

MATERNAL NUTRITION DURING PREGNANCY AND LOW BIRTH WEIGHT

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A quarter of babies are born low-birth-weight (LBW-less than 2500g) primarily due to maternal undernutrition¹. The body mass index Kg m^{-2} (BMI) grades chronic energy deficiency (CED) in women, was used to evaluate the relationship between BMI classes, weight gain and birth weight. The BMIC classes used were <16.0 CED Grade III (Severe), 16-17 CED Grade II (Moderate), 17-18.5 CED Grade I (Mild), 18.5-20.0 Low Weight Normal 20-25 Normal, 25-30 obese Grade I, >30 Obese Grade II.

157 mothers were studied in the Colombo urban slum of Henemulla (57 Sinhala, 55 Moor, and 43 Tamil) Mean + SD; age (years) 24.8+5.51, Parity 2.147+1.201, Weight (Kg) 42.85+7.424, Height (m) 1.488+0.067, Weight gain (Kg) 7.47+0.938, Birth weight (g) 2763.0+573.367, Supplementation (Kcals) 43,355+25409, MBI (Kg m^{-2}) 19.421+3.639.

51.5% of mothers, undernourished initially constituted 12% Grade III, 14% Grade II and 23% Grade I; Sinhala, Moor and Tamil equally represented. The mean weight, Grade III, Grade II and Grade I was 34, 35 and 39, mean weight gain 6.3, 6.8, 6.1, mean birth weight 2670, 2710, 2746 and % LBW 31.6, 19.1 and 16.7 respectively, the total being 23.6%. When the weight gain was less than 7 Kg and supplementation less than 43,000 kcals the percentage of LBW was high. 66.6% and 28.6% in Sinhala mother in Grade III and Grade II 31.5% and 25% in Tamil in Grade III and Grade I.

48.5% of mothers normal at the 20th week of gestation were, 23.5% low weight normal, 17.5% normal and 7.5% obese Grade I. Mean weight were 43,47 & 53, Mean weight gain were 6.4, 6.0, 6.6 and mean birth-weight were 2799, 2876, 3096 and supplementation (Kcals) 42760, 42542 & 33547 with % LBW 12.5, 13.6, and 4.8% total being 13.9%. The total LBW % of all mothers was 18.4%.

Strong correlations were found between initial weight less than 42 kgs, weight-gain and birth-weight in Sinhala, Moor and Tamil. Supplementation of 43,000 Kcals during pregnancy increased weight gain and reduced LBW in the severe, moderate and mild undernourished pregnant. Mothers were motivated to improve their diet plus supplementation by the use of mothers weight gain cards.

References: De Mel(1984) Report issued at Fourth Asian and Oceanic Congress of Obstetrics and Gynaecology.
Food and Nutrition Policy Planning division 1985.

National Institute of Nutrition, Research Report,