

Glucose Sensors: Are They Right for You?

➔ What are some potential benefits of using a glucose sensor or continuous glucose monitor (CGM)?



Requires fewer fingersticks



Shows where your glucose is now and where it is going



Provides alerts for your highs and lows

➔ What are some other things to consider about glucose sensors or CGMs?



You need to wear the sensor all the time (24/7) to get the most benefit



Glucose readings are available all the time, which some people say can be overwhelming



They provide more glucose data to share with healthcare providers and family members

AVAILABLE SENSORS

	Dexcom G6	Medtronic Guardian Connect	Abbott FreeStyle Libre 14 Day ^a	Senseonics Eversense ^a
				
How many parts does it have?	3: transmitter, sensor, and receiver	3: transmitter, sensor, and smartphone used as the receiver	2: sensor and receiver	3: transmitter, implantable sensor, and smartphone/smartwatch used as the receiver
Does it offer alerts and alarms?	Yes, can be customized	Yes, can be customized	No	Yes, can be customized
How do I view data?	On a smartphone (Apple or Android), smartwatch, or the receiver	On an Apple smartphone	On a smartphone (Apple or Android) or on the receiver	On a smartphone (Apple or Android) or smartwatch
How do I share the data with family members?	Real-time data can be shared using an app	Real-time data can be shared using an app; family members can also receive text message alerts	Data from whenever you scan can be shared using an app	Real-time data can be shared using an app
How many fingersticks are needed to calibrate the sensor?	None	2 per day	None	2 per day
How long is the sensor used?	10 days	7 days	14 days	90 days
How does it attach to the body?	Sensor is inserted in 1 step, and integrated adhesive holds the sensor and transmitter in place	Sensor is inserted with the use of a Medtronic one-press insertion aid, then the sensor and transmitter are held in place by an outer adhesive	Sensor is inserted in 1 step, and integrated adhesive holds it in place	Sensor needs to be inserted by a doctor, nurse practitioner, or physician assistant, then the transmitter sits outside the body and is held in place by an adhesive

^aIndicated for use in adults aged 18 years and older with diabetes.

➔ How do I get a CGM sensor?

If you think a CGM sensor might be right for you, visit DiabetesWise.org for more information about:

- What others think about using each type of sensor
- Key questions to ask your diabetes care team
- Insurance coverage and costs
- Support resources

Developed by Med-IQ in collaboration with JDRF.

Insulin Pumps: Are They Right for You?

➔ What are some potential benefits of using an insulin pump?



Requires fewer injections



Makes giving insulin easier (compared with traditional injections)



Is easy to use when on the go



Has a built-in dosing calculator

➔ What are some other things to consider about insulin pumps?



Setting it up and getting used to it can take some time



It needs to be worn all the time



You still need to do diabetes self-care and count carbohydrates

AVAILABLE INSULIN PUMPS

	Medtronic MiniMed 630G System	Medtronic MiniMed 670G System (not in auto mode) ^a	Insulet Omnipod System	Tandem t:slim X2 Insulin Pump
				
Does it need tubing to give insulin?	Yes, tubing connects the pump to your body	Yes, tubing connects the pump to your body	No, self-contained pod that does not need tubing	Yes, tubing connects the pump to your body
Does it connect to a meter?	Yes, wireless transmission from CONTOUR NEXT LINK 2.4 meter	Yes, wireless transmission from CONTOUR NEXT LINK 2.4 meter	Yes, wireless transmission from CONTOUR NEXT ONE blood glucose meter	No
Does it have a compatible/integrated sensor?	Yes, wireless transmission from Guardian Sensor 3	Yes, wireless transmission from Guardian Sensor 3	No, but may be used with any CGM sensor	Yes, wireless transmission from Dexcom G6 sensor
Can I customize the insulin bolus increment (in case I need less insulin)?	Yes, can be set as small as 0.025 (bolus range is 0.05 to 30 units)	Yes, can be set as small as 0.025 (bolus range is 0.05 to 30 units)	Yes, can be set as small as 0.05 (bolus range is 0.05 to 30 units)	Yes, can be set as small as 0.01 (bolus range is 0.05 to 25 units)
Is it water resistant?	Yes, up to 12 feet for 24 hours	Yes, up to 12 feet for 24 hours	Yes, up to 25 feet for 60 minutes for the pod (the PDM is not water proof)	Yes, up to 3 feet for 30 minutes

CGM = continuous glucose monitoring; PDM = personal diabetes manager.

