# **Insulin Therapy 101**



Taking insulin is required for people with Type 1 diabetes. Sometimes people with Type 2 diabetes also need to take insulin. Your healthcare provider can help you find the best insulin routine for you.<sup>1</sup>

### How Can You Take Insulin?1

#### Multiple Daily Injections (MDI)

#### **Syringes**

Syringes are devices that are used to inject insulin into your body through a needle. Syringes require you to fill them with the particular insulin you need.<sup>1</sup>

#### **Insulin Pens**

Insulin pens contain a cartridge of insulin that is inserted into the pen. The dose can be dialed on the pen to the amount needed and insulin is then injected through a needle into the skin.<sup>1</sup>

#### Insulin Pumps/Pods



#### Insulin Pumps/Pods

Insulin pumps/Pods deliver a continuous amount of insulin 24 hours a day through a cannula placed under the skin. You also deliver additional insulin doses for mealtime or correction from the insulin pump.<sup>2</sup>

### **How Does MDI Differ From Pump Therapy?**

#### Type of Insulin

With MDI, 2 types of insulin are commonly prescribed.<sup>1,2</sup>

- Long acting insulin is taken to provide a background amount of insulin (basal insulin) for what your body needs throughout the day. Long acting insulin reaches the bloodstream a few hours after injecting and can lower glucose levels over 24 hours.
- Rapid acting insulin is taken to cover the rise in blood glucose due to eating. Since this type of insulin reaches the bloodstream quickly and is out of your system in about 4 hours, it's usually taken at mealtime and/or for corrections. Rapid acting insulin taken at mealtime and/or for corrections is called a **bolus**.

With an insulin pump, only rapid acting insulin is used. Rapid acting insulin will cover both your basal and bolus needs.<sup>2</sup>



#### **Basal Rates**

Insulin pumps are programmed to deliver personalized basal rates, measured in units per hour (U/hr), throughout the day depending on your needs. For example, a higher basal rate may be programmed in the early hours of the morning to account for the higher BGs related to Dawn Phenomenon.<sup>2</sup>

#### The exact amount of insulin your body needs changes depending on<sup>2</sup>:

• Activity • Stress • Mealtimes • Illness • Schedule

Your healthcare provider will help you adjust your basal rates to address these changing needs.

When using long acting insulin as your basal insulin (with MDI), you are not able to adjust your insulin as easily as you can with an insulin pump or Pod.

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#### **Bolus Doses**

Along with your basal rate, you can deliver bolus doses from your insulin pump for mealtimes and/or corrections. The good news is insulin pumps have bolus calculators that help you determine the right dose. All you need to do is enter your current blood glucose and amount of carbohydrates in your meal. The insulin pump will suggest a bolus dose based on your personalized settings.<sup>2</sup>

## Is Insulin Pump Therapy Right for You?

#### Here are some things to consider<sup>2</sup>:

- Fewer injections
- More precise doses of insulin; Insulin pumps can deliver fractions of a unit, no need to round your calculated doses
- Bolus calculators can suggest how much insulin you need for mealtime and/or corrections
- May help improve A1C
- Bolus delivery is easy and discrete, no need to plan when and where to inject
- Mealtime flexibility
- May help reduce severe low blood glucose episodes
- Insulin therapy that fits your lifestyle, with advanced features that allow you to adjust your dose on the go!

#### Things to ask yourself

- Would you like to give fewer injections each day?
- Do you sometimes forget to give a bolus injection when you are out?
- Are you tired of rounding your insulin dose up or down?
- Do you find it difficult to adjust your dose for activity without going too low?
- Is your schedule different day to day?
- Do you have any injection site irritation or pain?

#### REFERENCES

1. American Diabetes Association Standards of Medical Care in Diabetes 2020. *Diabetes Care*. 2020; 43 (Supplement 1); S82,S98, S99 2. Walsh, J, Roberts, R. *Pumping Insulin*. 6th ed. Torrey Pines Press. 2017.

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