

Age	Value* before Meals (mg/dl)	Value* at Bedtime/ Overnight (mg/dl)	Hemoglobin A1C (%)	Implications
Toddlers and preschoolers (<6 years)	100 to 180	110 to 200	≤8.5% (but ≥7.5%)	High risk and vulnerability to hypoglycemia
School age (6 to 12 years)	90 to 180	100 to 180	<8%	Risks of hypoglycemia and relatively low risk of complications before puberty
Adolescents (>12 years) and young adults	90 to 130	90 to 150	<7.5%	Risk of hypoglycemia Developmental and psychological issues

*Plasma blood glucose goal range.

Modified from American Diabetes Association: Standards of medical care in diabetes, *Diabetes Care* 28(Suppl):S4–36, 2005.

Blood glucose.

Self-monitoring of blood glucose (SMBG) has improved diabetes management and is used successfully by children from the onset of their diabetes. By testing their own blood, children are able to change their insulin regimen to maintain their glucose level in the euglycemic (normal) range of 80 to 120 mg/dl. Diabetes management depends to a great extent on SMBG. In general, children tolerate the testing well.

Glycosylated hemoglobin.

The measurement of glycosylated hemoglobin (hemoglobin A1C) levels is a satisfactory method for assessing control of the diabetes. As red blood cells circulate in the bloodstream, glucose molecules gradually attach to the hemoglobin A molecules and remain there for the lifetime of the red blood cell, approximately 120 days. The attachment is not reversible; therefore, this glycosylated hemoglobin reflects the average blood glucose levels over the previous 2 to 3 months. The test is a satisfactory method for assessing control, detecting incorrect testing, monitoring the effectiveness of changes in treatment, defining patients' goals, and detecting nonadherence. Nondiabetic hemoglobin A1C values are generally between 4% and 6% but can vary by laboratory. Diabetes control for children depends on age, with hemoglobin A1C levels of 6.5% to 8% indicating a slightly elevated but acceptable range (Silverstein, Klingensmith, Copeland, et al, 2005).