

# **Starting an Insulin Pump Checklist**

- □ Talk to your provider about an insulin pump
  - Ask if they recommend a specific pump for you
- □ Complete the insulin pump education
  - You have 3 options to learn more about the pump
    - Attend an in-person pump class (Call 801-662-1640 option #2 to register)
    - Attend a virtual pump class (Call 801-662-1640 option #2 to register)
    - Read the pump education documentation packet (Self-paced)
- □ Scan the QR code and complete Pump Quiz and the Pump Waiver online
- □ Set up an account on the Intermountain Health app on your phone
  - All of our communication regarding the pump takes place through the Intermountain Health patient portal
- □ Wait for the clinic to contact you with final approval from your provider
  - When we contact you, you'll be given the information you need to order the pump
- $\Box$  Order the pump
  - Order saline if you chose T:Slim or Medtronic

□ Once your **T:SLIM OR MEDTRONIC ARRIVES AT YOUR HOME,** please call scheduling at (801) 662-1640, option #2 to schedule your pump start. You will need to schedule 3 appointments including:

- Visit 1: Insulin Pump Start
- Visit 2: Pump Follow-up Visit with Provider
- Visit 3. Advanced pump class

Note: The T:Slim or Medtronic pump trainer will reach out to schedule your saline start. **This must be completed before you come to your Insulin Pump Start.** 

□ Once your **OMNIPOD ARRIVES AT YOUR HOME,** scan the QR code in the Intro Kit box and complete the onboarding online. This will notify the pump trainer and they will reach out to you to schedule your **insulin pump start**. Once that is scheduled, we will reach out to schedule your **pump follow-up visit with a provider**, and **advanced pump class.** 

To increase the likelihood that your pump will be processed on your 2023 health insurance policy: THE WAIVER AND QUIZ ARE DUE BY NOVEMBER 10, 2023 THE LAST DAY TO ORDER PUMP FOR THIS YEAR'S DEDUCTIBLE IS NOVEMBER 17, 2023

# **Insulin Pump Comparison Sheet**

Model	Medtronic 780G	Omnipod DASH	T-slim X2 with Basal IQ
		Omnipod 5	T-slim X2 with Control IQ
Description			
Insulin Capacity	300 units	200 units	300 units
Wearability	Tubed pump with multiple infusion set options for 2-3 day wear or new 7 day wear set/ flexible wearability/can disconnect tubing when needed	Tubeless, pod stays in place for 2-3 days	Tubed pump with multiple infusion set options for 2-3 day wear/flexible wearability/can disconnect tubing when needed
CGM Capabilities	Connects with Guardian 4 Link CGM	Omnipod DASH: no CGM	Connects with Dexcom G6 CGM
	(7 day sensor)	Omnipod 5: Connects with Dexcom G6 CGM (10 day sensor)	(10 day sensor)
Basal Automation	Auto basal calculated based on total	Omnipod 5 ONLY: Adaptive basal	Basal rate modulates when the 30
	insulin delivery from past 2-6 days	calculated from total daily insulin and	minute predicted glucose is outside of
		60 minute predicted glucose; updates with each pod change	treatment range
Automatic Correction Boluses	Automatic correction boluses every 5 minutes	No automatic correction boluses	Control IQ only: 60% of calculated correction dose given automatically every 60 minutes
Smartphone Capabilities	MiniMed Mobile app (iOS or Android)	Omnipod Classic and DASH: no app	T:connect mobile app (iOS and
	for monitoring CGM and pump data	Omnipod 5: Android Omnipod 5 App	Android) allows for monitoring CGM
	CareLink Connect app for parent /	(no iOS) or Controller; Smartphone	and pump data; mobile bolus feature.
	others to monitor CGM and pump	required for Dexcom G6 app.	Parent / others can monitor CGM data
	data.	Parent / others can monitor CGM data	through the Dexcom follow app.
		only through the Dexcom follow app.	
FDA Approved	Pump only: all ages	OmniPod DASH: all ages	Basal IQ: all ages
	All features: 7+ years old and >8 units	OmniPod 5: 2+ years old	Control IQ: 6+ years old, >10 units per
	of insulin per day		day and 55+ pound

# **INTRODUCTION TO INSULIN PUMPS**

# What is an Insulin Pump?

- An insulin pump is a device that releases insulin into your body and tries to mimic the way your body naturally releases insulin.
- Insulin pumps only provide rapid-acting insulin. There is no long-acting insulin in the pump.
- Insulin is delivered in two different ways: basal and bolus insulin.



