

EDITORIAL;**Nutrition in 1000 days/ Maternal Child Health**Asma¹, Masood²**Author's Affiliation:**

1. Dr. Syeda Asma Batool Bokhari, Public Health Specialist, (03008557495, bokhari_asma@yahoo.com)

2. Prof. Dr. Sahibzada Masood Us Syed, (Certified Medical Editor, University of Health Sciences, Lahore) Chief Editor/ Chairman Editorial Board Sial Journal of Medical Sciences, Dean Research, SMC/ Imran Idrees Teaching Hospital, Sialkot. Contact # 0307-8605380, Email; sahibzadadrsyed786@gmail.com

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SABB; Literature search, drafting.

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Nutrition plays a major role in maternal and child health and it is widely recognized that optimum nutrition in early life is the foundation for long-term health. A healthy maternal dietary pattern, along with adequate maternal body composition, metabolism and placental nutrient supply, reduces the risk of maternal, fetal mortality and morbidity and long-term effects in the offspring. While under-nutrition is mainly an issue of low-income countries, malnutrition, due to poor quality diet, is becoming a global health problem.

Nutrition of Child Bearing Mothers

There should be a Food fortification programmes for mothers such as

- Salt iodization
- Fortification (of wheat flour, rice)
- Cooking oil , Fresh Fruits with vitamins
- Iron, folic acid and Calcium

Nutrition for Nursing Mothers

- Healthy Food
- Iron
- Folic acid
- Calcium
- Vitamin D
- Other Multi-Vitamins

Pre-conceptional counseling of women of childbearing age should spread awareness of the importance of maternal nutrition before and during pregnancy and should promote a cultural lifestyle change, in favor of a healthy weight before conceiving and balanced healthy diet with high-quality foods consumption. Supplementation and/or fortification can make a contribution when recommended micronutrient intakes are difficult to be met through food alone.

Pregnant woman's well-being, diet, and stress levels likely affect the development of her unborn child. After birth, the child's physical environment, nutrition, and relationships may have a long-term effect on their well-being and health.

Brain and Body suffer irreparable damage in first 1000 days of life.

During this stage, a child's ability to grow can be affected by maternal and child nutrition and health. According to specialists, a child's developing brain and body suffer irreparable damage from insufficient nutrition in the first 1,000 days of life.

The feeding and care needed by the expectant mother throughout the first trimester of her pregnancy impact the first 1,000 days of the pregnancy itself. Early pregnancy discovery is crucial to ensure the window of opportunity presented as of the first 1,000 days is used to give the child and mother a good future. The window of opportunity to remedy some deficiencies shortens as it ages, becoming a challenge for a grown-up or older child to handle the health difficulties brought on by a deficit. However, some deficiencies can be partially remedied later in life.

The 1,000 days hold both great possibility and great fragility in a child's life. The ability of a child to develop, learn, and thrive is significantly impacted by how well or how poorly mothers and children are fed and cared for throughout this period. This is because the developing brain of a child grows and develops throughout the first 1,000 days. This is also the period when the foundations for their long-term health are set.

Children's brains can create 1,000 new neural connections every second throughout this time. The connections that a three year old brain forms provide the foundation for their future because it is twice as busy as an adult's brain. Achieving both physical and mental wellness is a lifetime goal.

H.C 35 cm at Birth	} 11 cm increase in 01 year (Birth to 01 year)	} 16 cm increase in 05 years
HC 46 cm at 01 year		
HC 51 cm at 5 year	} 5 cm increase in 04 year (1 year to 05 year)	
HC 56 cm at 30 year	} 5 cm increase in 25 years (6 years to 30 years)	

Significance of Child Nutrition

- Brain and Physical Growth: Essential nutrients support rapid brain development and physical growth, preventing stunting (short height for age) and wasting (low weight for height).
- Immune System Strength: Well-nourished children have better immunity, reducing the incidence of infection and death, as under-nutrition contributes to 45% of child deaths.
- Long-Term Health: Proper early nutrition reduces the risk of obesity, type 2 diabetes, and cardiovascular diseases later in life.

Key Nutritional Periods

- Pre-conception: Establishing healthy body composition and nutrient reserves.
- Pregnancy & Lactation: High nutrient demand for organ development and breastfeeding.
- First 1,000 Days: This critical period (conception to age two) determines the child's long-term health, cognitive ability, and metabolic health.
- Optimal nutrition prevents the intergenerational cycle

Malnutrition in Mothers

Malnutrition is associated with numerous health problems, such as obesity and impaired growth. Prenatally, the seeds of a baby's health are sown, and they develop throughout early development and the effects of the first 1,000 days on psychological and physical health. Pregnant woman's wellbeing, diet and stress levels likely affect the development of her unborn child.

The child's health suffers when the mother's diet and health are impaired.

Contrarily, malnutrition in mothers, such as under-nutrition or excessive weight gain, has been connected with negative results, including low birth weight, poor neurodevelopment, and increased susceptibility to chronic diseases in later life.

The mother's mental health, including emotional equilibrium and psychological stability, significantly impacts the child's development. Stress, anxiety, and depression experienced by mothers during pregnancy harm the developing foetus and increase the risk of cognitive, behavioural, and emotional difficulties in the offspring. The growing fetus is exposed to high levels of stress hormones due to chronic maternal stress, which might alter the fetus's brain's shape and function.

Synergistic relationship between maternal nutrition and mental health

Factors influencing child development outcomes include maternal-infant attachment, breastfeeding start and duration, and general caring practices. A comprehensive approach is critical since new research indicates a synergistic relationship between maternal nutrition and mental health. Inadequate nutritional intake might result from maternal mental health.

Management for Under Nourished Children

- 50% CHO, 30% Fat, 20% Proteins, Balance Diet
- Iron, Folic Acid, Vitamin-A, Vitamin D, Vitamin B-Complex, Vitamin-C, Zinc, Iodine, and Calcium
- Omega-3 fatty acids reduces risk of developmental delays and improves cognitive performance.
- Improve access to affordable nutritious foods including fruits, vegetables, eggs, fish, meat and fortified foods - for all adolescent girls and women.

Recommendation

Nutrition governance for adolescent girls and women

Build bolder leadership to mobilize institutions, leverage resources and galvanize actions for adolescent girls' and women's nutrition more effectively.

Implement policies and mandatory legal measures to protect adolescent girls and women from nutrient-poor and unhealthy ultra-processed foods and beverages.

Disseminate Information to masses

Use multiple communication channels (print, broadcast, social and digital media) to reach adolescent girls, women and the general public with advice on nutrition and care practices.

Strengthen the coverage and quality of counselling to help adolescent girls, women, and their family members make decisions and take action to improve nutrition.

Revisit Policies

Implement gender-transformative policies and legal measures that strengthen the social and economic empowerment of adolescent girls and women.

Accelerate the elimination of discriminatory gender and social norms to enable adolescent girls and women to realize their rights to food and nutrition.

Take Home Message

- Improve access to essential nutrition services for adolescent girls and women before and during pregnancy and while breastfeeding. including in humanitarian crises.
- Expand access to social transfer programmes for adolescent girls and women, including in fragile settings and humanitarian crises.
- Exclusive breast feeding for infants till 6 months age
- Balanced and high fat diet for children over 06 months
- Vegetables, fruits, eggs, butter, and milk for children 6 months to 05 years

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