



Diabetes Technology Guide

The Johns Hopkins Patient Guide to Diabetes



The Johns Hopkins Patient Guide to Diabetes *hopkinsdiabetesinfo.org*

Providing a trusted and reliable resource based on the latest evidence that people with diabetes or interested in diabetes can use to live healthier lives.

Preface

The Johns Hopkins Patient Guide to Diabetes website (hopkinsdiabetesinfo.org) provides evidence-based educational resources for those affected by diabetes, as well as others interested in gaining knowledge for health optimization.

Essential components on the website include:

1. **About Diabetes:** Causes, types, risk factors, clinical and personal management.
2. **Living with Diabetes:** Routine and preventative for improved diabetes health.
3. **Complications:** Types and preventions
4. **Treatment:** Treatment types based on the type of diabetes.
5. **Helpful Tools:** Diabetes coping skills, including downloadable tools
6. **Ask the Expert:** Advice & tips from medical experts
7. **Videos:** From general knowledge to interactive hands-on learning
8. **Real Stories:** Sharing personal experiences of living with diabetes
9. **Nutrition and Lifestyle Blog:** written by expert dietitians and educators
10. **Podcasts:** special guest speakers on various topics related to diabetes

The rise in modern medical technology has transformed diabetes care. Insulin pumps and continuous glucose monitors facilitate diabetes prevention, treatment, and reduction in diabetes complications. Given the ever expanding number of devices available, this Diabetes Technology Guide was written by our diabetes editorial team to bring together complex and up-to-date information on the latest diabetes devices to one convenient location for clarity, comparison, and confidence in decision-making, and to serve as a resource that is easily downloadable from the website.

Yours in Health,

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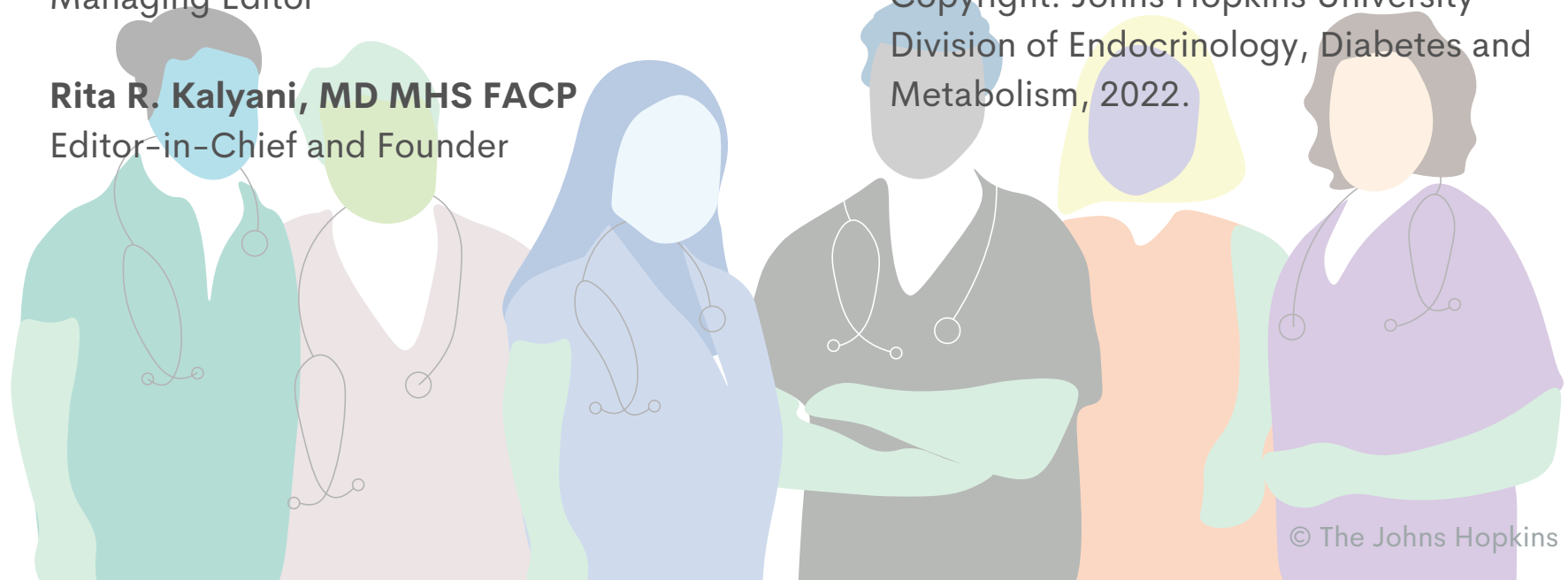
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| *the frannie foundation*

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Diabetes Technology Guide

The Johns Hopkins Patient Guide to Diabetes Website

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Diabetes is a global health epidemic that affects more than 500 million people around the world and is projected to increase even more in the future.



Diabetes

[dīə'bēdēz, dīə'bēdis] noun

Type 1 Diabetes: A chronic autoimmune disease caused by mistaken recognition and destruction of islets of Langerhans – the only source of insulin in the body – leading eventually to absolute insulin deficiency.

Type 2 Diabetes: A chronic disease due to insulin resistance primarily in the muscles, liver, and fat tissue. The body initially produces more insulin in response but is no longer able to compensate over time – leading to relative insulin deficiency.

In all types of diabetes, blood glucose levels are too high at diagnosis, and can lead to an increased risk of short and long-term complications without appropriate treatment.

“The person
with diabetes
who knows most,
lives the longest.”