- Basal insulin is delivered in small increments every 5
   minutes throughout the day and night. This takes the place of your long-acting insulin.
- Bolus insulin is given when you enter your blood sugar or the amount of carbohydrates you are eating into the pump. The pump delivers a dose based on how many carbs you are eating or if your blood glucose is high enough to need a correction dose.
- You and your provider will work together to program the pump for both basal and bolus doses.
- The pump is attached to your body by inserting a small needle under the skin that houses a soft, flexible tube called a cannula.
  - The needle is immediately removed, leaving the cannula under your skin.
  - The cannula is held in place with a sticker that is placed on top of your skin.
  - On a tubed pump, the cannula and sticker together are called an inset or a pump site.
  - It is called a pod on a tubeless pump.
  - Pump sites or pods are changed by you at home every 2 to 3 days.
  - You can put a pump site or pod anywhere that you can give an injection of insulin such as your arms, belly, buttocks, or thighs.



Advantages of an Insulin Pump	Expectations with an Insulin Pump
<ul> <li>No more shots.</li> <li>You can dose as small as 0.025 units of insulin. This gives you more accurate blood sugars because the dosing is more specific.</li> <li>It is easy to dose for meals and snacks. For picky eaters you can dose for part of the meal prior to eating and for the rest of the meal after eating.</li> <li>You can give a correction at any time with the touch of a finger. You no longer need to wait 3 hours between corrections as the pump keeps track of insulin on board.</li> <li>It helps manage early morning high blood sugar, also called the "dawn phenomenon."</li> <li>There are features on some pumps that will automatically give insulin if your blood sugar is high or decrease/stop insulin to help prevent lows.</li> <li>Children who wear an insulin pump can receive insulin at school at times other than breakfast and lunch, such as a correction dose or insulin for snacks at parties.</li> </ul>	<ul> <li>You will need to enter the amount of carbs you are eating and your blood sugar into your pump each time you eat.</li> <li>You will need to change the pump site every 2-3 days.</li> <li>There is a higher risk of diabetic ketoacidosis (DKA) on a pump if it stops working. You do not have any long-acting insulin in your body, so if the pump is not delivering insulin properly you could develop DKA. You can avoid this by watching your blood sugars and following your clinic's rules for failed pump sites.</li> <li>Training is essential to know how to safely use the pump.</li> <li>Using an insulin pump is more expensive than injections.</li> <li>An insulin pump may not be right for you if:         <ul> <li>You are not willing to enter carbs and blood sugars.</li> <li>You are unable to come to the required visits including the initial pump training and the follow-up appointments.</li> </ul> </li> </ul>

One thing to keep in mind: You will always need to have rapid-acting and long-acting injectable insulin on hand in case the pump stops working.

### **Pump features**

- All pumps have the same basic features. The difference is in their specialty features.
- All pumps include basal rates, carb ratios, correction doses, and targets that can be adjusted as needed.
- They also may include options for temporary basal rates, extended boluses for high fat/protein meals, a bolus history, insulin on board (IOB), exercise/activity mode and sleep mode.
- Insulin on board is the amount of insulin that is already inside your body but is still working on your blood sugars. If
  you receive a bolus of insulin through the pump for carbs or a high blood sugar level, the pump will automatically take
  this IOB into account. This feature is what allows children to receive insulin at school outside of breakfast and lunch
  times.

# How much time and effort does pump therapy require?

Starting pump therapy requires commitment. It is typical to review blood sugars multiple times throughout the first few weeks, as you did soon after diagnosis. This often means a lot of interruptions during the workday and during family time. Think about your schedule and time commitments. Try to time a pump start apart from other significant events, like vacations, the first day of school, or having a baby.

Once you start your pump, you will continue to count your carbs, enter your carbs and blood sugar into your pump, and give yourself insulin each time you eat. You will need to change your pump site every 2-3 days and troubleshoot pump issues such as failed pump sites, low battery and more. However, the pump does provide more tools to help you more easily manage your diabetes.

