When blood glucose levels are high, glucose molecules attach to the hemoglobin in red blood cells. The longer hyperglycemia occurs in blood, the more glucose binds to hemoglobin in the red blood cells and the higher the glycated hemoglobin. Once a hemoglobin molecule is glycated, it remains that way. A buildup of glycated hemoglobin within the red cell, therefore, reflects the average level of glucose to which the cell has been exposed during its life-cycle. Diagnosis of
diabetes during pregnancy continues to require fasting and glucose tolerance measurements for gestational diabetes, and not the glycated hemoglobin. Modification by diet[edit]. Hemoglobin A1c is now standardized and traceable to IFCC methods HPLC-CE and HPLC-MS. See the article "Association between blood glucose level derived using the oral glucose tolerance test and glycated hemoglobin level" in volume 31 on page 535. See Article on Page 535-542. There are two main techniques to assess the effectiveness of a management plan on glycemic control: SMBG and A1C measurement [9]. Solid knowledge of the glycemic control status of a patient with diabetes is very important for the initiation of hypoglycemic agents, dose adjustment of their medication, prevention of hypoglycemia, and guidance in treatment decisions [9]. In addition, the Korean Diabetes. Hemoglobin A1c and mean glucose in patients with type 1 diabetes: analysis of data from the Juvenile Diabetes Research Foundation continuous glucose monitoring randomized trial.