Elliot Joslin

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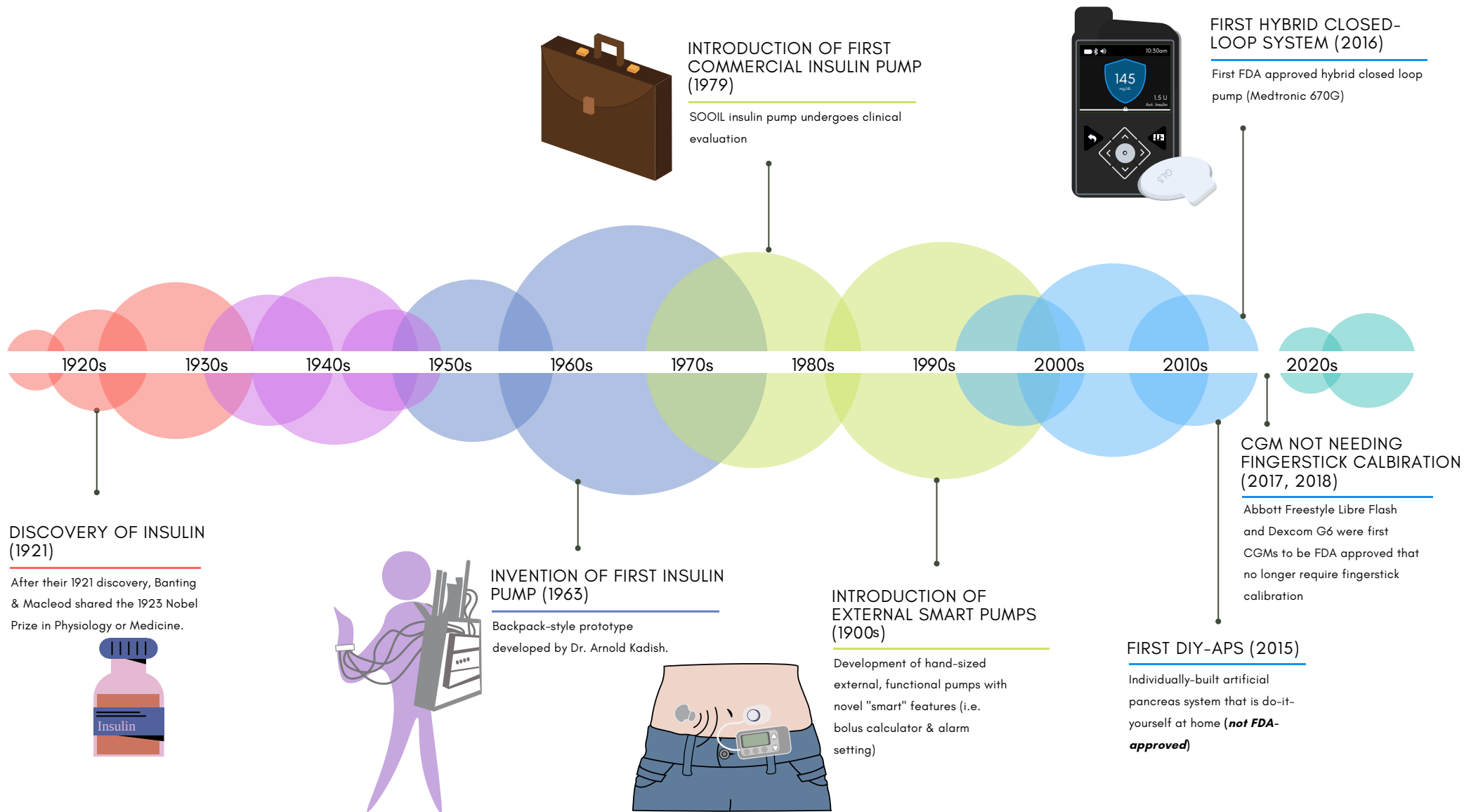
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Prevalence



Types

Type 1 Diabetes: 5-10% (of all diagnosed diabetes cases)

Type 2 Diabetes: 90-95% (of all diagnosed diabetes cases)

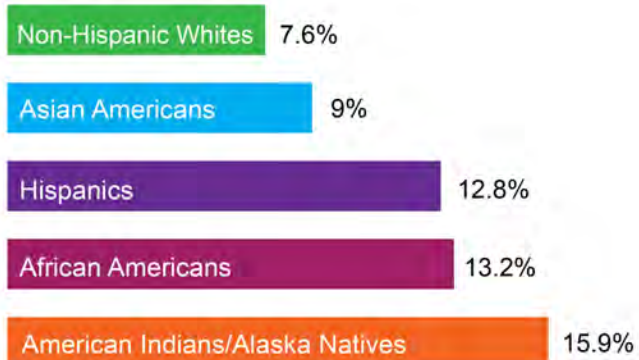


1 in 3: have pre-diabetes

1 in 5: unknown about having diabetes

1 in 10: have diabetes

Race/Ethnicity



resilient multitasker

monitor BG fluctuations

24/7 powerhouse

persevering pancreas

innovative management

Burden

\$13,700

estimated average medical
spending annually per person
diagnosed with diabetes in the US.

\$327 Billion

loss of medical cost,
work productivity, labor.

