

## BIRTHWEIGHTS IN THE NEW GUINEA HIGHLANDS TOWN OF GOROKA, 1964-1973

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The effect of maternal nutrition on birthweight continues to be the subject of debate (1); is lifetime nutrition of the mother a more critical determinant of her offspring's birthweight than her nutrition during pregnancy? In the highlands of New Guinea where maternal mortality is high, partly due to the incidence of obstructed labour, it was suggested that recent improvements in food availability were affecting nutrition during pregnancy and resulting in the birth of bigger babies.

The birth records of Goroka Hospital, Eastern Highlands District, for the period 1964-1974 were therefore examined for trends in birthweight. No data were located for 1966; data for stillbirths, multiple births and premature births were excluded from the study. Data for 4,481 live births, including date, birthweight, sex, birth order and mother's origin, were analysed by computer at the University of New South Wales.

It was found that mean birth weight had increased significantly over the period from 3079 g in 1964 to 3186 g in 1973. As expected, males were significantly heavier than females and birthweight increased significantly with birth order from 3011 g for a first baby to 3299 g for a seventh or subsequent baby. Infants born to coastal and islands mothers were significantly lighter than infants born to highlands mothers. There were no differences in birthweight between highlands locations of maternal origin. More babies were born each month in the dry season than in the wet season; dry season babies were also heavier. Of the factors studied in this series of births, year of birth was the most important determinant of birthweight.

The small increase in birthweight over the period 1964 - 1973, when viewed in the light of other evidence, was considered to be a reflection of a general improvement in maternal nutritional status in the area, and not of a specific nutritional effect in pregnancy.

LECHTIG, A., YARBOROUGH, C., DELGADO, H., HABICHT, J-P., MARTORELL, R. and KLEIN, R.E. (1975) *Am.J.Clin.Nutr.* 28, 1223.

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