

Nutrition during Pregnancy / Breast Feeding versus Obesity & Diabetes risk

-In 1990, Professor David J Barker from England proposed a hypothesis called “Fetal origins of adult disease-FOAD.” The theory stated that fetal nutrition during the second and third trimester of pregnancy and lack of optimal breastfeeding of the infant has a significant effect on the well-being of the individual from childhood to adulthood. Low birth weight and premature births increase the risk of high blood pressure, heart disease, and Type2 diabetes in the middle ages. Low birth weight infants have fewer muscles and more fat in their bodies and carry on this trait to adulthood, increasing the risk of abdominal obesity (excessive abdominal fat) and related diseases. Abdominal obesity is the most common type of obesity amongst the Indian population. It is the primary culprit in the development of Type2 diabetes, the most prevalent disease epidemic in India.

Large for gestation (LGA) children from overweight, obese, and pre-diabetic mothers lie at the other end of the spectrum in this respect. LGA children are more likely to be overweight, obese and develop high blood pressure, and a high level of harmful cholesterol early in life.

World Health Organization (WHO) has recognized the implication of Dr. Barker’s hypothesis on human health and stated that “Global burden of death, disability, and loss of human capital as a result of impaired fetal and infant development is huge and it impacts both developed and developing nations.”

The efforts for the prevention of obesity and Type2 diabetes, therefore, must be initiated right from pregnancy and during the early infancy care.

References

1. Calkins K et al. Fetal Origins of Adult Disease. Current Problems in Pediatric and Adolescent Healthcare. 41; 2011.
2. Malhotra N et al. Fetal Origins of Adult Disease. Review Article. DSJUOG. 8;2014 (pp 164-177).