Diabetes Complications



Nerve Damage



Limb Problems



Poor Vision



Heart Disease



Kidney Failure



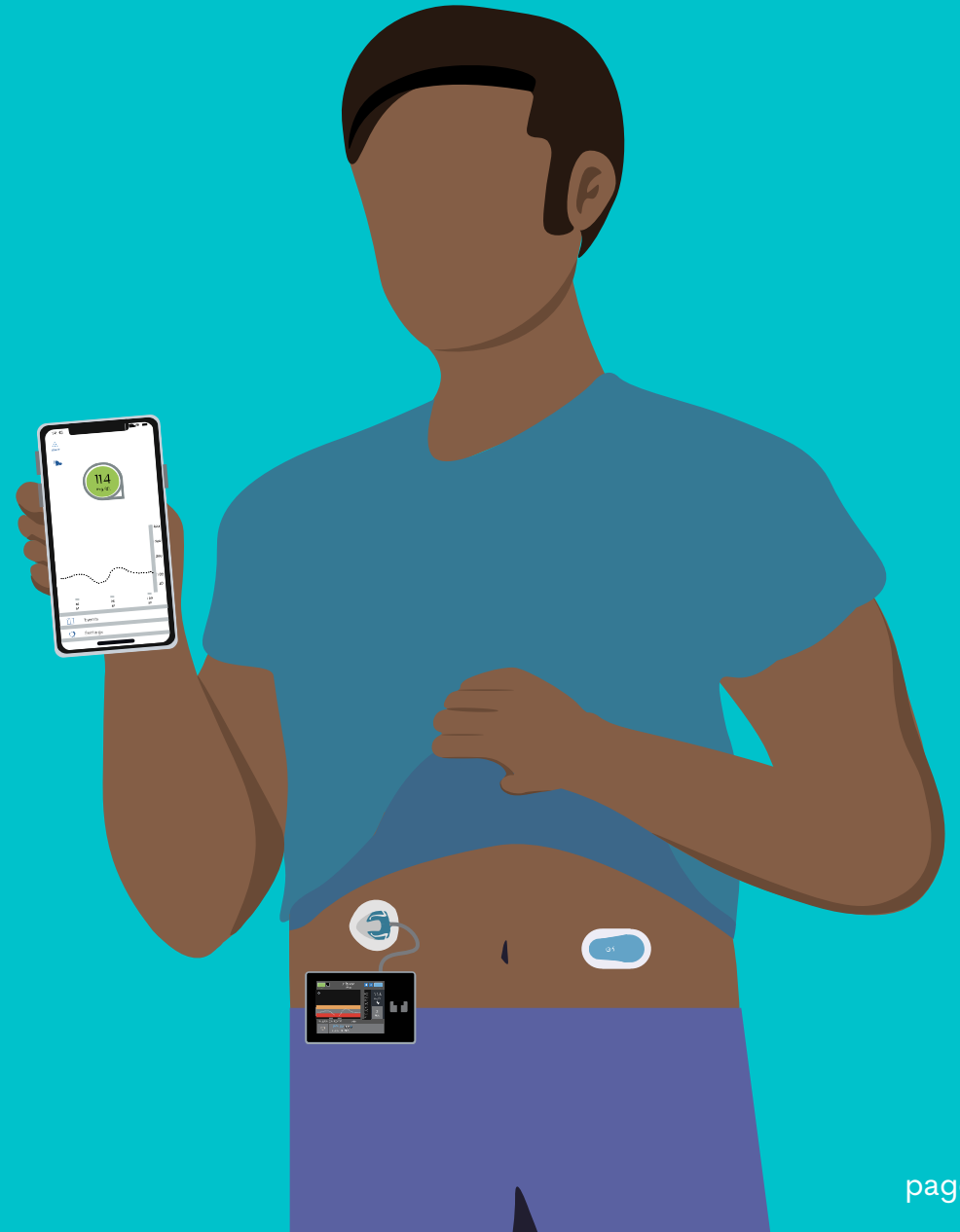
Stroke

What's inside a typical diabetes bag



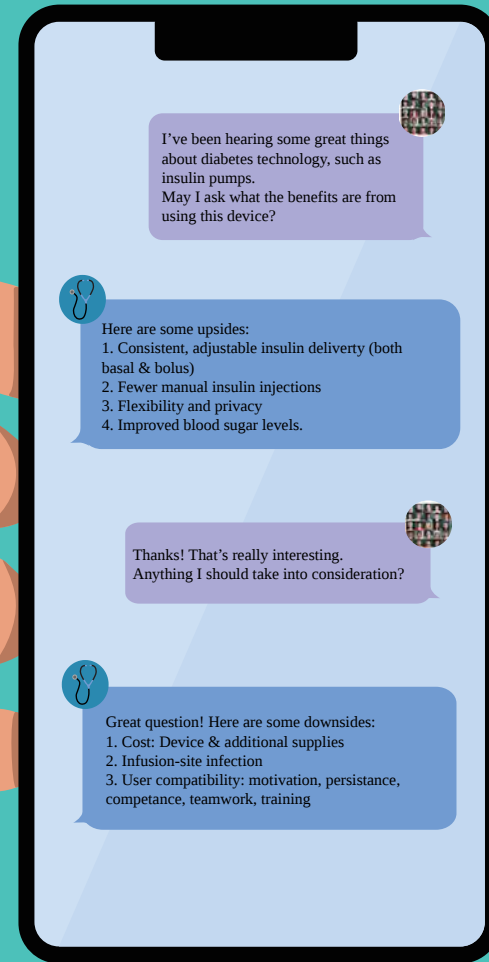
References:
Centers for Disease Control and Prevention. National Diabetes Statistics Report website. <https://www.cdc.gov/diabetes/data/statistics-report/index.html>. Accessed 22 July 2022.

Insulin Pump



Delivers doses of insulin on a pre-programmed schedule through small, computerized devices

Both Type 1 and Type 2 persons with diabetes can use insulin pumps. Manual injections and insulin pump therapy work very differently. One-on-one training is a crucial part of insulin pump therapy.