^aFor more details on using the Medtronic MiniMed 670G System in auto mode, please see the guide Automated Insulin Delivery Systems: Are They Right for You?

➔ How do I get an insulin pump?

If you think an insulin pump might be right for you, visit DiabetesWise.org for more information about:

- Other people's experiences using the different types of pumps, which may help you decide which pump to try first
- Key questions to ask your diabetes care team
- Insurance coverage and costs
- Support resources

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Automated Insulin Delivery Systems: Are They Right for You?

➔ What is an automated insulin delivery system and how does it work?

- Also known as an artificial pancreas, a hybrid closed-loop system, or a smart pump and sensor
- Consists of an insulin pump, continuous glucose monitor (CGM), and algorithm/brain on the pump or separate smartphone app
- Senses glucose and adjusts insulin automatically; “gives less if low, gives more if high”

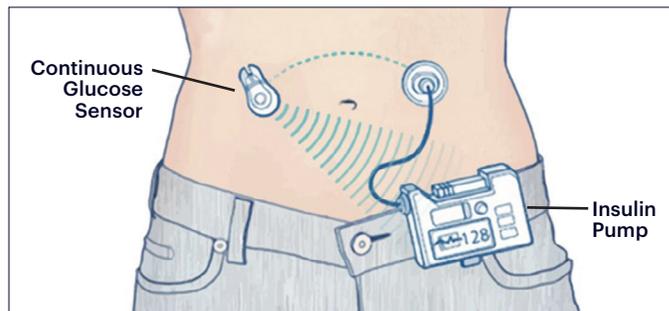


Image from Aathira R, Jain V. Advances in management of type 1 diabetes mellitus. *World J Diabetes*. 2014;5(5):689-696.

➔ What are some potential benefits of using an automated insulin delivery system?



Requires you to make fewer decisions/calculations because the machine does it for you



Helps you spend more time in your target glucose range with fewer highs and lows



Requires fewer fingersticks and needles/injections

➔ What are some other things to consider about using an automated insulin delivery system?

- You need to wear 2 devices at all times
- You still need to count carbs and bolus when you eat
- You still need to do diabetes self-care
- It can provide more alerts and alarms, which can cause “alarm fatigue” in some people
- The system is not perfect (but each generation is getting better)

TYPES OF AUTOMATED INSULIN DELIVERY SYSTEMS



Medtronic MiniMed 670G System

First automated insulin delivery system approved for use in the United States (since 2016); can be used in people with type 1 diabetes aged 7 years and older



DIY Automated Delivery Systems

What is it? Sometimes people make their own automated insulin delivery systems and then offer the instructions as a Do-It-Yourself (DIY) approach to others for free (also called open source). It is usually done with an extra small, specialized device, a CGM, a smartphone app, and an older compatible insulin pump. These systems are not FDA-approved but many patients use DIY systems like OpenAPS and Loop.

COMING SOON

Tandem Control-IQ Hybrid Closed-Loop System

(expected in late 2019)

Omnipod HORIZON Automated Glucose Control System

(expected in late 2020)

➔ How do I get an automated insulin delivery system?

If you think an automated insulin delivery system is right for you, visit DiabetesWise.org for more information about:

- People’s experiences with using FDA-approved and DIY automated insulin delivery systems
- Key questions to ask your diabetes care team
- Insurance coverage and costs
- Support resources

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