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DIABETES TECH RIZZ

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January 15, 2025





DISCLOSURES

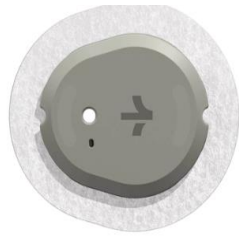
NONE



Objectives

Upon completion of this educational activity, members of the healthcare team will be able to:

- Compare available and upcoming insulin pump systems
 - Identify current and upcoming continuous glucose monitor options
 - Recommend apps which may be beneficial to students for managing diabetes
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Stelo Glucose Biosensor

Adults (18+ years) not on insulin who have been diagnosed with type 2 diabetes or prediabetes and are not at risk for hypoglycemia, and those interested in tracking their glucose.

Now available to purchase online, no prescription required.

Current State: Dexcom CGM

- G6/G7 are currently 10.5 day wear; Stelo is 15 day wear.
- For G6/G7: Glucose readings sent to smartphone, smart device or receiver as often as every 5 minutes.
- 8.1-9.2% MARD (mean absolute relative difference)
- Dexcom G6 and G7 work with Tandem Tslim and Mobi pumps and I-Let pump
- Dexcom Follow App
<https://www.dexcom.com/dexcom-follow>

<https://www.dexcom.com/glucose-sensing>



Dexcom Follow 
CGM Remote Monitoring
Dexcom
#72 in Medical
 2.5 - 26 Ratings
Free

Current State: Dexcom Recent updates!

Bluetooth was updated: range increased from 20 to **33 feet**, and now patients will rapidly reconnect when back in range.

Adhesive was updated to further remove potential skin irritants. This update was run alongside the Bluetooth update, so if the adhesive is updated, the Bluetooth is updated.

Apple Widget for iPhone can now be added to a user's lock screen and display their real-time glucose numbers and where they are headed, without having to open the app or even unlock their iPhone.

Once a month, patients can request a pack of additional overpatches to be shipped to them if they would like (In G7 app, Profile > Contact > Overpatch Form)

Continuous Glucose Monitors- What's Next for Dexcom



- Dexcom G7- 15 day wear sensor

Current State,
soon to be
previous
state: Libre 2
and 3 sensor:



- Will be discontinued as of 09/30/2025!



Current State: Freestyle Libre

Libre 2 Plus and Libre 3 Plus

- 15 day wear
- 1 hour warm up time
- Indicated for age 2 and up
- AID compatibility (Libre 2 Plus with Tandem; Libre 3 Plus with I-let)
- Mard (mean absolute relative difference) 7.9%
- No calibration required
- Data can be shared with care partners using the Libre Link Up app



Stay in the know

The FreeStyle Libre 3 and 2 apps* are easy to use¹, so you can access your glucose data and receive real-time glucose alarms^{1†}.



Share

Easily share[§] your glucose readings with your loved ones or caregivers with the LibreLinkUp app^{†§}.

Continuous Glucose Monitors- What's next?

[Abbott's Biowearable: One Sensor for Glucose, Ketones | Abbott Newsroom](#)

It's about the same size as the Freestyle Libre 3 sensor

“Dual Monitoring system” that will allow people with diabetes to continuously monitor glucose and ketone levels in one sensor device

Current State: Medtronic Pumps- Medtronic 670G and 770G

- Automated basal insulin delivery calculated based on total daily insulin from past 2-6 days ("auto basal")
- No auto boluses, just adjustment of basal to address high blood sugars
- Tightest target is 120
- 670G: can't see data remotely
- 770G: Can see Remote data with Carelink Connect app



CareLink™ Connect US 4+

Diabetes data sharing

[Medtronic, Inc.](#)

★★★★★ 2.7 • 77 Ratings

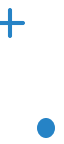
Free



670G



770G*



CURRENT STATE: MEDTRONIC PUMPS



Medtronic 780G with Smart Guard

- Auto Basal calculated from total daily insulin- updated each day at midnight.
- Auto basal adjusted every 5 minutes based on the most recent CGM glucose values.
- "Smart Guard" uses algorithm to predict future glucose levels and deliver corrective doses before significant fluctuations occur. "Missed meal detection".
- Can use 3 target options: 100, 110, or 120 or use a Temp Target of 150