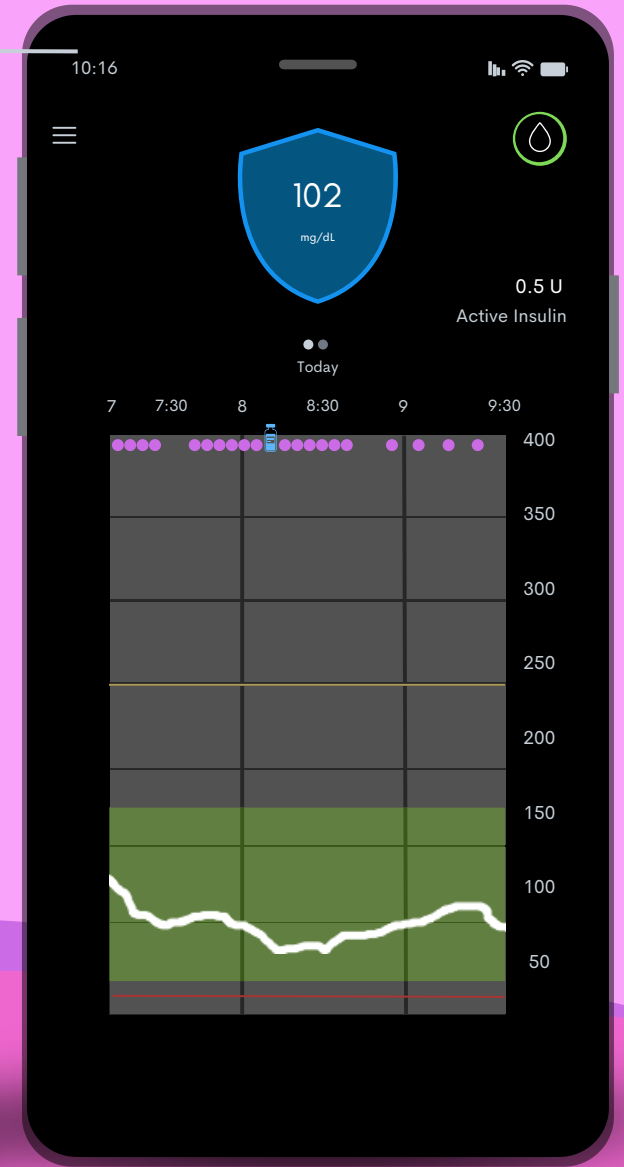
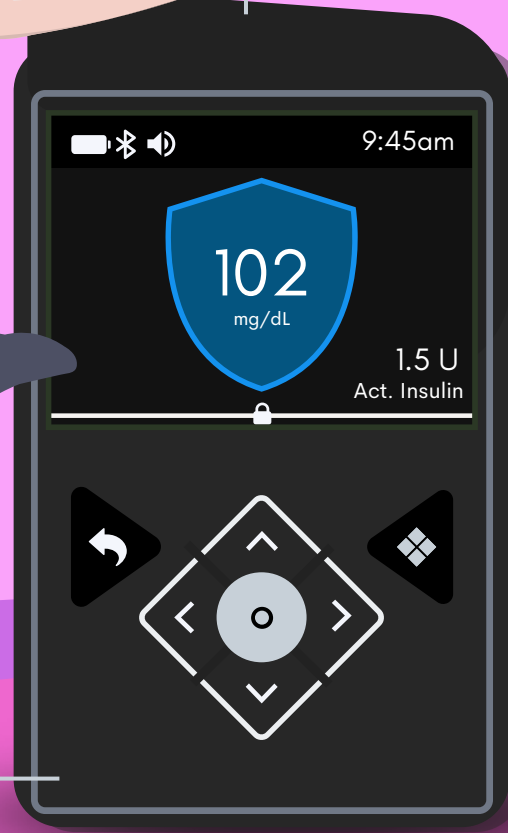
Type 1 Warrior

Insulin Pump

SmartGuard
Auto Mode:
Designed to reduce
hypoglycemia &
hyperglycemia

CareLink
Personal
Software:
upload data to
software for creating
and sharing reports

Blood Sugar Readings:
View from pump display & MiniMed
CGM App



MiniMed 770G

Specifications

Pump:

- 2.1 x 3.78 x 0.96 inches (5.3 x 9.6 x 2.4 cm)
- Wt: 3 oz (85 g)
- 300-unit reservoir
- Battery: AA (1); lithium/alkaline/ NiMH (FR6)
- Waterproof:
 - 12 ft (3.6m) \leq 12 hrs
 - Sensor/Transmitter: 8 ft (2.4m) < 30 mins

Bolus/Basal

Bolus:

- Range: 0-25 units
- Standard: 1.5 units/min
- Quick: 15 units/min
- Increments: 0.025 unit, 0.05 unit, 0.1 unit

Basal:

- 0-25 units/hr or set to max basal rate.

CGM/BG

CGM:

- Guardian Link 3 Transmitter
- Duration: \leq 7 days

BG Meter:

- Accu-Chek Guide Blood Glucose Meter

Infusion

Medtronic Infusion Set: 4 types

- Mio/Advance
- Silhouette
- Sure-T
- Quick-set

Key Features

- Programmed to change insulin basal setting every 5 mins that match to current glucose level
- SmartGuard Auto Mode intended for reducing hypoglycemic/hyperglycemic events
- Blood sugar readings can be viewed from pump display & smartphones with MiniMed CGM App (with Bluetooth connection)
- CareLink Personal Software: upload data from pump to software to create reports & share data with healthcare providers for enhanced patient-centered care & treatment.

MiniMed 770G

Notes

- Approved for T1Ds ages \geq 2 yrs old.
- CareLink Personal software (downloadable on Windows & Mac)
- Compatible with MiniMed Mobile App via Bluetooth connection
- Warranty:
 - Pump: 4 yrs
 - CGM: 1 yr

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Insulin delivery:
Insulin stoppable 30 mins before potential hyperglycemia & restarted when blood glucose back within optimal range.

Hybrid closed-loop system
wireless communication between insulin pump & CGM

SmartGuide Feature:
Monitors CGM blood glucose readings & bolus action to adjust basal insulin dosage.

MiniMed 670G

Specifications

Pump:
1.4 x 1.12 x 0.37"
(3.6 x 2.8 x 0.94 cm)
Wt: 0.19 oz (5.4g) w/o sensor

3.81 x 2.11 x 0.98 in
(9.68 x 5.36 x 2.49 cm)
Wt: 3.8 oz (106 g) (without
battery/consumables)

300-unit reservoir
Battery: AA (1)
Waterproof: 12ft (3.6m) ≤ 24 hrs

Transmitter:
rechargeable
Charger: AAA battery (1)

Waterproof: 8ft (2.4m)
≤ 30 mins

Receiver:
2.1 x 3.78 x 0.96 in
(5.3 x 9.6 x 2.4 cm)

3.7 oz (105g) without
battery & unfilled
reservoir

Bolus & Basal

Bolus Range:
0.025–25 units

Basal Range:
0.025–35 units/hr

Increments:
• 0.025 units
• 0.05 units
• 0.1 units

Increments:
• 0.025 units
• 0.05 units
• 0.1 units

Insulin-to-Carb:
Fraction grams available

CGM/BG

BG Meter:
Contour Next Link
2.4 Meter
(wireless connection)

Infusion

Medtronic Infusion Set: 4 types

- Mio/Advance
- Silhouette
- Sure-T
- Quick-set

Notes

- Approved for T1Ds ages ≥ 7 yrs old.
- CareLink Personal software (downloadable on Windows & Mac)
- Not compatible with MiniMed Mobile App
- Warranty: 4 yrs (pump) & 1 yr (CGM)
- Manual pre-meal calculation & dosing still strongly recommended.

