

## **INSULIN PUMP IS A MODERN WAY OF INSULIN THERAPY IN PATIENTS WITH TYPES 1 DIABETES MELLITUS**

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Insulin pumps (IP) are having recently become the treatment of choice for the most favorable course of the types 1 diabetes mellitus. Today in the world, over 70,000 people use IP. IP a new medical device has a very small volume, intended for insulin to the patient exposed to the program in advance, with the catheter and replacement capacity are attached to insulin in the human body and are removed only when necessary, such as taking a shower, so as not to disrupt the program. Administration of the hormone is by using the remote control. Catheter after entering the needle under the skin attached patch on the belly skin, and the unit with the capacity (connected to a catheter tube) on the belt. An IP allows the replacement of slow-acting insulin for basal needs with a continuous infusion of rapid-acting insulin.

The insulin pump delivers a single type of rapid-acting insulin in two ways: a bolus dose that is pumped to cover food eaten or to correct a high blood glucose level; a basal dose that is pumped continuously at an adjustable basal rate to deliver insulin needed between meals and at night.

Indications for transfer to a pump-action insulin therapy: for labile diabetes; tendency to hypoglycemia or hyperglycemia; increased glucose levels in the early morning hours; impairment (delay) of mental development; personal motivation.

Benefits of IP therapy: more flexibility for your lifestyle by not having to follow a strict schedule for eating, activity, and insulin injections; fewer injections; improved A1; fewer hypoglycemic episodes (low blood sugars); reduced long-term complications related to diabetes; better predictability for insulin absorption; IP deliver insulin more accurately than injections; makes diabetes management easier – if your glucose level is high or you feel like eating, figure out how much insulin you need and push the little button on the pump; using an IP eliminates unpredictable effects of intermediate- or long-acting insulin.

Although there are many good reasons as to why using an IP can be an advantage, there are some disadvantages. IP can cause weight gain; can cause diabetic ketoacidosis if your catheter comes out and you don't get insulin for hours; can be expensive; can be bothersome since you are attached to the pump most of the time, can require a hospital stay or maybe a full day in the outpatient center to be trained. Even though using an IP has disadvantages, most pump users agree the advantages outweigh the disadvantages.