Methods of preparing weaning food and its relation to nutritional statues of infants

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صدق الله العظيم

الآية 114 سورة طه

إهداءإلى والدي و والدتي و زوجتي و أبنائي ياسمين و عبد الله و فاطمة و عبد الرحمن

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List of abbreviation

PER **Protein Efficiency Ratio**

WHO **World Health Organization**

FAO **Food and Agriculture Organization**

PEM **protein energy malnutrition**

AAP **American academy of pediatrics**

SIDS **Sudden infants death syndrome**

RDA **Recommended Dietary Allowances**

ICDS **The Integrated Child Development Scheme**

Introduction

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Infancy is a critical period of human life development, growth, health, and survival.Malnutrition is a world-wide human suffering.Malnutrition (indicated by infant-child mortality, underweight and low birth weight) was stable in South America and decreased in Asia and Central America. Africa suffered from decline in food supplies and increased malnutrition.

Solutions ofunder-nutrition in the Third World involve economics, politics, food availability and distribution.They may includeInadequate or inappropriate weaning diets and poor nutritional status due to improper timing of introducing weaning foods or infections from their food contamination.

Weaning is defined by ***Milla (1986):*** 'the period which commences when solids are introduced and continues until after suckling has been discontinued'.A weaning food is normally a semi-solid food to be used in addition to breast milk and not only to replace it.In many countries, introducing weaning foods is recommended from the age of 6months (***Lutter and Dewey, 2009***).

For breast milk infant, complementary food represents any beverage, semi-solid or solid food offered (***Fransen and Ocke, 2008***).

Weaning foods are prepared mostly as gruels made from cereals (rice, wheat, corn). Gruels are prepared from cereal: legumes combination which carry a more favourable nutrient profile than gruels made from cereals alone. However, even those gruels do not eliminate the hazards associated with feeding excessively

viscous foods that can cause infant choking and restrict dietary nutrients(***Grant, 1997***).

Germination enhanced flavour and nutritional qualities, particularly through breakdown of phytate and flatulence factors (***Urooj and Puttaraj, 2006***).Germination is also known to improve the vitamin and mineral contents. It has been reported that vitamin C and riboflavin are synthesized during germination (***Henry and Massey, 2001***).

Aim of the study

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The present study was carried out to develop weaning food mixtures based on germinated cereals and legumes in ratio of (70:30)and supplemented with yellow carrots to improve and to increase the quality of this food to face the requirement of this critical time of infant life (the first year of life) .

Chapter 1

Breastfeeding

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Breast milk is the most complete form of infant's nutrition, withbenefits for infants, growth, developmentand immunity.Breast milk is a source that cannot be replaced by other food (***Martin-Cabrejas et al., 2003, Urooj and Puttaraj, 2006***).

Infants are susceptible to disease, partly because their bodies are not fully developed(***Lopez and Estrella, 2006***).

Studies demonstrated important health benefits to breastfeeding:more resistant to disease and infection(***Wooand Teong, 2006, Lee et al.,2007***), mothers are less to develop osteoporosis laterand have a lower risk of breast, uterine and ovarian cancer.

1) Benefits to the Child in the First Years of Life

The American Academy of Pediatrics (AAP) recommends that mothers breastfeed for at least the first year of a child's life and continue until they both feel they are ready to stop.In the first six months, the baby should be nourished exclusively by breast milk. The slow introduction of iron-enriched foods may complement the breastfeeding in the second half of the first year (***Taylor and Liebenberg, 1995***).

The AAP asserts that breast milk has the perfect balance of nutrients for the infant. It is by itself enough sustenance for approximately the first six months of life and should follow as the child's staple throughout the first year (***Martin-Cabrejas et al., 2003, Urooj and Puttaraj, 2006).***