Low Birth Weight: Unpacking The Global Public Health Burden

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Key points:

- Low birth weight is defined as <2500 grams at birth
- Major causes include prematurity and intrauterine growth restriction
- Maternal nutrition and health are key determinants
- Strong association with neonatal mortality and morbidity
- Long-term risks include chronic diseases in adulthood
- Preventable through improved antenatal care and public health measures

Introduction

Low birth weight (LBW) is defined as a birth weight of less than 2500 grams, irrespective of gestational age. It is an important indicator of neonatal health and a strong predictor of infant survival, growth, and development.[1]

LBW is broadly classified into two main types: preterm birth and intrauterine growth restriction (IUGR). Preterm birth refers to babies born before 37 completed weeks of gestation, while IUGR refers to babies who are small for gestational age due to restricted growth in the womb.[2] In some cases, infants may be both preterm and growth-restricted, further increasing health risks.

Causes and Symptoms

The causes of low birth weight are multifactorial, involving maternal, fetal, and environmental factors. Maternal causes include poor nutrition, anaemia, infections, hypertension, smoking, and inadequate antenatal care.[3] Teenage pregnancies and closely spaced births also contribute significantly.

Fetal factors such as congenital anomalies and multiple pregnancies (twins or triplets) can lead to LBW. Environmental and socioeconomic factors, including poverty, low maternal education, and exposure to pollutants, further increase the risk.[4]

Symptoms of LBW are mainly observed after birth. These infants often have a small body size, low body fat, difficulty maintaining body temperature, poor feeding, and increased susceptibility to infections. They may also present with respiratory distress and delayed developmental milestones.[5]

Treatment and Prevention

Management of low birth weight primarily focuses on supportive care and prevention of complications. Immediate care includes maintaining body temperature (kangaroo mother care), ensuring adequate nutrition (breastfeeding), and preventing infections.[6] In severe cases, neonatal intensive care may be required.

Prevention strategies are crucial and include improving maternal nutrition, regular antenatal check-ups, early detection and management of high-risk pregnancies, and supplementation with iron and folic acid. Health education, family planning, and improving socioeconomic conditions also play a vital role.[7]

Public health interventions should emphasize strengthening maternal and child health services, particularly in low-resource settings, to reduce the incidence and impact of LBW.

References

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