MiniMed 670G

Key Features

- Hybrid closed-loop pump with wireless communication between insulin pump & CGM
- SmartGuide feature: Monitors CGM blood glucose readings & bolus action to adjust basal insulin dosage.
- Insulin administration can be stopped 30 mins before potential hyperglycemic episode & restarted when blood glucose back within optimal range.



No response to hypoglycemia alarm

SmartGuard:
Responds to hypoglycemia-related events by stopping insulin delivery for ≤ 2 hrs.



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MiniMed 630G

Specifications

Pump:
2.1 x 3.78 x 0.96 in
(5.3 x 9.6 x 2.4 cm)
~ 3.7 oz (105g)

300-unit reservoir

Battery: AA (1); Lithium/alkaline/NiMH

Waterproof: 12 ft (3.6m) \leq 24 hrs

CGM/BG

- Pump functions both as insulin pump & CGM.

CGM:

- Guardian Sensor 3 built-in.
(duration: \leq 7 days)

BG Meter:

- Contour Next Link 2.4 Meter (wireless communication)

Key Features

- Built-in CGM & SmartGuard feature.
- SmartGuard: Responds to hypoglycemia-related events by stopping insulin delivery for \leq 2 hrs:
- Blood sugar lower than personalized low range
- No response to hypoglycemia

Bolus/Basal

Bolus Range:
0–26 units

Default amt:
10 units

Basal:
0–35 units/hr

Increments:
0.025 units/hr: \leq 0.975 units/hr
0.05 units/hr: \leq 9.95 units/hr
1 unit/hr: \geq 10 units/hr

Infusion

Medtronic Infusion Set: 4 types

- Mio/Advance
- Silhouette
- Sure-T
- Quick-set

Notes

Pump:

- T1Ds ages \geq 14 yrs old

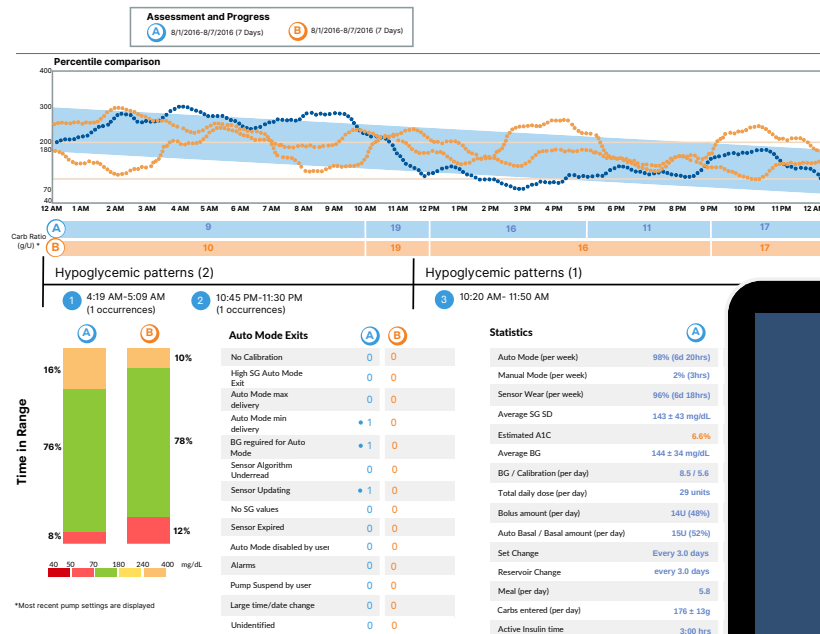
Pump w/ Enlite sensor:

- T1Ds ages \geq 16 yrs old

- CareLink Personal software (downloadable on Windows & Mac)
- Warranty: 4 yrs (pump) & 1 yr (CGM)

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MiniMed 630G



CareLink

WELCOME TO THE NEW CARELINK SYSTEM

CareLink software transforms raw data into personalized insights that can improve diabetes management by helping you make confident decisions about your patient's therapy.

The latest evolution of CareLink software allows freedom to access new reports from new devices. Please visit medtronicdiabetes.com for more product information.

US - English

Log in to CareLink

Username

Password

[Forgot your password?](#)

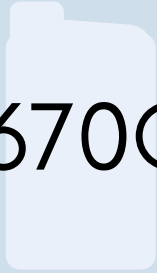
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770G

- First Medtronic hybrid closed-loop insulin pump system that allows caregivers to directly adjust insulin delivery settings through Bluetooth.
- Designed to reduce hypoglycemic & hyperglycemic event: background insulin setting is automatically fine-tuned every five minutes based on real-time CGM blood sugar readings.
- Compatible with MiniMed Mobile App via Bluetooth connection
- Waterproof: 12 ft (3.6m) ≤ 12 hrs
- Approved for T1Ds ages ≥ 2 yrs old.



670G

Two major upgraded features of 670G from 630G focus on enhancing hypoglycemic & hyperglycemic prevention:

- Background insulin delivery setting automatically fine-tunes every five minutes based on real-time CGM blood sugar readings.
- SmartGuide algorithm set to stop background insulin delivery 30 mins before potential hypoglycemic episode and restart when blood glucose returns back to the optimal range.
- Waterproof: 8 ft (2.4m) ≤ 30 min
- Approved for T1Ds ages ≥ 7 yrs old.



