## **Insulin Pump Transforms Lives of Diabetes Patients**

hen Barbara Taylor of Hooksett walked down the aisle at her daughter's wedding this summer, no one suspected that under her form-fitting platinum dress her insulin pump was attached to her thigh, providing a steady flow of insulin and keeping her blood sugar level under control. Before last November, when she became the first patient at the Diabetes Resource Institute at Catholic Medical Center to use the insulin pump, a day focused primarily on the bride and groom would have been impossible for the Taylor formity

or a pocket. A length of small tubing runs from the pump under the patient's clothes to the insertion site, usually at the abdomen, thighs, buttocks or upper arm. Here, a tiny cannula inserts under the skin and can remain for two to three days before being changed. A reservoir inside the pump, which contains a three-day supply of insulin, delivers a continuous basal or base rate of insulin, while the buttons on the pump allow patients to administer a bolus or larger dose at meals. The bolus dose depends on the amount and types of foods eaten.

A piece of fruit contains about

15 grams of carbohydrates and

"Using the pump is not diffi-

would usually require a bolus

dose of one unit of insulin.

cult as it's simply a change in

insulin delivery for patients who

have had type I diabetes for quite

BS, CDE, Assistant Diabetes Nurse

a while," says Diane Schor, RN,

Educator at CMC's Diabetes

Taylor family.

A type I diabetic for the past 33 years, Barbara frequently had several low blood sugar episodes a day with traditional syringebased insulin therapy. While a normal blood sugar level is 60 to 110 milligrams per deciliter, her level often dropped to 20 or 30 mg./dl. before she had any sensation that something was

## Insulin pump candidates

- Have type I diabetes
- · Have had poor glucose control with conventional therapy
- · Desire a flexible lifestyle
- Are motivated to monitor blood sugar at least four, and up to eight, times a day
- Understand carbohydrate counting
- · Have urine ketone testing equipment and glucagon in place

wrong. Now, with the insulin pump, her level dips only a few times a week, and she usually recognizes the symptoms when her level drops to 60 or 70 mg./dl.

Using the pump has given Barbara new control of her life. Last Christmas was the first time that her family was able to sit down to eat when they wanted. "The pump has made my life so much more versatile," she says. "I finally have a life now."

## How the pump works

The size of a beeper, an insulin pump can be hooked on a belt



Diane Schor (left) discusses using the insulin pump with patient, Barbara Taylor.

Resource Institute. "They already know the importance of diet and exercise and their need for insulin and ketone testing, as well as all the other skills and concerns related to diabetes."

## **Getting started**

First, a patient is referred to the Diabetes Resource Institute by an endocrinologist for an assessment of educational needs. Then, the patient learns how to insert and use the pump and has a trial run with saline solution. The next week, the patient begins insulin therapy and is monitored by telephone two or three times each week for the next several weeks. Once patients get used to the insulin pump, they find it less time consuming, claims Schor. She estimates that within six to eight weeks, patients feel comfortable and confident using the pump.

In June, the Diabetes Resource Institute held its first quarterly meeting of its Insulin Pump Support Group. The session allowed pump users to share experiences and learn more about advanced features of the pump.

Barbara Taylor, who also wore her insulin pump with ease at the beach this summer, claims that the pump's steady flow of insulin has not only reduced her varying high and low blood sugar levels, but has made her temperament much more even as well. "I'm so glad to be back to my happy self," she says. And she's sure her family is, too. (2)

For more information on the insulin pump or the support group, contact the Diabetes Resource Institute at Catholic Medical Center at **663.6236**.