

兒童自我血糖監測

Self-Monitoring of Blood Glucose (SMBG)

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Introduction

One of the main goals of the management of type 1 diabetes in the pediatric population is to avoid extremes of glycemic excursion. By treating blood glucose levels that are outside of a predetermined age-specific target range with supplement oral glucose or extra insulin, children and teenagers can minimize the episodes of both hypoglycemia and hyperglycemia that can impair judgment and learning and lead to coma, convulsions, recurrent ketoacidosis, and the long-term microcirculatory and neuropathic complication of this disease.

INDICATIONS

Indications for Self-Monitoring of Blood Glucose

Pregnant diabetic patients

Unstable diabetes

Propensity to severe ketosis or hypoglycemia

Propensity to hypoglycemia without usual warning symptoms

Intensive treatment program (eg, subcutaneous insulin infusion or multiple injections)

Abnormal renal glucose threshold

ADA Consensus Statement

Adjusting time of insulin injection

Supplemental short-acting insulin injections used to normalize blood glucose levels

outside of the patient's target range.

Blood glucose (mg/dl)	AM	PM	Time to wait to eat after shot
< 70	-1	-1	Take juice
71-150	Base dose	Base dose	30min
151-200	+1	+0.5	30min
201-250	+2	+1	45min
251-300	+3	+1.5	60min
301-350	+4	+2	60min
351-400	+5	+2.5	60min

Monitoring frequency

we recommend that the patient carry out blood glucose determinations before each meal and at bedtime. In addition, periodically, blood glucose determination at 2 - 3a.m.should be obtained to document whether hypoglycemia is occurring during sleep.

Goals

Table Goals of Intensive Insulin Therapy and Guide for Adjusting Conventional or Pump Therapy*

Glucose	Therapy goal	Adjustment	Adjustment
Time	mg/dl	Conventional	Pump
Fasting	80-120	Ultralente or intermediate	Basal rate
Before meals	70-120	Check meal & snack timing & profile of NPH	
2hr p meals	≤ 140	Premeal injection	Bolus dose
2 - 4 AM	70-120	NPH or Ultralente	Basal rate

*SMBG must be performed 4 - 5 times a day and 2 or 3 snacks are taken in addition to regularly timed meals.

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