Low birth weight

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Tikrit Univercity Colledge of Medicene

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Definition:

- Low birth weight has been defined by the WHO as weight at birth of less than 2,500 grams (5.5 pounds).
- This is based on epidemiological observations that infants weighing less than 2,500 g are approximately 20 times more likely to die than heavier babies.

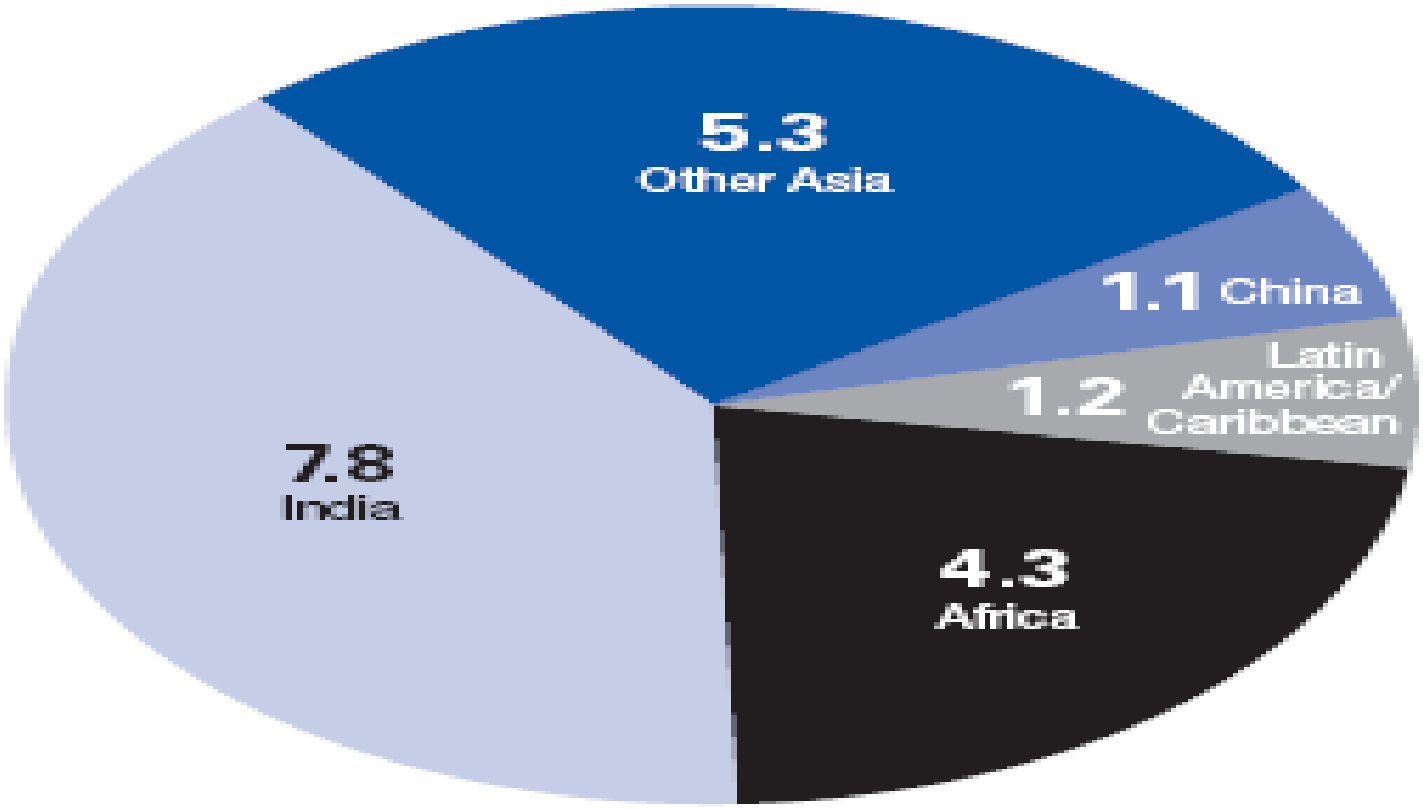
Definitions:

- Very LBW is less than 1,500 g .
- Extremely LBW is less than 1,000 g .

Incidence

- More than 20 million infants worldwide, representing 15.5% of all births, are born LBW, 95.6 % in developing countries.
- LBW is closely associated with: foetal and neonatal mortality and morbidity, inhibited growth and cognitive development, and chronic diseases later in life.

More than 20 million low birth-weight infants are born each year in the developing world*



* Oceania (excluding Australia, Japan and New Zealand) had 27,000 low birthweight infants. Source: UNICEF/WHO, 2004.