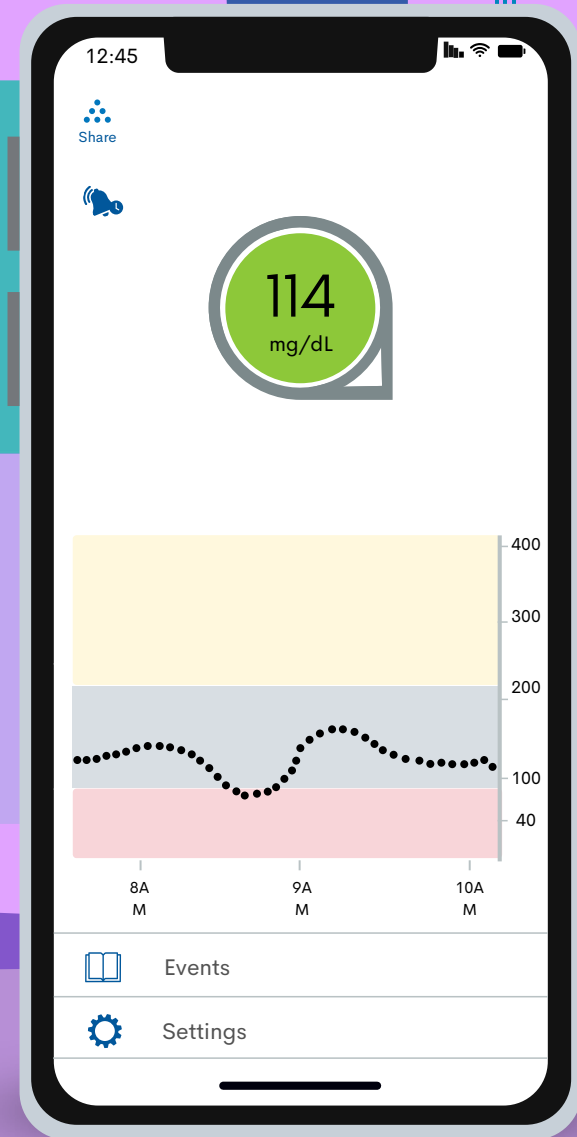
630G

- A non-hybrid closed loop insulin pump system that communicates with CGM for detecting and responding to real-time hypoglycemia
- Stops insulin delivery for ≤ 2 hrs.
- Waterproof: 12 ft (3.6m) ≤ 24 hrs
- T1Ds ages ≥ 14 yrs old

Summary

Hybrid Close-Loop System: Control IQ and Dexcom G6 CGM.

Control IQ:
Basal insulin settings
match to anticipated
blood sugar 30 mins from
current time.



t:slim Control IQ

Specifications

Pump:
3.13 x 2 x 0.6 in
(8 x 5.1 x 1.5 cm)
Wt: 3.95 oz (112g) (with battery & full reservoir)

300-unit cartridge
Battery: Rechargeable
Waterproof: 3ft (0.91m) \leq 30 min.

Bolus/Basal

Max bolus range:
0.05–25 units

Insulin-to-Carb:
Fraction grams
available

Basal range:
0.1–15 units/hr

Increment:
0.001 unit only

Infusion

Tandem infusion set: 3 different
types

- Autosoft 30/90/XC
- Trusteel
- Varisoft

CGM/BG

- CGM:
- Dexcom G6
 - (duration: 10 days)

Notes

- Approved for ages ≥ 14 yrs old.
- T:connect Diabetes Management
- Compatible Software: Tidepool & Glooko
- Control IQ does not replace pre-meal bolus.
- Pump updates completed via computer only for in-warranty pumps.

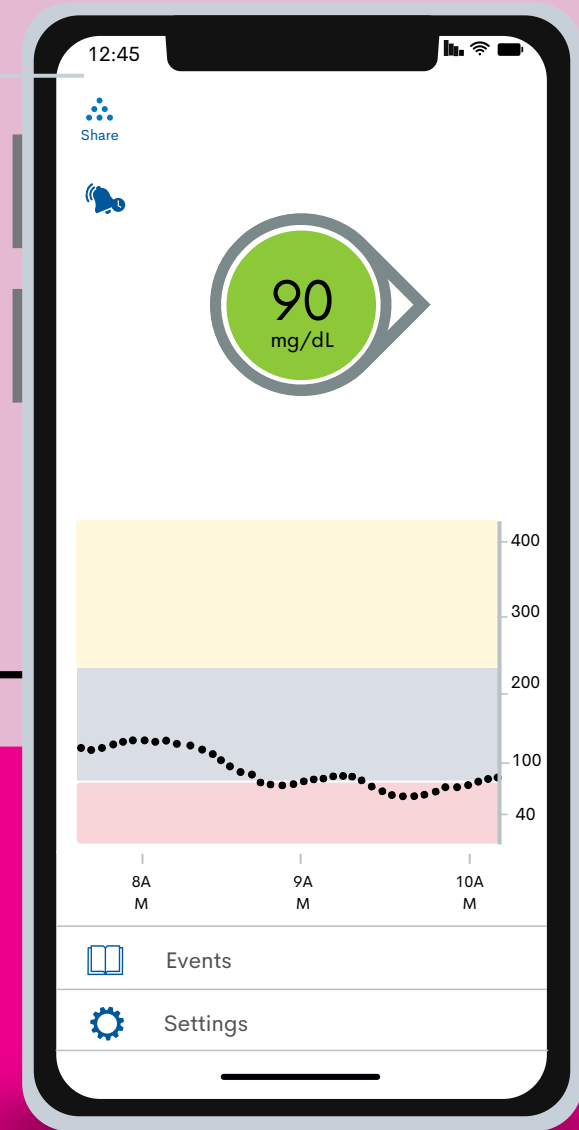
Control IQ



Hybrid Close-Loop System: Basal IQ and Dexcom G6 CGM

Basal-IQ feature:

Designed to stop insulin delivery in either real-time hypoglycemia or downward trend towards hypoglycemia with pump-CGM connection



Insulin delivery resumes following blood sugar returning to normal level.

t:slim Basal IQ

Specifications

Pump:

3.13 x 2 x 0.6 in

(8 x 5.1 x 1.5 cm)

3.95 oz (112g) with battery & full reservoir

300-unit cartridge

Battery: Rechargeable

Waterproof: 3ft (0.91m) \leq 30 mins.

