

Urine.

Urine testing for glucose is no longer used for diabetes management; there is poor correlation between simultaneous glycosuria and blood glucose concentrations. However, urine testing can be carried out to detect evidence of ketonuria.

Nursing Alert

It is recommended that urine be tested for ketones every 3 hours during an illness or whenever the blood glucose level is over 240 mg/dl when illness is not present.

Nutrition

Essentially, the nutritional needs of children with diabetes are no different from those of healthy children. Children with diabetes need no special foods or supplements. They need sufficient calories to balance daily expenditure for energy and to satisfy the requirement for growth and development. Unlike children without diabetes, whose insulin is secreted in response to food intake, insulin injected subcutaneously has a relatively predictable time of onset, peak effect, duration of action, and absorption rate depending on the type of insulin used. Consequently, the timing of food consumption must be regulated to correspond to the timing and action of the insulin prescribed.

Meals and snacks must be eaten according to peak insulin action, and the total number of calories and proportions of basic nutrients must be consistent from day to day. The constant release of insulin into the circulation makes the child prone to hypoglycemia between the three daily meals unless a snack is provided between meals and at bedtime. The distribution of calories should be calculated to fit the activity pattern of each child. For example, a child who is more active in the afternoon will need a larger snack at that time. This larger snack might also be split to allow some food at school and some food after school. Food intake should be altered to balance food, insulin, and exercise. Extra food is needed for increased activity.

Concentrated sweets are discouraged; and because of the increased risk of atherosclerosis in persons with DM, fat is reduced to 30% or less of the total caloric requirement. Dietary fiber has