# Self-management skills you will need before starting insulin pump

- You should understand insulin action time, carbohydrate counting and how to treat high and low blood sugars.
- Sick Day Management- how/when to check for ketones and how to treat them. Sick day gets more complicated
  on a pump as you no longer have long-acting insulin to fall back on. For this reason, you need to already know
  how to manage your sick day with injections.

# Does the pump know my sugar level and automatically deliver the right amount of insulin?

- Some do, and some do not, but with all pumps you will still need to count your carbs and take insulin when eating or correcting for a high blood sugar.
- The pumps that do give auto corrections cannot do so until your blood sugar has started rising, which is after eating. This data must come from your CGM. Read through the Pump Comparison Sheet below to see which pumps have this feature.



• If you give yourself insulin prior to eating, your blood sugar will not rise as high and will return to your target range more quickly.

# Do I have to be attached to the pump all the time?

It is possible to temporarily disconnect yourself from the pump such as when bathing, swimming, or some other physical activities.

- You can be disconnected from your pump for up to 3 hours. If you are disconnected for more than 3 hours, you will need rapid-acting insulin every 3-4 hours for meals and correction. If you plan to be disconnected for more than 24 hours, you will need to take long-acting insulin. You may restart the pump 24 hours after your last long-acting dose.
- You can remove your pump and go on a "pump break" anytime you like if you do it in 24-hour time periods and take your long-acting insulin as soon as you remove your pump. If you go to the beach for 3 days, you can return to injections for those 3 days and then go back on your pump afterwards. When we start your pump, we will train you on how to take pump breaks.

# Where can I wear an insulin pump?

You can attach your pump site or pod anywhere you can give an injection of insulin including your arms, belly, buttocks, or thighs. The pump itself can be attached to your clothing, belt, or pants. It can also be worn in a fanny pack or placed in your pocket. Many children choose to wear a type of fanny pack.



### Pump site options:

- Traditional 90-degree angle pump sites work for most children, but 30-degree sites (called angled sites) can be better for those who are slim or athletic.
- When you order your pump, you will receive either 1 box of pump supplies as a 30-day supply or 3-5 boxes as a 90-day supply. When ordering your pump, you can choose to order the 90 degree or angled sites. If you are not sure which one is best for your child, you can get a variety. This can only be done if your insurance will allow you to order a 90-day supply.

### Pump features: All pumps have the following features

Basal	Rapid-acting insulin that the pump delivers continuously during the day and night, every 5		
	minutes. This takes the place of your long-acting insulin.		
Carb ratios based on the	Example: If you have a 1:20 carb ratio for breakfast and a 1:15 carb ratio for lunch and		
time of day	dinner the pump will be set up to use the 1:20 until 11am and the 1:15 after 11am		
Correction dose	Your regular correction dose can be given any time you enter your blood sugar into the		
	pump and there is not already sufficient insulin on board to deal with your current blood		
	sugar		
Target	Your blood sugar will be corrected down to this target		
Reverse correction	If your blood sugar is already low when entering carbs into your pump, the pump will		
	subtract insulin from the dose to bring your blood sugar back into a normal range		
Bolus history	This is a history of when the past 30 boluses were given		
Insulin on board (IOB)	Insulin that is still in your body but is still working on bringing your blood sugar down. This		
	is the reason you can be given a correction at school at times other than breakfast and/or		
	lunch. The pump will determine IOB and adjust the recommended dose based on the		
	IOB.		
Temporary basal rates	Used to increase or decrease a basal rate for a temporary period, such as sick day or		
	sports		

# Which Pump Is Best?

All insulin pumps have benefits and drawbacks. Your choice will depend on what is most important to you. Since most insurance companies will only allow you to get a new pump every 4 years it's important to find one that works for you now and will fit your needs over the next 4 years.