<https://www.pantherprogram.org/device-comparison-chart>

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What's next for Medtronic Insulin Pump

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8-Series Pump AHCL + Next Gen CGM

Tethered AID

- ✓ AHCL Algorithm with SmartGuard™
- ✓ 7-day extended wear infusion set
- ✓ Smartphone control

*In Development**

Continuous Glucose Monitors- Current State: Medtronic Guardian



- Guardian 3 and 4 are 7 day wear.
- Guardian 3 requires at least every 12 hour calibrations
- Guardian 4 requires no routine calibration
- MARD (Mean absolute relative difference)
 - Guardian 3 8.7-9.14% in arm. 9.6-10.5% in abdomen.

Medtronic Continuous Glucose Sensors Moving forward



Guardian 4

- Separate sensor & transmitter
- Overtape needed
- 7 gram
- 7 day wear time
- MARD 10.2%
- 2 hour warmup time, overlapping sensors is NOT possible

Simplera Sync

- Sensor & transmitter **all-in-one**
- **No overtape** needed
- 4.6 gram
- 7 day wear time
- MARD 10.2%
- 2 hour warmup time, but **overlapping sensors** is possible

Abbott-based CGM

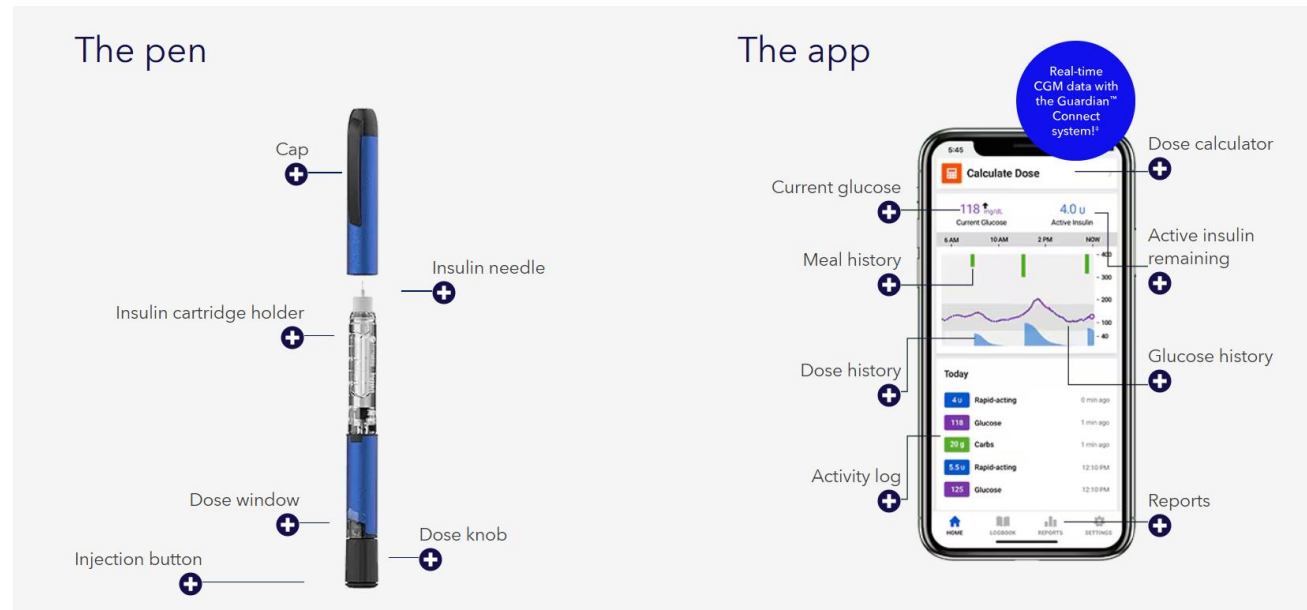
- Sensor & transmitter **all-in-one**
- No overtape needed
- **1 gram**
- **15 day** wear time
- **MARD 7.5%**
- **1 hour** warmup time, overlapping sensors is NOT possible

Current State: Medtronic InPen

- A Smart Insulin Pen that uses Bluetooth data to send blood sugar data to an app to calculate doses
- Can use IOB (insulin on board) calculations to determine doses
- Can set reminders to take doses
- Can link data to Medtronic Carelink to create reports



Products sold separately.



