minimal handling
- Handling with clean hands
- Room must be warm, clean and dust-free
- Immunization at right time

2.Prevention of hypothermia

- Avoid bath till baby attains 2500g weight
- Cover baby with clean dry & warm cloth
- Bottles filled with warm water & covered with thin cloth are kept on both sides (or) baby without blanket is kept near 60 candle bulb burning.

3.Correction of malnutrition

- As LBW babies cannot suck milk actively , it gets tired faster. So frequent breast feeding must be given almost every alternate hour.

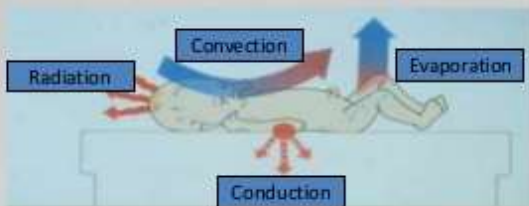
LBW: Keeping warm at home



Skin-to-skin contact

Birth weight (Kg)	Room temperature ($^{\circ}\text{C}$)
1.0 – 1.5	34 – 35
1.5 – 2.0	32 – 34
2.0 – 2.5	30 – 32
> 2.5	28 - 30

Warm room, fire or heater



Prevent heat losses



Baby warmly wrapped

Special care at Hospital

1. Prevention of infections

- Prophylactic antibiotics to prevent septicemia.
- Separate nurses for feeding and toilet attending.
- Barrier nursing to prevent cross infections.



2.Prevention of hypothermia

- Child is kept under incubator – it maintains the temperature , humidity and o2 supply , till weight increases to 2000g.
- Careful monitoring of O2 supply:
 - low O2 – hypoxia and cerebral palsy
 - high O2 – retinopathy of prematurity



3. Correction of malnutrition

- The baby is already malnourished.
- Further malnutrition should be prevented.
- Tube feeding is done because baby is in incubator and it is too young to suck mothers milk.



KANGAROO MOTHER CARE

- First suggested by Dr Edgar Ray in Colombia.
- Refers to care of preterm or low birth weight infants by placing the infant in skin-to-skin contact with the mother or any other caregiver.



PARAMETERS TO BE MONITORED DURING KMC

- Temperature : Once in 6 hrs.
- Respiration : For apnea.
- Feeding : Once in 90-120 min.
- Well being : By educating mother about danger signs.
- growth : Gain of 15-20 g /kg/day.
- Compliance with kangaroo care.

COMPONENTS OF KMC

1. KANGAROO POSITION

- Consists of specific frog like position of LBW new born with skin-to-skin contact with mother , in between her breasts in a vertical position.
- The provider must keep herself in a semi-reclining position to avoid gastric reflux in the infant.
- Maintained 24 hrs a day , till it gains at least 2000g.



PREPARATION OF KANGAROO BABY

- Baby must be suitably dressed in a cap, soak-proof diaper, socks and with an open shirt to have skin to skin contact between mother and baby and placed in a kangaroo bag.

Mechanism of prevention of hypothermia

- THERMAL SYNCHRONY
- If the temp of the baby decreases by 1°C , correspondingly the temp of mother increases by 2°C to warm up the baby.
- If the temp of the baby raises by 1°C , the temp of the mother decreases by 1°C .

2.KANGAROO FEEDING POLICY

- kangaroo position is ideal for breast feeding.
- Exclusive breast feeding is the policy.
- Feeding is done once in 90-120 min.
- If the baby can suckle , it is promoted.
- If baby cannot suckle , expressed breast milk to be fed.
- If the baby is unable to swallow , EBM is fed by nasogastric tube.

3a.EARLY DISCHARGE

Criteria for discharge:

- Wt gain of at least 40g a day for 5 consecutive days.
- Baby should feed well on breast milk.
- Temp should be maintained.
- There should not be any evidence of illness.
- Successful 'in-hospital adaptation' of the mother and other members of the family.

3b.FOLLOW-UP

- After discharge , KMC is continued at home.
- Follow-up is done daily by the health worker for one week and ensured that baby is feeding well and gaining about 40g weight daily.
- Afterwards once a week till the baby reaches 40 weeks of post conceptional age.



BENEFITS OF KANGAROO MOTHER CARE

1. Benefits to baby

- Baby is kept warm all the 24 hours by the mother. (natural incubator)
- It has minimum risk of apnea.
- It gains physiological stability.
- It gets safety and love.
- Early growth is promoted.
- It is at a reduced risk of nosocomial infections.

2. Benefits to mother

- Mother becomes actively involved in taking care of her child.
- Mother is relaxed , confident and empowered.
- Bonding is better established.
- Breastfeeding becomes successful.

3. Benefits to family

- KMC is economical compared to cost of intensive care.
- There is better follow-up.
- KMC promotes bonding among the family members

4. Benefits to Hospital

- KMC saves materials like incubators, O2 cylinders.
- Saves in man power in terms of nursing staff.

5. Benefits to Nation

- KMC reduces neonatal mortality & thus infant mortality.
- Healthy and intelligent children , adds to the nation's health and wealth.

PREVENTION OF LBW BABY

A . DIRECT INTERVENTION MEASURES

- Prevention of malnutrition - By nutritional education and supplementation under ICDS.
- Prevention of anemia - By distribution of IFA tablets
- Control of infections - By early diagnosis and prompt treatment.
- Avoid strenuous exercise , smoking & alcohol among pregnant mothers.

B . INDIRECT INTERVENTION MEASURES

These are mainly family welfare services such as

- Deciding age at marriage.
- Deciding age at first child.
- Birth spacing.
- Deciding no of children.
- Improvement of availability of health services to women.

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THANKS
FOR
CONCERN
OVER ME

THANK YOU