# Some things to consider:

- Which is best for your lifestyle:
  - A tubed or tubeless pump
  - Communication of pump with a continuous glucose monitor (CGM).
  - Automatic corrections when connected to specific CGM's.
- Amount of insulin: pumps hold either 200 or 300 units of insulin.
- Pump sites for all pumps are replaced at home every 2 to 3 days based on which pump you use.
- The T-slim and Medtronic pumps come with an automatic 4-year warranty which covers replacement of the pump for any reason other than loss of the pump or intentional damage.
- The Omnipod is a prescription and does not include the warranty. Many insurance companies will not cover a new pump for 4 years after you first fill your Omnipod prescription.
- Consider how your child will grow and change over the next 4 years when determining which pump to order

# Paying for Your Pump

- Most insurance companies cover insulin pumps, but your cost will be determined based on your insurance plan, your deductible, and your out-of-pocket max. If your insurance plan has a high deductible, you may need to pay a big part of the cost. Your policy may cover only certain pumps, so be sure to check.
- If you have trouble paying for an insulin pump, some organizations can help. Ask your doctor for recommendations. Some pump companies may also accept monthly payments. You will need to check with them prior to ordering your pump.

### You Can Choose

• Using a pump is an option, not a requirement. Whatever treatment you use, you can change your mind. Many people use their pump continuously, and others switch to shots when they go on vacation, want infusion sites to heal, or just want a break from their insulin pump.

# **Requirements for ordering an insulin pump**

Purchasing an insulin pump should be done thoughtfully and after educating yourself.

- Once you decide to move forward, please complete the pump quiz and pump waiver using the QR code at the end of this document.
- We will then check with your provider to obtain final approval.
- Once your provider has given their approval, we will contact you with the information you need to order your pump.

Your pump will be mailed to your home. Once it arrives remember not to start using it until you've been properly trained. Use of an insulin pump without proper education can lead to diabetic ketoacidosis (DKA) and hospitalization.

# Who will teach me how to use the pump?

### **REQUIRED CLASSES:**

- Mechanical Training Omnipod
  - Once you have the pump, scan the QR code in the box and complete the required onboarding; this will notify the pump trainer that you need to be scheduled for your pump start.
  - You will complete an online simulated pump education prior to meeting with the trainer.
- Mechanical Training or "Saline Start" T:Slim/Medtronic
  - A virtual or in-person, 2-hour training provided by pump trainers from each pump company. This is done during regular business hours.
  - You will wear the pump with saline and will continue to give injections for a few days prior to your actual pump start with insulin.
  - Be sure to call the Primary Children's Outpatient Pharmacy prior to the saline start at (801) 662-1680 and have them ship the saline to your home. This saline is required for your saline start.
- Visit 1: Insulin Pump Start
  - An in-person 2-hour pump training where insulin will be started in your pump.
  - Please bring a new vial or pen of rapid-acting insulin, your pump, infusion set/cartridge or pod, and pump charging cord (if applicable) to this appointment.
  - DO NOT take your long-acting insulin the night before or morning of your insulin pump start.
  - Once you've started your pump, you will be required to contact our office weekly for a month or so to review your pump data.
- Visit 2: Pump Follow-up Visit with Provider
  - An in-person pump follow-up visit with a provider in clinic, 2-3 weeks after your insulin pump start.
- Visit 3: Advanced Pump Class
  - A 1-hour virtual class to learn how to use the more advanced features on the pump.

Once your **T:SLIM OR MEDTRONIC ARRIVES AT YOUR HOME,** please call scheduling at (801) 662-1640, option #2 to schedule your pump start. You will need to schedule 3 appointments including:

Visit 1: Insulin Pump Start

Visit 2: Pump Follow-up Visit with Provider

Visit 3. Advanced pump class

Once your **OMNIPOD ARRIVES AT YOUR HOME,** scan the QR code in the Intro Kit box and complete the onboarding online. This will notify the pump trainer and they will reach out to you to schedule your **insulin pump start**. Once that is scheduled, we will reach out to schedule your **pump follow-up visit with provider**, and **advanced pump class**.

\*Please note that if your child lives in more than one household, both legal guardians are required to attend all pump educations\*

After reviewing this information, if you have any questions, please contact our office through the Intermountain Health app, at diabetes@imail.org or at (801) 662-1640 option #4 and speak with one of our diabetes educators.