<https://www.medtronicdiabetes.com/products/inpen-smart-insulin-pen-system>

What's Next for InPen?

Medtronic Smart MDI system with the InPen™ app and Simplera™ CGM

- New In Pen app that features missed meal dose detection
- App will provide real time, personalized dose recommendations
- Limited market release beginning with existing standalone CGM and InPen™ customers followed by a broad commercial launch



<https://news.medtronic.com/2024-11-20-Medtronic-receives-FDA-clearance-for-new-InPen-TM-app,-paving-the-way-for-its-Smart-MDI-system-launch-with-Simplera-TM-CGM>



Current State: Beta Bionics I-Let

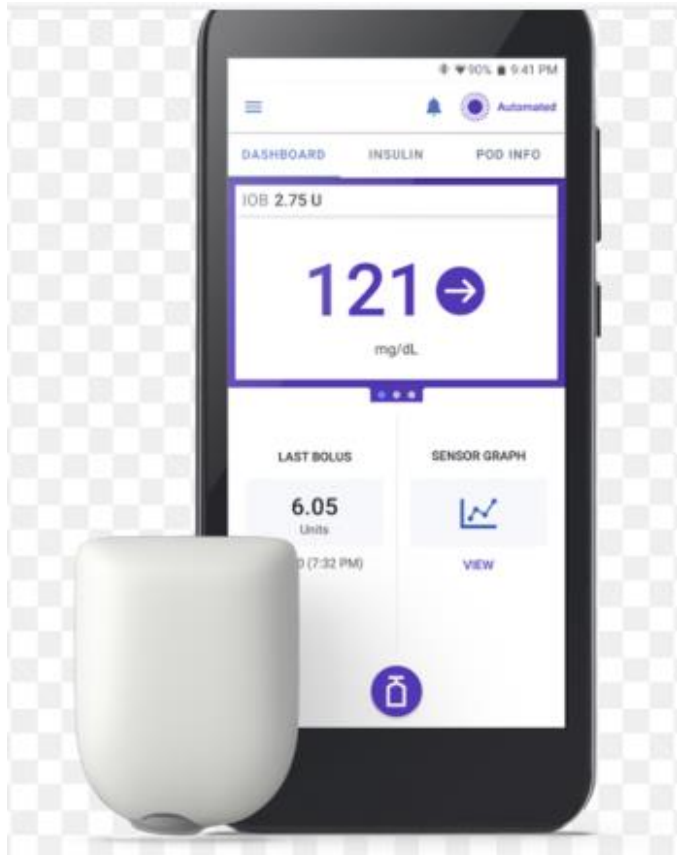
- Newest version has color screen/Brighter display
- Does not require carb counting, but rather carb awareness
- Meal announcement- Just enter which meal and "Usual for me", "More" or "Less".
- Aiming for a 7.0% Hemoglobin A1c
- Works with Dexcom G6 or Dexcom G7 and Libre 3 Plus
- Can Follow the child in the Bionic Circle
- Simulator available
- <https://www.betabionics.com/ilet-bionic-pancreas/ilet-children/> (accessed 1/5/2025)



Bionic Circle 4.5
iLet Remote Monitoring
BetaBionics
★★★★★ 4.9 - 5.0 Ratings
Free

Current State: Omnipod

Omnipod 5



- Works with Dexcom G6 and G7 and Libre 2 plus. Can use phone as controller (Android and iOS) with G6 and Android phone as controller for G7.
- Automatically delivers insulin aiming for selected target glucose from 110-150 mg/dL.
- Calculates basal insulin delivery every 5 minutes based on CGM glucose trends

