

PREVENTIVE MEDICINE IN OBSTETRICS, PAEDIATRICS AND GERIATRICS



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MEASURING THE BABY



- BIRTH WEIGHT(within first hour of life)
- LENGTH(within 3 days)
- HEAD CIRCUMFERENCE- maximum circumference of the head at the occipito frontal diameter

NEONATAL SCREENING



- DETECT INFANTS WITH TREATABLE GENETIC, DEVELOPMENTAL, AND SECONDARILY, TO PROVIDE PARENTS WITH GENETIC COUNSELLING
- 10-15 ml of cord blood should be collected at birth and saved in the refrigerator for 7 days for typing, Coomb's testing and other tests.



➤ **COMMON DISORDERS SCREENED:**

1. Phenylketonuria
2. Neonatal hypothyroidism
3. Coombs' test
4. Sickle cell or other hemoglobinopathies
5. Congenital dislocation of hip

“AT-RISK” INFANTS



- Birth weight less than 2.5 kg
- Twins
- Birth order 5 or more
- Artificial feeding
- Weight below 70% of the expected weight
- Children with protein energy malnutrition or diarrhea
- Working mother/ one parent
- Failure to gain weight during three successive months

LATE NEONATAL CARE



The remaining three weeks of the neonatal period carry the common and serious hazards of infection and failure of satisfactory nutrition. Diarrhoea and pneumonia take a heavy toll of life in infants exposed to an unsatisfactory environment. The case fatality rate of what would normally be trivial episodes can increase dramatically when elementary care is not given.

LOW BIRTH WEIGHT



- The birth weight of an infant is the single most important determinant of its chances of survival, healthy growth and development
- 2 groups
 - Short gestation (premature)
 - IUGR

- BIRTH WEIGHT LESS THAN 2.5 KGS AT FIRST HOUR OF LIFE
- A LBW INFANT IS ANY INFANT WITH A BIRTH WEIGHT OF LESS THAN 2.5 KGS REGARDLESS OF GESTATIONAL AGE.

➤ ***PRETERM BABIES***

1. Extremely preterm (<28 weeks)
2. Very preterm (28 to 32 weeks)
3. Moderate to late preterm(32 to 37 weeks)

➤ ***PRETERM BIRTH***

TWO BROAD SUB TYPES

1. SPONTANEOUS PRETERM BIRTH
2. PROVIDER INITIATED PRETERM BIRTH

Types of preterm birth and risk factors involved

Type:	Risk Factors:	Examples:
Spontaneous preterm birth:	Age at pregnancy and pregnancy spacing	Adolescent pregnancy, advanced maternal age, or short inter-pregnancy interval
	Multiple pregnancy	Increased rates of twin and higher order pregnancies with assisted reproduction
	Infection	Urinary tract infections, malaria, HIV, syphilis, bacterial vaginosis.
	Underlying maternal chronic medical conditions	Diabetes, hypertension, anaemia, asthma, thyroid disease
	Nutritional	Undernutrition, obesity, micronutrient deficiencies
	Lifestyle/work related	Smoking, excess alcohol consumption, recreational drug use, excess physical work/activity
	Maternal psychological health	Depression, violence against women
	Genetic and other	Genetic risk, e.g., family history, Cervical incompetence
Provider-initiated preterm birth:	Medical induction or caesarean birth for: obstetric indication, Foetal indication	There is an overlap for indicated provider-initiated preterm birth with the risk factors for spontaneous preterm birth.
	Other-Not medically indicated	

SMALL-FOR-DATE BABIES



- THESE MAY BE BORN AT TERM OR PRETERM
- THEY WEIGH LESS THAN THE 10TH PERCENTILE FOR THE GESTATIONAL AGE

Computation : The percentage of LBW babies is computed as :

$$\frac{\text{Live-born babies with birth weight less than 2.5 Kg}}{\text{Total number of live births}} \times 100$$

MATERNAL FACTORS



- ✓ Malnutrition
- ✓ Severe anemia
- ✓ Heavy physical work
- ✓ Hypertension
- ✓ Malaria
- ✓ Smoking
- ✓ Low economic status
- ✓ Short maternal stature
- ✓ High parity
- ✓ Close birth spacing
- ✓ Low education status