# PUMP QUIZ AND PUMP WAIVER

Please scan the QR code below with your phone camera and click on the website that pops up to access the online PUMP QUIZ and PUMP WAIVER. From there, follow the steps below:

- 1. Click 'Next Page'
- 2. Complete the PUMP QUIZ. All questions must be answered correctly for the 'submit' button to appear. Click 'submit' and it will take you to the waiver.
- 3. Complete the PUMP WAIVER. All fields must be filled out for the 'submit' button to appear. Click 'submit' to move forward.
- 4. Review your information, click the check box to confirm. Click 'submit' and your quiz and waiver will be sent to the Diabetes Clinic.
- 5. We will reach out to you once we receive and review your PUMP QUIZ and PUMP WAIVER.



DUE TO RAPID CHANGES IN TECHNOLOGY, PLEASE REVIEW THE DIFFERENT PUMPS BELOW AND VISIT THEIR WEBSITES FOR MORE INFORMATION.

### Other powerful features



Large color touchscreen





### **Rechargeable battery**



Profiles, with up to 16 different

### Small size

# Control-IQ technology

THE EASY CHOICE TO HELP PROTECT YOU FROM HIGHS AND LOWS

Trying to keep your blood sugar in range Our Control-IQ<sup>™</sup> advanced hybrid by using Dexcom G6 CGM values to

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O PREDICTIVE TECHNOLOGY Designed to help prevent highs and lows, to help increase time in range (70-180 mg/dL).\*

> O CORRECTION BOLUS Automatic correction boluses (up to one per hour) for added protection.



O ACTIVITY SETTINGS Dedicated Sleep ( 🔤 ) and Exercise ( 🗃 ) Activity settings for more targeted control.



# How Control-IQ technology works

The t:slim X2 insulin pump with Control-IQ technology is designed to help increase time in range (70-180 mg/dL)\* using Dexcom G6 CGM values to predict glucose levels 30 minutes ahead and adjusts insulin delivery accordingly.

190	🔷 🚺 Delivers	Delivers an automatic correction bolus if sensor glucose is predicted to be above 180 mg/dL**
160	lncreases	Increases basal insulin delivery if sensor glucose is predicted to be above 160 mg/dL
110 -	🗞 🖪 Maintains	Maintains active Personal Profile settings
70	Secreases	Decreases basal insulin delivery if sensor glucose is predicted to be below 112.5 mg/dL
/U mg/dL	📀 🖸 Stops	Stops basal insulin delivery if sensor glucose is predicted to be below 70 mg/dL

\* As measured by CGM.

\*\* If glucose values are predicted to be above 180 mg/dL, Control-IQ technology calculates a correction bolus using the Personal Profile settings and a target of 110 mg/dL and delivers 60% of that value. It will do this up to once per hour as needed.

### For more information, please visit www.tandemdiabetes.com

### **Omnipod**

\*\*\*Child must have phone compatible with the Dexcom G6 app to use Omnipod 5



### **Omnipod® 5 System Communication**



### How Omnipod® 5 works

### SmartAdjust<sup>™</sup> technology:

ALWAYS ADJUSTING, SO YOU DON'T HAVE TO

- Increases insulin delivery every 5 minutes for predicted hyperglycemia
- Decreases or pauses insulin delivery for predicted hypoglycemia
- · Will always pause if glucose below 60 mg/dL



When your levels are dropping, SmartAdjust<sup>19</sup> technology automatically decreases or pauses insulin delivery.

# When your levels are rising, SmartAdjust<sup>™</sup> technology automatically increases insulin delivery.

### Control it all WITH A COMPATIBLE

Now, you can monitor and control the entire Omnipod<sup>®</sup> 5 System from

SMARTPHONE

- a compatible smartphone.\* · Give mealtime insulin with the SmartBolus calculator
- · Enable Activity feature
- · See all of your child's diabetes trends and data in one place

### Pod life: 3 easy steps, every 3 days

Place the Pod alm

your child an injecti

where you would give







1. FILL IT UP The Pod contains a 200-unit insulin reserv Once filled, it automatically primes itself and performs a series of safety checks.

