

DIETARY STRATEGIES FOR GESTATIONAL DIABETES PREVENTION

Dhivya Chakrabarthy¹, Ruby Shrestha², Sanjay Kumar Sah³, Yasser H.A. Abdel-Wahab⁴, Prawej Ansari^{1,4}¹Department of Pharmacology, National Medical College Teaching Hospital, Birgunj, Nepal²Department of Obstetrics & Gynecology, National Medical College Teaching Hospital, Birgunj, Nepal³Department of Biochemistry, National Medical College Teaching Hospital, Birgunj, Nepal⁴Center for Diabetes Research, School of Biomedical Sciences, Ulster University, Coleraine, UK**Citation:**

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Gestational diabetes mellitus (GDM) is a common complication of pregnancy and a growing public health concern, particularly in low- and middle-income countries. Its increasing prevalence is associated with several factors, including advanced maternal age, obesity, sedentary lifestyles, urbanization, and unhealthy dietary patterns. GDM can cause serious maternal and neonatal complications, including hypertension, preeclampsia, and cesarean delivery, macrosomia, and birth complications. It also increases the mother's future risk of developing type 2 diabetes.¹ Healthy dietary habits and lifestyle modifications are important for preventing the risk of GDM and improving pregnancy outcomes. A balanced diet rich in whole grains, fruits, vegetables, legumes, lean proteins, and healthy fats, while limiting refined carbohydrates and added sugars, can support healthy glucose regulation. Therefore, early nutritional counseling and culturally appropriate dietary education should be integral component of antenatal care to reduce the risk of GDM and promote long-term health for mothers and their children.^{1,2}

Healthy dietary habits may reduce the risk of gestational diabetes mellitus (GDM) by improving glucose metabolism and insulin sensitivity. Balanced dietary patterns such as the Mediterranean and Dietary Approaches to Stop Hypertension (DASH) diets, which emphasize fruits, vegetables, whole grains, legumes, nuts, lean proteins, fish, and healthy fats, may help reduce the risk of GDM. Choosing low-glycaemic-index foods and foods rich in dietary fibre may support blood glucose control, whereas limiting refined carbohydrates, sugar sweetened beverages, ultra-processed foods, and unhealthy fats may reduce the risk of insulin resistance and improve

the overall metabolic health. Maintaining appropriate gestational weight gain and engaging in regular moderate physical activity, such as walking or swimming, may further support GDM prevention. Overall, a healthy diet combined with regular physical activity may help reduce the risk of GDM and promote maternal and neonatal health.^{3,4} Nutritional counselling before conception and throughout pregnancy can promote healthy eating habits, improve nutritional status, and support appropriate gestational weight gain management. Continued dietary education during antenatal care can encourage healthy food choices and adherence to recommended dietary patterns. Therefore, individualized nutritional counselling should be an important component of routine maternal healthcare to support both maternal and child health outcomes.^{1,2}

Integrating dietary counselling into routine antenatal care is an important strategy for reducing the risk of GDM and promoting maternal and neonatal health. Healthcare professionals can provide individualized advice on healthy eating, appropriate gestational weight gain, and blood glucose management. A multidisciplinary approach involving doctors, nurses, dietitians, and community health workers can strengthen nutrition education and lifestyle support. In countries such as Nepal, counselling should focus on affordable, locally available, and culturally appropriate foods. Personalised nutrition and community-based education may further strengthen GDM prevention strategies and promote long-term maternal health.³⁻⁵

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