

## **INTRODUCTION AND AIM OF THE WORK**

# I N T R O D U C T I O N

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The newborn infant is in a state of rapid development and maturation, growth rate is most rapid during the first 4-6 months of life. This results in a high demand for the availability of specific essential nutrients. At the same time an infant's tolerance for deviations in food intake is especially limited because most of the organs that play an essential role in metabolism and its regulation (i.e. liver, kidney, endocrine glands) are immature. Other organs, such as the central nervous system, are also in a process of intensive development and maturation. Another factor, is that the child has to rely upon one single food item which, if nutritionally insufficient, is generally not compensated for by any supplementary foods or ingredients (American Academy of Pediatrics, 1976).

Nutritional requirements are thus most critical during the infancy period; nutritional inadequacy might cause prolonged and sometimes irreversible effects on growth and development and adult physiological functions (Cravioto et al., 1974). It is now increasingly believed that many disorders which plague adults may have their origin in infancy; these include defective brain development, obesity, atherosclerosis

and perhaps even hypertension (Alfin-Slater and Jelliffe, 1977).

Good nutrition contributes to the prevention of deficiency states, acute and chronic illnesses, and the development of physical potentials (William, 1979).

For many years, it has been recognized that the nutritional needs of the infant are met by the nutrients contained in human milk. This, of course, presupposes a well nourished mother and an infant who has been well nourished in utero (Alfin-Slater and Jelliffe, 1977).

The decline of breast-feeding of infants at the present time appears to be a trend in many countries. In Egypt as a result of social and economical reform since the revolution in 1952 woman has participated in labour by 3.2% in lower Egypt and 2.6% in upper Egypt (population and development- CAPMS, 1973). The early return of mother to work after labour is among the reasons for increased tendency towards bottle feeding.

The growing awareness of the impact exerted by the individual's nutritional status on his well being during the different stages of growth and development,

has brought the keen participation of biologists, epidemiologists, dietitians and physicians. Many of the varied aspects of nutrition, nutritional requirements and deficiencies peculiar to infancy and childhood have been extensively studied (Abbassy et al., 1972).

It was observed that while the importance of human milk in infant feeding is generally accepted, there are conflicting reports regarding the difference of physical growth between breast-fed and bottle-fed infants.

The aim of the present work is to compare **physical** growth in the first five years of age between breast-fed and artificially-fed children.

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