bcdiabetes.ca
Patient Care + Research + Clinical Trials

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Introduction to Insulin Pumps

Insulin pumps are devices that pump or "infuse" insulin into the skin of a person who requires insulin for the management of their diabetes. Prior to 2020-May-31 insulin pumps had to be told what to do: they were not magic devices; pump users had to test their sugar frequently, count their carbs and program their pumps. In other words, pumps took a lot of hard work.

That all changed with the arrival of "looping" apps in late 2019 that took sugar readings from a CGM device and used them to automatically instruct the insulin pump to give just the right amount of insulin so that sugar is in a safe zone: not too high and not too low. This was the "artificial pancreas" that has been awaited for almost a century since the discovery of insulin by Canadians Banting and Best in 1922. For more information on the "artificial pancreas" see this article on closed-loop CGM-coupled pump systems.

There should be no rush to go to an insulin pump unless you are ready to use a closed-loop system. Most diabetes specialists believe that a highly motivated, well-trained and diligent individual with Type 1 diabetes using old school multiple daily shots of insulin in combination with a CGM/sensor can get almost as good a level of diabetes control and quality of life as a similarly motivated, trained and diligent individual using a traditional non-closed loop insulin pump with CGM/sensor technology.

BCDiabetes recommends that insulin pumps only be considered for individuals currently using CGM/sensor technology and taking multiple daily shots of insulin. The only substitute for CGM for individuals considering an insulin pump is to do conventional finger-poke testing 10-15 times per day.

All insulin pump users need to have an emergency back-up should the pump system fail. This includes an insulin pen with basal/long-acting insulin and a means of giving rapid/mealtime insulin (either syringes or a pen of rapid insulin). Should the pump fail a single daily dose of long-acting insulin equivalent the usual 24 hour basal pump insulin should be given, and meal-time boluses of rapid insulin. Regardless of whether glucose is measured with CGM or with finger-poke, if glucose values are consistently > 12 with feelings of sickness or malaise, individuals should begin sick day management.

As of 2022-Apr-18 four insulin pumps are covered by BC Pharmacare. Eligibility for BC Pharmacare coverage is complex because of the deductible - be sure to read the fine print.

Short URL = https://bit.ly/BCDpumps