Bolus/Basal

Bolus Range:

0.05–25 units

Max amt:

Add'l 25 units

Insulin-to-Carb:

Fraction grams available

Basal Range:

0.1–15 units/hr

Increment:

0.001 unit only

Infusion

Tandem infusion set: 3 different types

- Autosoft 30/90/XC
- Trusteel
- Varisoft

CGM/BG

CGM:

Dexcom G6

(duration: 10 days)

Key Features

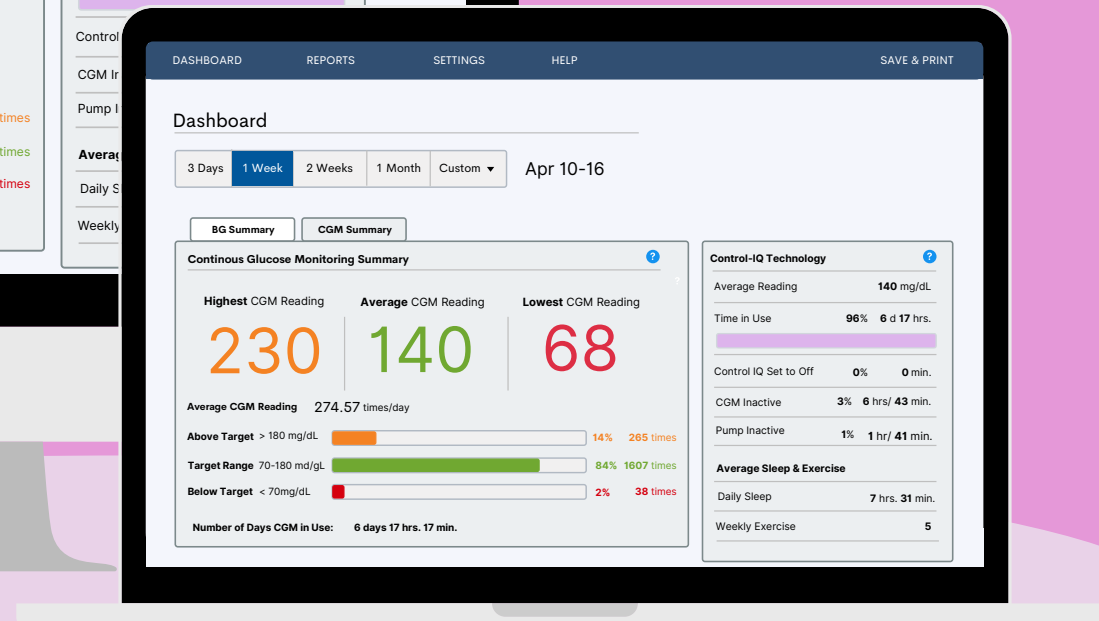
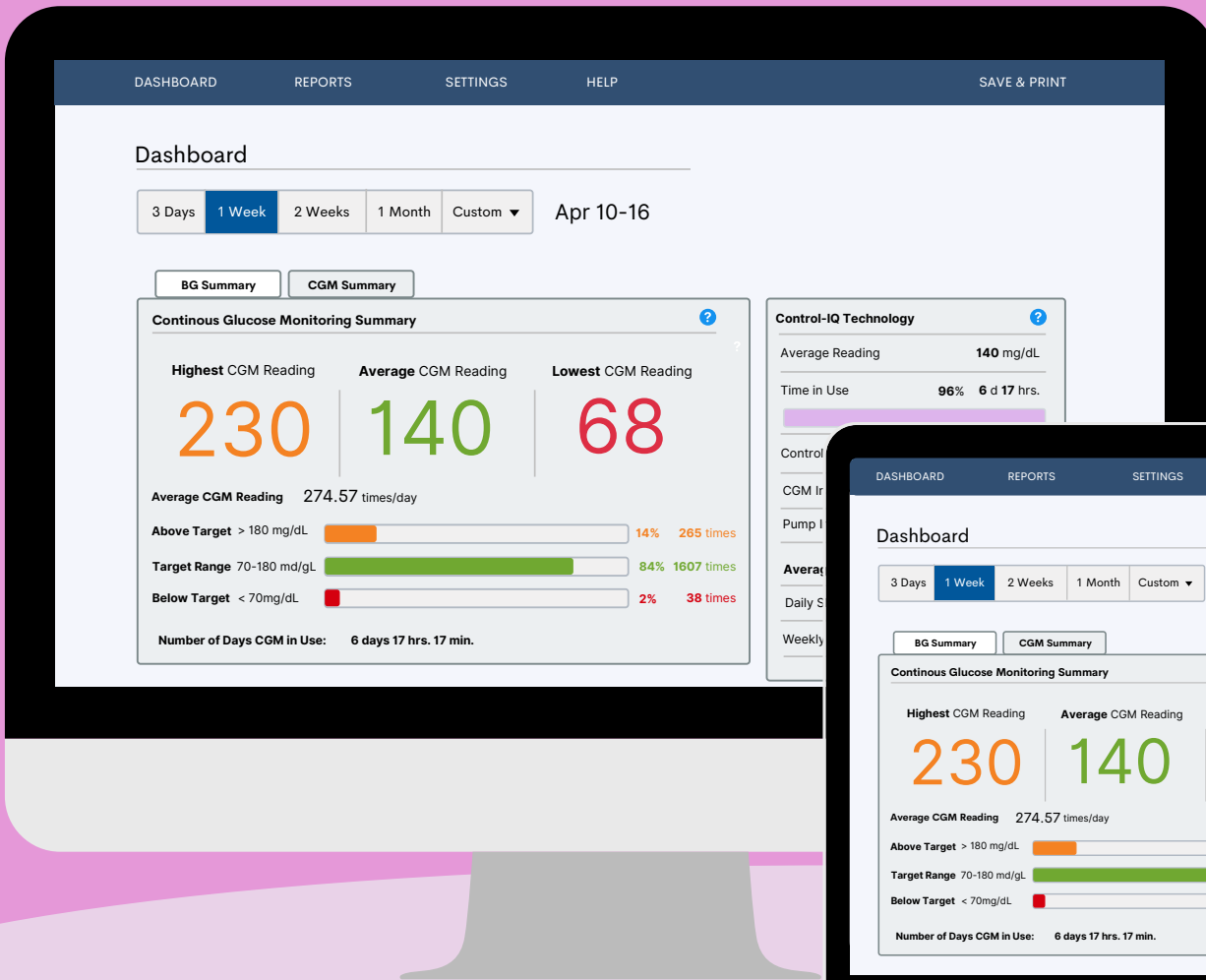
- Basal-IQ feature: Designed to stop insulin delivery in either of these hypoglycemic-related episodes with pump- CGM connection:
 - Blood sugar reading showing \leq 70mg/dL
 - Downward trend of reaching \leq 80mg/dL within 30 mins
- Insulin delivery resumes following blood sugar returning to normal level.

