Diabetes and Pregnancy

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All women of childbearing age with diabetes should be counseled about the importance of strict glycemic control prior to conception. Observational studies show an increased risk of diabetic embryopathy, especially anencephaly, microcephaly, and congenital heart disease, which increases directly with elevations in A1C. Spontaneous abortion is also increased in the setting of uncontrolled diabetes. While observational studies are confounded by the relationship between elevated periconceptional A1C and other poor self-care behaviors, the quantity and consistency of data are convincing and the recommendation remains to aim for an A1C <7% prior to conception to minimize risk. There are opportunities to educate adolescents of reproductive age with diabetes about the risks of unplanned pregnancies and the opportunities for healthy maternal and fetal outcomes with pregnancy planning. Targeted preconception counseling visits should include routine rubella, hepatitis B virus, and HIV testing and prescription of prenatal vitamins (with at least 400 μg of folic acid). Diabetes-specific management should include A1C, TSH, creatinine, and urine albumin-to-creatinine ratio testing; review of the medication list for potentially teratogenic drugs (i.e., ACE inhibitors, statins); and referral for an ophthalmologic exam.

For women with preexisting type 1 diabetes or type 2 diabetes who become pregnant, the followings are recommended as optimal glycemic goals if they can be achieved without excessive hypoglycemia: Premeal, bedtime, and overnight glucose 60–99 mg/dL, Peak postprandial glucose 100–129 mg/dL and A1C <6.0%. Insulin is the preferable agent for management of diabetes in pregnancy due to lack of long-term safety data for noninsulin agents. The physiology of pregnancy requires frequent titration of insulin to match changing requirements. In the first trimester, there is often a decrease in total daily dose of insulin. In the second trimester, rapidly increasing insulin resistance requires weekly or biweekly increase in insulin dose to achieve glycemic targets. In general, a small proportion of the total daily dose should be given as basal insulin and a greater proportion as prandial insulin. Insulin is pregnancy category B, except for glargine and glulisine as labeled C.

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