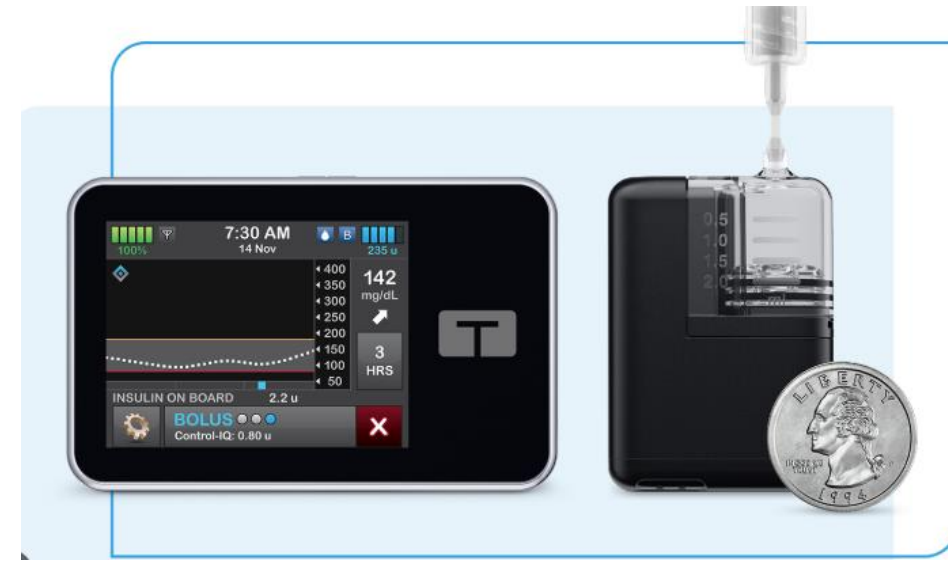
WHAT'S NEXT FOR OMNIPOD?


iOS app for
Omnipod 5 with
Dexcom G7
integration expected
“in first half of
2025”

