Nutrition before and during gestation in pre-existing diabetes and in gestational diabetes

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The prevalence of diabetes in pregnancy has been increasing worldwide. The majority is gestational diabetes mellitus (GDM) with the remainder primarily preexisting type 1 diabetes and type 2 diabetes. Pregestational uncontrolled diabetes has a tremendous impact on the health of the fetus associated with congenital anomalies which may affect several organ systems. After organogenesis, maternal, fetal and neonatal effects include miscarriage, preeclampsia, macrosomia, hypoglycemia, respiratory distress syndrome and stillbirth. Also, diabetes in pregnancy may increase the risk of obesity and type 2 diabetes in offspring later in life. Moreover, Women with GDM are at high risk of developing type 2 diabetes after pregnancy.

Medical Nutrition Therapy (MNT) is the cornerstone of diabetes management in pregnancy. It is the only therapy for 40%-58% of women with GDM. The MNT provides an individualized nutrition plan to help control blood glucose and to promote appropriate gestational weight gain. During pregnancy, the nutritional goal is to provide adequate calorie intake and nutrients with guidance from the Dietary Reference Intakes (DRI) in order to support thedeveloping baby, while limiting episo des of hyperglycemia and avoiding hypoglycemic events and the production of ketones (especially for women with type 1 diabetes). Specific dietary recommendations are poorly studied during pregnancy and no data exists to support one dietary approach over another.

Last but not least, preconception dietary counseling is equally important and provides an opportunity to inform patients of the risk of diabetes in pregnancy and to use that time when the patient is most motivated to initiate lifestyle changes that will improve both pregnancy outcome and the patient's long-term health status.

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