FOETAL FACTORS

1. FOETAL ABNORMALITIES
2. INTRAUTERINE INFECTIONS
3. CHROMOSOMAL ABNORMALITY
4. MULTIPLE GESTATION

PLACENTAL FACTORS

1. INSUFFICIENCY
2. ABNORMALITY

Risk factors for Low birth weight



- In the developing countries, adverse prenatal and post natal development of the child is associated with three interrelated conditions:
 - **Malnutrition**
 - **Infection**
 - **Unregulated fertility**

PREVENTION



- ❑ Interventions have to be “**cause specific**”.
- ❑ Main attention is given to ways and means of preventing LBW through good prenatal care and intervention programs, rather than treatment of LBW babies born later

- ❑ *DIRECT INTERVENTION MEASURES*
 - The incidence of LBW can be reduced if pregnant women “**at risk**” are identified and steps are taken to reduce the risk.
 - The women should be identified early in the pregnancy.
 - Both malnutrition and morbidity due to infections during pregnancy can be prevented.



Some direct interventions include

1. INCREASING FOOD INTAKE
2. CONTROLLING INFECTIONS
3. EARLY DETECTION AND TREATMENT OF MEDICAL DISORDERS

❑ **INDIRECT INTERVENTION MEASURES**

1. Family planning
2. Avoidance of excessive smoking
3. Improved sanitation measures
4. Improving health and nutrition of young girls
5. Improvement of socio economic status
6. Environmental conditions



• TREATMENT

- a) <2KGS - FIRST CLASS MODERN NOENATAL CARE
- b) 2-2.5KGS – ICU FOR A DAY OR TWO

KANGAROO MOTHER CARE



- ❑ COLOMBIA 1979 Dr HECTOR MARTINEZ AND EDZAR REY
- ❑ FOR LOW BIRTH WEIGHT BABIES

COMPONENTS



1. SKIN TO SKIN POSITIONING OF THE BABY ON THE MOTHER'S CHEST
2. ADEQUATE NUTRITION THROUGH BREAST FEEDING
3. AMBULATORY CARE AS A RESULT OF EARLIER DISCHARGE FROM HOSPITAL
4. SUPPORT FOR THE MOTHER AND HER FAMILY IN CARING FOR THE BABY

INTENSIVE CARE



Intensive care comprises:

- INCUBATORY CARE
- FEEDING
- PREVENTION OF INFECTION

LEADING CAUSE OF DEATH IN LBW



- Atelectasis
- Malformation
- Pulmonary hemorrhage
- Intra cranial bleeding, secondary to anoxia or birth trauma
- Pneumonia and other infections

BREAST FEEDING



- ❖ 450-600 ML OF MILK PER DAY
- ❖ 1.1 GM PROTIEN PER 100 ML
- ❖ 70 KCAL PER 100 ML

ADVANTAGES



➤ BABY

- ✓ It is safe , clean,cheap and available to the infant at the correct temperature
- ✓ Nutritional requirements satisfied
- ✓ Anti-microbial factors
- ✓ Easily digested and utilised
- ✓ Promotes bonding
- ✓ Development of jaw and teeth-sucking
- ✓ Protects from obesity
- ✓ Prevents malnutrition and reduces IMR
- ✓ Spacing
- ✓ Increase IQ and better visual activity

➤ MOTHER

- ✓ LOWER RISK OF PPH AND ANEMIA
- ✓ BOOST IMMUNE SYSTEM
- ✓ DELAYS NEXT PREGNANCY
- ✓ REDUCES INSULIN OF DIABETIC MOTHERS
- ✓ PROTECT FROM OVARIAN AND BREAST CANCER AND OSTEOPOROSIS

- ❖ FEED BY THE CLOCK
- ❖ 1-4 HRS INTERVAL
- ❖ NO OTHER FOOD IS REQUIRED UNTIL 6 MONTHS AFTER BIRTH

BREAST MILK SUBSTITUTES



- ❖ DRIED WHOLE MILK POWDER
- ❖ FRESH MILK FROM A COW OR OTHER ANIMALS
- ❖ OTHER COMMERCIAL FORMULAE

WEANING



Weaning is not sudden withdrawal of child from the breast. It is a gradual process starting around the age of 6 months, because the mother's milk alone is not sufficient to sustain growth beyond 6 months. It should be supplemented by suitable foods rich in protein and other nutrients. These are called "supplementary foods". These are usually cow's milk, fruit juice, soft cooked rice, suji, dhal and vegetables. The weaning period is the most crucial period in child development, for during the weaning process children are particularly exposed to the deleterious synergistic interaction of malnutrition and infection.