Current State of Tandem


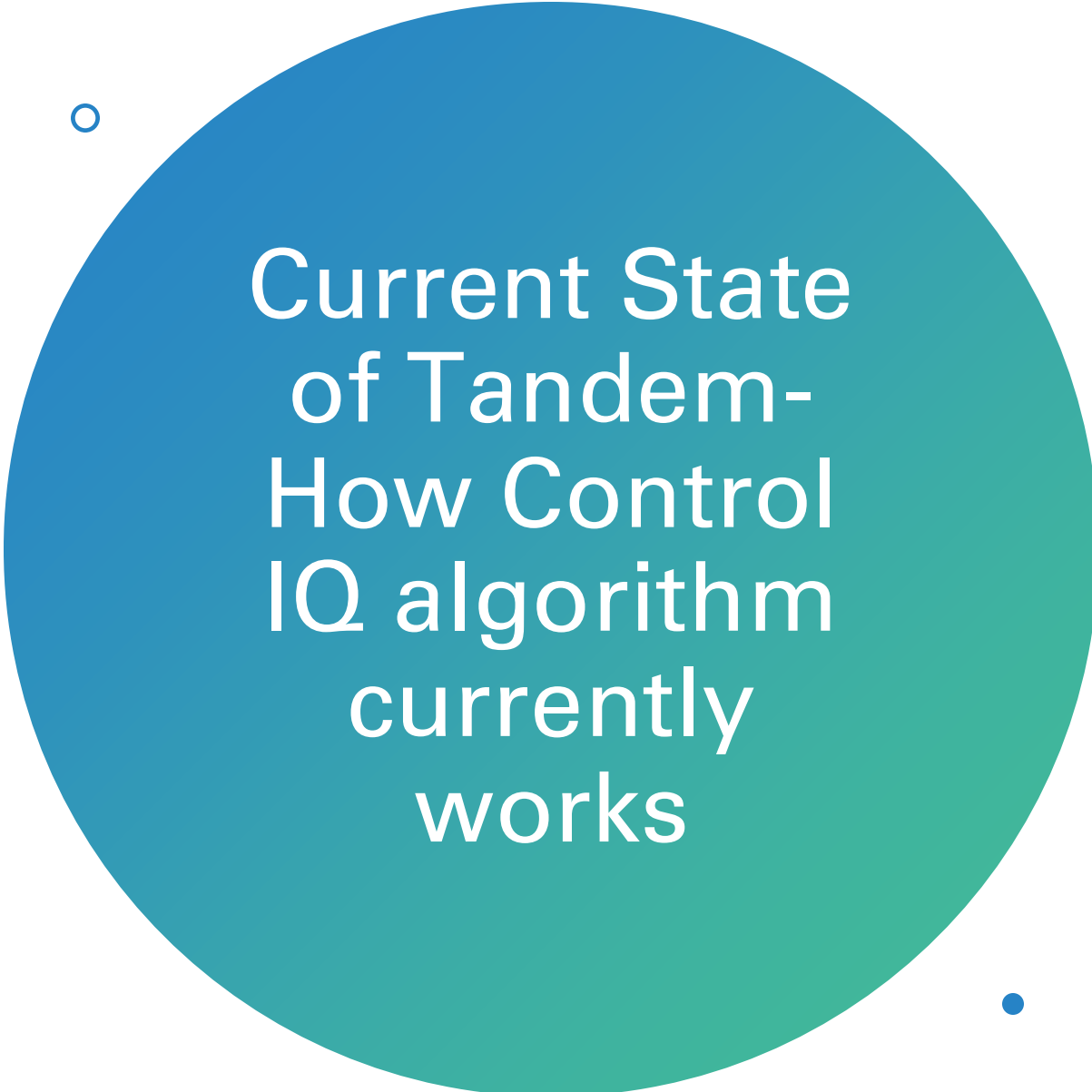
Tandem T-Slim and Tandem Mobi

- Tandem T Slim Works with Dexcom G6/G7/Libre 2 Plus
- Tandem Mobi works with Dexcom G6/G7
- Tandem Mobi can be used with short or long tubing






Current State of Tandem- How Control IQ algorithm currently works



- “Uses CGM glucose data to adjust the basal insulin delivery by increasing, decreasing, or suspending programmed basal rates; aiming for a target glucose range of 112.5-160 mg/dL”
- “Delivers automated correction boluses up to once per hour if glucose is predicted to rise above 180 mg/dL; uses 60% of the programmed correction factor when calculating automated correction boluses”
- It reverts to manual mode when CGM data is not received, but will go back into automated mode once CGM signal returns.

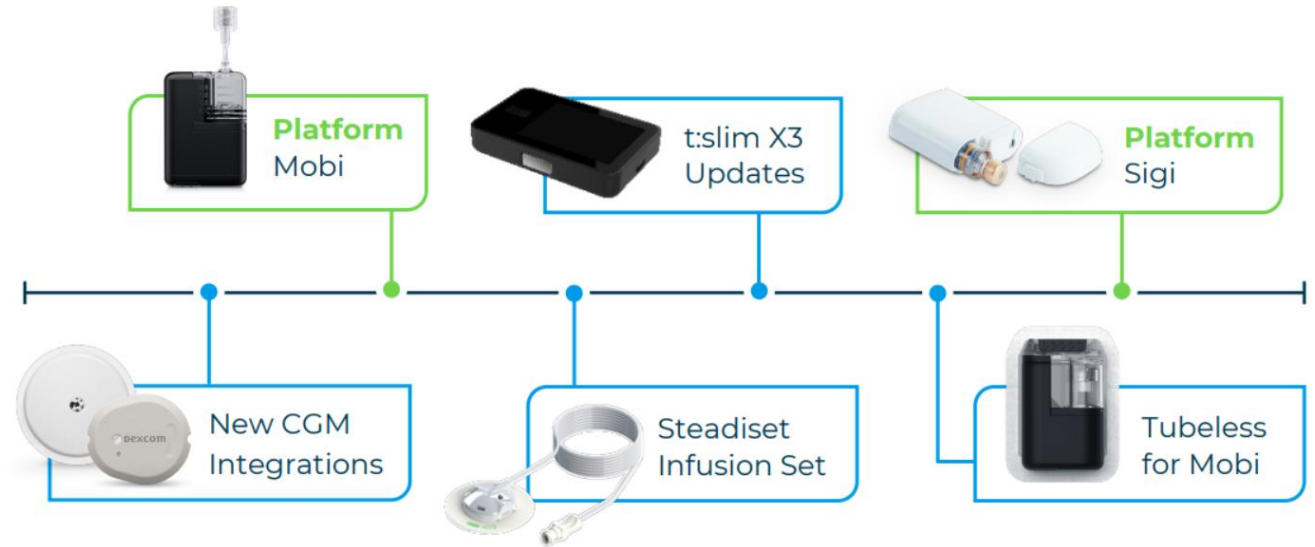
https://www.pantherprogram.org/_files/ugd/71a2f0_5e0c1097c54046689afc502117d1e33c.pdf



