

B. Malnutrition

"The single and most important developmental factor which determines the outcome of human pregnancy is maternal-fetal nutrition."¹⁸

13. Malnutrition during pregnancy is one of the more obvious circumstances related to developmental disabilities of young children. There is considerable evidence to show that poorly nourished women become infertile and those just well enough nourished to be fertile produce low birth-weight babies.¹⁹ In this category are included those born either before completion of a full term pregnancy (premature) and those who are full term but not completely developed (immature). Very small infants, weighing less than 2500 g. (5½ pounds) are generally referred to as premature. Such infants come into the world facing the likelihood of disadvantage in their future development in many ways. To begin with, they are likely to require special treatment, to be separated from their mothers and to stay in hospital longer. They are in greater risk of infection and illness. They are more likely to have congenital defects, to be handicapped, mentally retarded, or to have behaviour disturbances later.²⁰ There is an inverse relationship between birth-weight and the incidence of developmental handicaps and of brain disorders.²¹ Malnutrition may give rise to a number of possible abnormalities in a child, depending on the severity and the timing of the malnourishment.

14. For many years it has been generally accepted that malnutrition during pregnancy may cause the stunting of growth of the fetus as a whole. It is now recognized that "the brain is particularly vulnerable to damage from early-life malnutrition."²² Cell multiplication in the human brain does not occur at a steady rate. There are two periods of intense growth spurt, the first between the 15th and 20th weeks of pregnancy and the second beginning at about the 25th week and continuing until the second year after birth.²³ These facts have provided a "new perspective on the nature of the brain defects brought about by fetal malnutrition. This includes incomplete development of one or more parts of the brain, whose stunting depends on the nature, timing, and duration of the malnutrition."²⁴ A great deal of work on the effects of malnourishment on the general mental and physical capacities of children has shown a fairly clear connection, especially in terms of children with intra-uterine growth retardation from a number of causes. The association between this malnutrition and later delinquency is by no means clear.²⁵

15. Furthermore, the harmful effects of malnutrition during pregnancy do not end with damage to the child of that pregnancy, but extend to subsequent generations. Continuing severe malnutrition may adversely affect the quality of human reproduction. The ova already forming in the female fetus by twenty weeks of life may be