

Introduction



- Premature birth and low birth weight (LBW) still a health problems in newborn
- Morbidity and mortality still high accordingly to the complication
- Medical and technology development leads to increasing the survival at high risk of LBW for long term neurocognitive deficits .

Introduction (2)

- The normal birth weight of is > 2500 to 3000 gm.
- Low birth weight or LBW :
birth weight of less than 2500 gm regardless to gestational age
- Incidence : 15 – 30 %
- Neonatal deaths : 75 % due to LBW
- Infant deaths : 50 % caused by LBW
- Complication :
 - Prone to malnutrition
 - Recurrent infection
 - Neurodevelopmental handicaps

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

Identification: SFD / IUGR

2.1 Kg - IUGR



3.2 Kg - AFD



Teaching Aids: NNF

LBW-15₆

LBW (Preterm) : Problems

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

LBW: Indications for hospitalization

- ❖ Birth weight <1800 g
- ❖ Gestation <34 wks
- ❖ Unable to feed*
- ❖ Sick neonate*
- ❖ Irrespective of birth weight and gestation

Management of Newborn Illness

- Education of mothers to recognize danger signals
- Working with families to develop complication plan for newborns
- Early recognition and appropriate management of newborn illness

Minimum Preparation for any Birth

The following should be available and in working order:

- Heat source
- Mucus extractor
- Self-inflating bag of newborn size
- 2 masks (for normal and small newborns)
- 1 clock
- At least one person skilled in newborn resuscitation present at birth

Care of the Low Birth Weight Newborn

- Birth weight = Gestation duration + intrauterine growth
 - Most low birth weight newborns in developing countries are term or near term (Small for gestation age)
 - Increased risk of hypothermia and poor growth

Delivery management

- LBW is prone to be asphyxiated
- Management at birth accordingly to Guidelines of Resuscitation (AHA/AAP)
- Consider :
 - Early intubation
 - Early CPAP
 - Prevent hypothermia
 - Prevent hyperoxia

Principles of Management for Low Birth Weight and Preterm Newborns

- Warmth
- Feeding
- Detection and management of complications (e.g., resuscitation, assisted respiration, infection)

Warmth



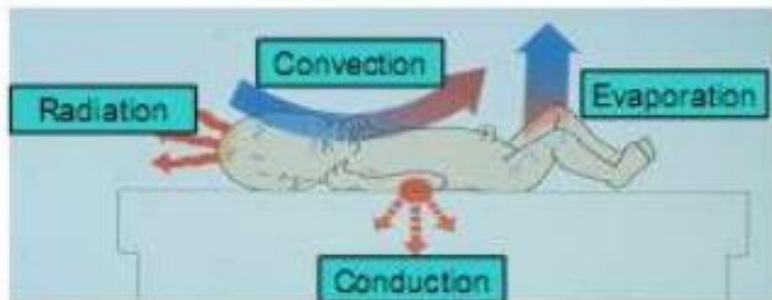
As for all newborns:

- Lay newborn on mother's abdomen or other warm surface
- Dry newborn with clean (warm) cloth or towel
- Remove wet towel and wrap/cover with a second dry towel
- Bathe after temperature is stable

LBW: Keeping warm at home



Skin-to-skin contact



Prevent heat losses

Birth weight (Kg)	Room temperature (°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



Baby warmly wrapped

LBW: Keeping warm at home

Well covered newborn



Teaching Aids: NNF

²¹
LBW-21

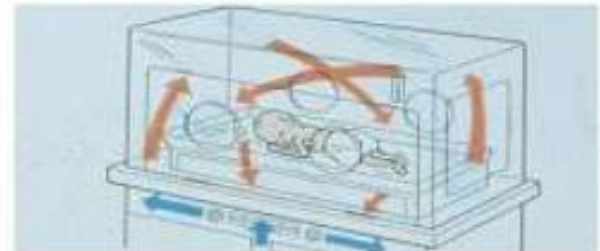
LBW: Keeping warm in hospital

- Skin-to skin method
- Warm room, fire or electric heater
- Warmly wrapped



Heated water-filled mattress

Radiant warmer



Air-heated Incubator

LBW: Keeping warm in hospital

**Overhead
Radiant warmer**



Teaching Aids: NNF

LBW-23



Kangaroo Mother Care

Feeding



- Early and exclusive breastfeeding
 - Breastmilk = best nourishment
 - Already warm temperature
 - Facilitated by kangaroo care
- If Breast milk is not available, consider milk formula :
Preterm formula --- until 2000 gm then change to *After Discharged Formula*

LBW: Fluids and feeding

Weight <1200 g; Gestation <30 wks*

- Start initial intravenous fluids
- Introduce gavage feeds once stable
- Shift to katori-spoon feeds over next few days. Later on breast feeds

* May try gavage feeds, if not sick

**START ANTIBIOTIC ADMINISTRATION EVEN
WITHOUT ANY SYMPTOMS**

LBW: Fluids and feeding

Weight 1200-1800 g; Gestation 30-34 wks*

- Start initial gavage feeds
- Katori-spoon feeding after 1-3 days
- Shift to breast feeds as soon as baby is able to suck

* May need intravenous fluids, if sick

LBW: Fluids and feeding

Weight >1800 g; Gestation > 34 wks*

- Breast feeding
- Katori-spoon feeding, if sucking not satisfactory on breast
- Shift to breast feeds as soon as possible

LBW: Supplements

- Vitamins : IM Vit K 1.0 mg at birth
Vit A* 1000 I.U. per day
Vit D* 400 I.U. per day
- Iron : Oral 2 mg/kg per day from 8 weeks of age

***From 2 weeks of age**

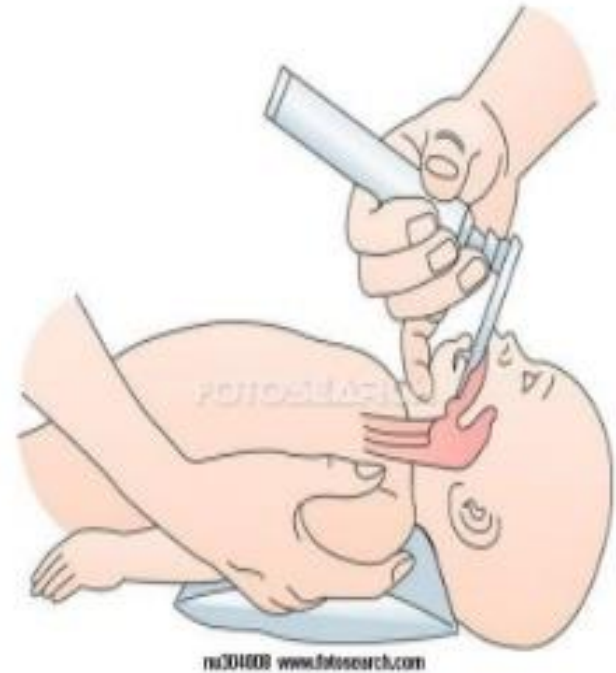
MANAGEMENT OF HIGH RISK BABIES



management

- Immediate care

clear the airway



- Body temperature



- Prevention of infection



- Apgar score



- Breast feeding



- Umbilical cord care



- Eye care



- Vitamin k injection



- Weight record





Thank You
Thank You
Thank You!!!!