Expanding Our Family of Delivery Devices

What's Next for Tandem?

- Anticipate approval for Mobi down to age 2.
- Improved algorithm-
"emphasizing automation, personalization and simplification".
- Mobi-Tubeless
- Steadiset Infusion Set-
Extended wear sets
- Sigi Pump
 - Rechargeable and detachable
 - Will use prefilled insulin cartridges



“Note: The information on this page discusses products that may not be approved by the FDA. This information is intended for people researching the company, and is updated in conjunction with public announcements about our product innovations. All dates and information are as of November 6, 2024. Tandem Diabetes Care undertakes no obligation to update or review any forward-looking information below based on new information, future events, or other factors.”

<https://www.diabetotech.com/blog/tandem-update>

What's Next for Insulin Pumps- Sequel Twiist Insulin Pump

Automated insulin delivery (AID) system
Intended for age 6 and older

“Flexible wear options, discreet design, and a
300-unit insulin capacity”

Uses Tidepool Loop

“manage your insulin directly from your
iPhone and optional connected Apple Watch”

Uses 6 hour blood sugar forecast and adjusts
insulin delivery every 5 minutes

CGM partner is yet to be announced.



<https://www.twiist.com/>

Helping your Diabetes Tech help you

Family may consider additional taping for accessorizing, additional adhesive or to protect against skin irritation:

<https://expressionmed.com/>

<https://thesugarpatch.shop/>

<https://grifgrips.com/>

<https://glucomart.com/products>

<https://www.uselesspancreas.com/>

Many other options are available as well!

Belts:

<https://bandiwear.com/>

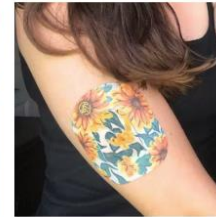
<https://spibelt.com/collections/diabetic-belts>



SELECT A DEVICE



All Dexcom



Pod



All Libre



Medtronic/Oval



Infusion Set

Featured Items

- NEW! Reusable Tandem Mobi™ SugarShield™**
Sale
\$21.99
Shop Now
- Dexcom G7 GripShield™ with Comfort Ring- 2 Overlay Patches Included**
Sale
\$11.99
Shop Now
- Combo Pack- Pick 3 Tandem Mobi™ Insulin Pump Clip Cases & Save!**
3-PACK
Sale
\$58.97
Shop Now



How to stay up- to-date on Diabetes Tech

Follow social media groups pertinent to diabetes. Examples include specific sites for that particular company (ie. Omnipod, Tandem, Medtronic, I-let)

Panther Diabetes <https://www.pantherprogram.org>

Diabetech

Nerdabetic (this is out of Europe)

Juicebox Podcast

Diatrube



- **QUESTIONS?
THOUGHTS?
WHAT RESOURCES DO
YOU USE TO KEEP UP
TO DATE?
DIABETES TECHNOLOGY
THAT YOU WOULD LIKE
TO SEE?**
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