

## RESEARCH ARTICLE

# The impact of maternal nutrition on fetal development and birth outcomes

■ Pruthvi K. Lakhani and Daxaben Mehta

### SUMMARY

Maternal nutrition is a key determinant of fetal growth and overall pregnancy outcome. Inadequate or imbalanced dietary intake during pregnancy can lead to complications such as low birth weight, preterm delivery, and impaired neonatal health, whereas adequate nutrition supports optimal intrauterine growth and maternal well-being. The present study was undertaken to assess the impact of maternal nutrition on fetal development and birth outcomes. Data on dietary intake, supplementation practices, and maternal health indicators were collected and analyzed in relation to neonatal outcomes. The findings revealed a significant association between maternal nutritional status and parameters such as birth weight, gestational age, and immediate neonatal health. The results emphasize the importance of balanced diet, iron and folic acid supplementation, and nutrition counselling during pregnancy to reduce adverse outcomes and promote healthier generations.

**Key Words :** Maternal nutrition, Fetal development, Birth outcomes, Dietary intake, Iron supplementation

**How to cite this article :** Lakhani, Pruthvi K. and Mehta, Daxaben (2025). The impact of maternal nutrition on fetal development and birth outcomes. *Internat. J. Plant Sci.*, 20 (1 and 2): 44-51, DOI: 10.15740/HAS/IJPS/20.1 and 2/44-51, Copyright@ 2025 : Hind Agricultural and Horticultural Society.

**Article chronicle :** Received : 17.05.2025; Revised : 03.06.2025; Accepted : 18.06.2025

### ► MEMBERS OF THE RESEARCH FORUM ◄

#### Author to be contacted :

**Pruthvi K. Lakhani**, Smt. S. C. U. Shah Home Science and C. U. Shah Arts and Commerce Mahila College, Wadhwan City, District Surendranagar, Saurashtra University, **Rajkot (Gujarat) India**

Email : [lakhlanipruthvi@gmail.com](mailto:lakhlanipruthvi@gmail.com)

#### Address of the Co-authors:

**Daxaben Mehta**, Smt. S. C. U. Shah Home Science and C. U. Shah Arts and Commerce Mahila College, Wadhwan City, District Surendranagar, Saurashtra University, **Rajkot (Gujarat) India**