

## The Role of Micronutrients in Pregnancy: Essential Vitamins and Minerals for Maternal and Fetal Health

Sophie Jain \*

Department of General Obstetric Medicine, University of Nursing, Paulo, Brazil

### DESCRIPTION

Nutrition plays a pivotal role in the health and well-being of both the mother and the developing fetus during pregnancy. A balanced and nutrient-rich diet supports the mother's body through the various physiological changes of pregnancy, fosters healthy fetal development and lays the foundation for a healthy future for the child. The importance of maternal and paternal proper nutrition during pregnancy, detailing the essential nutrients needed, the benefits they provide and practical dietary tips for expectant mothers.

### The importance of maternal nutrition

Proper nutrition during pregnancy is essential for several reasons:

**Supporting fetal growth and development:** The fetus relies on the mother for all nutrients needed for growth. Inadequate nutrition can lead to developmental issues and birth defects.

**Maintaining maternal health:** A balanced diet helps manage the increased physical demands on the mother's body, preventing deficiencies and complications.

**Preparing for lactation:** Good nutrition prepares the mother's body for breastfeeding, ensuring an adequate supply of milk post-delivery.

### Essential nutrients during pregnancy

**Proteins:** Proteins are vital for the growth and repair of tissues, including the baby's developing organs and tissues.

**Sources:** Lean meats, poultry, fish, eggs, dairy products, beans, lentils, nuts and tofu.

**Requirement:** Approximately 71 grams per day.

**Carbohydrates:** Provide the primary energy source for both mother and fetus.

**Sources:** Whole grains, fruits, vegetables and legumes.

**Requirement:** Should make up about 45-65% of total daily calories.

**Fats:** Important for fetal brain development and as an energy reserve.

**Sources:** Healthy fats from fish (omega-3 fatty acids, avocados, nuts, seeds and olive oil).

**Requirement:** About 20-35% of total daily calories, with a focus on unsaturated fats.

### Micronutrients: Vital for development

**Folic acid:** Prevents neural tube defects and supports the development of the brain and spinal cord.

**Sources:** Leafy greens, fortified cereals, legumes and citrus fruits.

**Requirement:** 400-800 micrograms daily.

**Iron:** Essential for the production of hemoglobin, which transports oxygen in the blood.

**Sources:** Lean red meat, poultry, fish, beans, lentils and fortified cereals.

**Requirement:** 27 milligrams per day.

**Calcium:** Necessary for the development of fetal bones and teeth.

**Sources:** Dairy products, fortified plant milks, leafy greens and tofu.

**Requirement:** 1,000 milligrams daily.

**Vitamin D:** Helps with calcium absorption and bone health.

**Sources:** Fatty fish, fortified dairy products and sunlight exposure.

**Requirement:** 600 IU daily.

**Vitamin C:** Enhances iron absorption and supports the immune system.

**Sources:** Citrus fruits, strawberries, bell peppers and broccoli.

**Requirement:** 85 milligrams per day.

**Correspondence to:** Sophie Jain, Department of General Obstetric Medicine, University of Nursing, Paulo, Brazil, Email: sophie.123@hotmail.com

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## The impact of maternal nutrition on the child

**Fetal development:** Proper maternal nutrition ensures optimal fetal growth and development. Key nutrients such as folic acid, iron, calcium and omega-3 fatty acids are critical for the development of the baby's brain, spinal cord, bones and overall body structure.

**Long-term health:** Adequate nutrition during pregnancy can reduce the risk of chronic conditions such as obesity, diabetes and cardiovascular diseases later in life.

**Cognitive development:** Nutrients like omega-3 fatty acids and iodine play a significant role in brain development. Proper intake of these nutrients during pregnancy can enhance cognitive function and reduce the risk of developmental delays.