Use the Con to control your child's



of princhings's days based on individuals on MDI baking a Stoke and 1+2 based rejectorisiday multiplied by 3 days

Ready for the next step? Get a benefits check at omnipod.com For a list of compatible reportation

For more information, please visit www.omnipod.com

### Medtronic



MiniMed<sup>™</sup> 780G system

### Designed for real life

Greater freedom and peace of mind with the only system featuring meal detection technology that automatically adjusts and corrects<sup>†</sup> sugar levels every 5 minutes.§

Taking a bolus 15-20 minutes before a meal helps to keep blood sugar levels under control after eating. Finenetific recommendations I letting a Book 15-of Intrinstru termine a meter impo to expla simple Moje, were survey a termine "Tigentick is required in emandal mode and to enter 6 man Gandan Will symposition and only match-alers and readings, use a fingeratick. Refer to user guide. Privatel risel participants spend arrange of > 3933 in marCulars.<sup>10</sup> Refers to auto correct, which provides toble assistance. Can deliver all and out correction with the marcular deliver and the second on and off. Refers to simulational without are interaction, final excitations for smooth and without Refers to simulational without are interaction, final excitations. Can deliver all Refers to simulational without are interaction, final excitations are structed. Refers to simulational without are interaction, factor and out.





Helping you manage sugar levels with real-time insights

Keeping track of the 42 factors that mpact your insulin needs is we're here to make it easier.'







Missing two doses per week can lea to an increase in A1C of up to **0.4%** 

### You're not alone

That's why we've designed a system that helps cover undercounted carbs or a missed meal dose.<sup>2</sup>

1. Meade LT et al., Clin Diabetes, 2016;34(3):142-147, 2. Randlov J, et al. J Diabetes Sci Technol. 2008;2(2):229-235, 3. Matejio B, et al, Diabetes Care, 2022;https://doi.org/10.2337/ dr-22.0475

# SmartGuard<sup>™</sup> technology

MiniMed<sup>™</sup> 780G system provides real -time adjustments and corrections<sup>†</sup> every five minutes all day and night<sup>§</sup>

### Anticipates

Anticipates insulin needs based on real-time sugar trends

### Adjusts

Makes precise adjustments of insulin delivery to help smooth out highs and lows

### Corrects<sup>†</sup>

Corrects highs automatically§ to help cover underestimated carb counts and an occasionally missed meal dose<sup>3</sup>





If more insulin is needed, an auto correction dose is delivered

What is meal detection\*

and how does it work? The system uses current and past sugar

trends to detect a missed meal dose."

If the system detects sugar levels rising it can automatically deliver a stronger correction dose for undercounted carbs every five minutes to help prevent highs.§

Taking a bolus 15-20 minutes before a meal helps to keep blood sugar levels Intellig Booth 19 January Constraints and the series frame of constraints and constraints and the series of constraints and constraints and the series of constraints and the

### • Sugar levels Background insulin (Auto basal) Auto correction dose





Infusion set

Allows for continuous and discreet delivery of insulin through a thin, flexible tube and can be worn up to 7 days.



### Continuous Glucose Monitor (CGM)

The Guardian<sup>™</sup> 4 sensor measures sugar levels every 5 minutes, sending levels to the pump. There are also no fingersticks with SmartGuard<sup>™</sup> technology.<sup>™</sup>

# Less work for you to do

The MiniMed<sup>™</sup> 780G system helps prevent highs and lows all day and night<sup>§</sup>

Real-world<sup>»</sup>results showed patients achieved up to **80% Time in Range** with recommended settings, without increasing lows.<sup>4,\*</sup>

of users are satisfied with the impact the system has on their quality of life<sup>5</sup>

4. Choudhary P. et al, Lancet Diabetes Endocrinol. 2022; https://doi.org/10.1016/ S2213-8587(22)00245-5.

Medtronic data on file: MiniMed™ 780G users survey conducted in April-May 2021 in UK, Sweden, Italy, Netherlands and Belgium. N = 789.
 Recommended settings in adults: SmartGuard™ target: 100 mg/dL, 2 hr AIT, ages <=15: Start at SmartGuard™ target: 110mg/DI and reduce to 100 mg/DI if no hypos, 2 hr AIT.</li>

§ Refers to SmartGuard™ feature. Individual results may vary.

### For more information, please visit www.medtronicdiabetes.com