

BACKGROUND

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Questions and Answers About Pump Therapy

What is an insulin pump?

An insulin pump is a small, battery-operated device (about the size of a pager) that can replace insulin injections for patients managing diabetes. An insulin pump more closely mimics a healthy pancreas by continuously delivering small doses of insulin around the clock, even while a patient sleeps. Pump users can also deliver insulin at the touch of a few buttons, enabling them to improve their blood sugar (glucose) control.

Why pump therapy?

Insulin pumps enable tighter glucose control than any other insulin delivery method for many diabetes patients. Maintaining tight blood glucose control is associated with a reduction in the incidence and severity of long-term diabetes complications (such as blindness, impotence, kidney failure, amputation and heart disease) and lower healthcare costs. Insulin pumps can also provide better quality of life as compared to traditional injection therapy.

How does an insulin pump work?

A pump delivers insulin to the body from a reservoir inside the pump through a thin plastic tube (called an infusion set). Most infusion sets are worn in the abdominal area and use a tiny, flexible tube, called a cannula, which is easily inserted into the skin with an insertion device. Patients generally refill their insulin and change their infusion sets every two to three days.

A pump automatically delivers a constant rate of insulin – called a “basal rate” – to keep blood glucose in the desired range between meals and during the night. A pump is easy to program and users can customize a variety of insulin delivery rates to match their particular lifestyle needs.

What are the benefits of pump therapy?

- The pump helps achieve tight glucose control. An insulin pump is an excellent tool for helping people improve glucose control. Diabetes patients can easily adjust insulin to keep glucose levels within a near-normal range. A pump can help patients avoid hyperglycemia (high blood sugar), which can degrade health over time, and hypoglycemia (low blood sugar), an acute condition that can place a patient at risk of coma or death, particularly if it occurs at night while a patient sleeps.
- The pump more closely mimics a healthy pancreas. Just as a healthy pancreas delivers insulin every 10 to 14 minutes, an insulin pump delivers insulin continuously with minimal variability. A pump delivers insulin around the clock and allows patients to program multiple basal rates depending on their individual needs.

- The pump is precise and accurate. Medtronic MiniMed insulin pumps deliver insulin precisely and accurately in .05 or 0.1 unit increments, which is nearly impossible with traditional injection therapy.
- With an insulin pump, people with diabetes can enjoy a more flexible lifestyle. Pump users can program insulin delivery at mealtimes, and adjust or stop insulin delivery upon demand to accommodate exercise schedules or lifestyle needs. Patients using pump therapy can eat what they want, when they want – something almost unheard of in patients using insulin shots, who must follow rigid injection and meal schedules associated with traditional injection therapy.

How important is tight glucose control?

Tight glucose control helps people with diabetes maintain good health, as proven by numerous studies, including the landmark Diabetes Control and Complications Trials (DCCT). In that study, diabetes patients who maintained near-normal glucose control significantly reduced their risk of long-term complications. The risk of diabetic eye disease decreased by up to 76 percent, nerve disease was reduced by up to 60 percent, and kidney complications were reduced by up to 56 percent. Additionally, a DCCT follow-up study revealed that near-normal control can delay the onset of complications from diabetes by an average of 15 years and prolong life an average of five years.

How many people wear insulin pumps?

Approximately 200,000 Americans use pump therapy, and an estimated 300,000 people use insulin pumps worldwide.

Are insulin pumps covered by insurance?

Insulin pumps are covered by most insurance plans. Medtronic MiniMed has an extensive payor contract base. Medicare also covers insulin pumps for diabetes patients meeting eligibility criteria. Medtronic MiniMed provides insurance verification, billing and reimbursement assistance to its customers to facilitate the adoption of insulin pump therapy.

How can a diabetes patient obtain an insulin pump?

An insulin pump requires a prescription from a physician. Physicians and diabetes patients can contact Medtronic MiniMed to obtain information about a pump by calling 1-866-MiniMed, or (818) 362-5958 outside the United States, or by visiting their website at www.minimed.com. Medtronic MiniMed is dedicated to customer service, providing the paperwork, billing, training for pump initiation and educational support for physicians and diabetes patients.

For a brief statement about the use of the Insulin Pump Therapy, see the enclosed insert.

¹ Lancet 2000; 356(9231): 757-761.

² Approved for physician use only.