Risk factors for LBW:

- Mother's Malnutrition
- Heavy work load
- High blood pressure
- Infection and diseases
- Unregulated fertility.

Causes and consequences of LBW

Preterm babies:

- There are babies born too early before 37 weeks of gestation, their intrauterine growth may be normal, that is their, weigh, length and development may be within normal limit for the duration of gestation.
- Given good neonatal care, these babies can catch up growth and by 2 to 3 years of age will be of normal size and performance.

- Approximately 2 thirds of all babies of LBW in developed countries are estimated to be preterm the causation of preterm babies is multifactoral. There include multiple births, hard physical works, hypertensive disorders of pregnancy. But it is often preventable by such measures as good prenatal screening and care.

Small for dates (SFD):

- These babies are result of intrauterine fetal growth retardation(IUGR).
- The factors associated with intra uterine growth retardation are multiple and interrelated to mother, placenta or to foetus.

Factors affecting birth weight:

- **The maternal factors:**
- Include malnutrition.
- Anaemia.
- Heavy physical work-during pregnancy.
- Hypertension.
- Malaria.
- Toxaemia.
- Smoking.

The maternal factors:
:

- Low economic status.
- Short maternal stature.
- Young age.
- High parity.
- Dose birth spacing.
- Low education status.

Factors related to placenta:

- Placental insufficiency.
- Placental abnormalities.

The foetal causes:

- Foetal abnormality.
- Intra uterine infections.
- Chromosomal abnormalities.
- Multiple gestation.

- SFD babies has a high risk of dying not only during the neonatal period but during their infancy, thus significantly raising the rate of infant and prenatal mortality.
- Most of them become victims of protein energy mal nutrition and infection.

Importance:

- LBW is one of the most serious challenges in maternal and child health in develped and developing countries.

Its public health significance may be ascribed, to numerous factors:

- Its high incidence.
- Its association with mental retardation.
- A high risk of prenatal and infant mortality and morbidity.

Prevention:

- The rates of LBW could not be reduced to more than 10 percent in all parts of the world. There is no universal solution,

- interventions have to be case specific.

- In recent years good attention has been given to ways and means of preventing LBW through good prenatal care and interventions programmes rather than treatment of low birth weigh babies born later.

Direct intervention measures: (mothers)

1. Increasing food intake
2. Controlling infection
3. Early detection and treatment of medical disorders

Prevention:

- Indirect intervention:

1. Family planning
2. Improved sanitation
3. Improving health and nutrition of young girls
4. Improvement of socio-economic conditions

Treatment:

- From the point of view of treatment. LBW babies can be divided into 2 groups.
- Those under 2 kg.
- Those between 2 – 2.5 kg.
- The first group require first class modern neonatal care which is hardly available

- globally in an intensive care unit their weight reaches the weight of the second group.
- The second group may need an intensive care unit for a day or two.

- **The intensive care comprises of:**
- Incubatory care, that adjust temp, humidity oxegen supply (low levels of oxygen in the blood steam can produce cerebral palsy. If it is excessive leads to retinopathy and lung toxicity.

- Feeding: Nasal catheter.
- Prevention of infection: Infection can cause death in the first few hours e.g respiratory infection so prevention of infection is there fore one of the most important functions of an intensive care unit.

The leading causes of death in low birth weight babies:

- Atelectasia.
- Malformation.
- Pulmonary haemorrhage.
- Intracranial bleeding.
- Pneumonia and other infections.

The development of perinatal intensive care units has been associated with a decline in neonatal mortality.

Feeding of infants:

- Breast feeding:

1. Ideal
2. Protect from infection and malnutrition
3. Reduces infant mortality

Advantages:

- Safe, clean ,cheap, and available in correct temp.
- Meets nutritional requirement of infant in first months of life
- Antimicrobial factors
- Easily digested ,has biochemical advantages.
- Promotes bonding
- Protects against obesity
- Sucking is good for development of jaws & teeth
- Prevents malnutrition
- Child spacing

Artificial feeding:

- Dried milk,cow`s milk
- Indications:

1. Failure of breast milk
2. Prolonged illness
3. Death of mother

Growth Monitoring

- The practice of following a child's physical development, by regular measurement of certain indicators (usually weight and sometimes length) in order to maintain good health by detecting growth flatering and intervening in a timely manner
- **Nutrition Status** – Is the balance between nutrient intake and nutrient requirements and/or the degree to which an individual's physiological needs for nutrients are being met from the food they eat.

Thank you