Basal IQ



Notes

- Approved for ages \geq 6 yrs old.
- T:connect Diabetes Management
- Compatible with:
 - Tidepool
 - Glooko



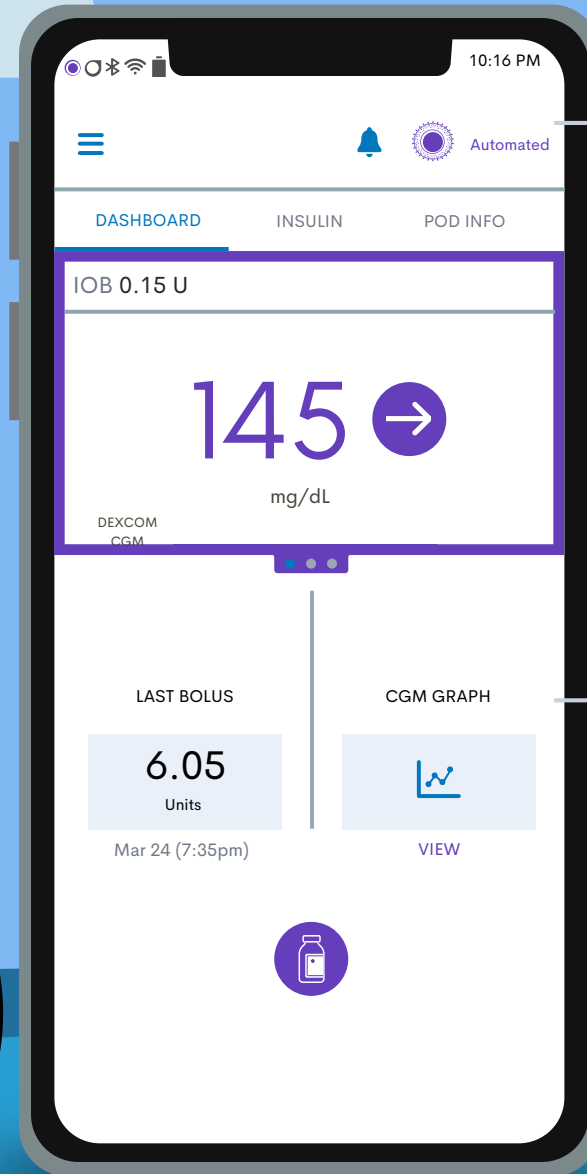
Control IQ

- First Tandem hybrid closed-loop system.
- Control IQ feature: Automated adjustments in basal insulin settings (cessation/correction bolus) that matches to anticipated blood sugar 30 mins from current time.
- Assesses glucose trends in order to adjust basal rates.
- Control IQ does not replace pre-meal bolus.
- Approved for ages ≥ 14 yrs old.

Basal IQ

- Non-hybrid closed loop system that responds to real-time or anticipated hypoglycemic-related episodes with automatic cessation of insulin delivery.
- Insulin administration resumes following blood sugar returning to normal level.
- Approved for ages ≥ 6 yrs old.

Hybrid closed-loop system:
Pump & Dexcom
G6 CGM



HypoProtect:

Automatic cessation for hypoglycemia with max limit at 150 mg/dL; lowering of basal insulin delivery for exercise.

SmartAdjust:

Live basal adjustments every 5 mins, dependent on current/predicted glucose trends from CGM, IOB, insulin sensitivity factors, and HypoProtect; better personalized basal accuracy after 2-3 pods of use, or ~9 days.

omnipod 5

CGM/BG

Pod:
3-day use

CGM
Dexcom G6
(duration: 10 days)

Key Features

- Hybrid closed-loop system: pump & Dexcom G6 CGM together enable Automated Insulin Delivery System.
- Automated Insulin Delivery System (AID): The SmartAdjust technology controlled with Omnipod 5 controller or with mobile app.
- SmartAdjust: live basal adjustments every 5 mins, dependent on current/predicted glucose trends from CGM, IOB, insulin sensitivity factors, and HypoProtect; better personalized basal accuracy after 2-3 pods of use, or ~9 days.
- Glucose targets: Adjustable and customizable (quantity/time) in 10mg/dL increments (110-150 md/gL).
- HypoProtect: automatic cessation for hypoglycemia, max limit at 150 mg/dL; lowering of basal insulin delivery for exercise.
- SmartBolus Calculator
- Omnipod 5 App: View real-time BG data, insulin delivery, alerts & reminders.

Specifications

Pod
1.53 x 2.05 x 0.57 in
(3.9 x 5.2 x 1.4 cm)
Wt: 1.2 oz (34g) (with full reservoir);
battery included
85-200 units of insulin

Controller
Battery: Rechargeable
Watertight: 25ft (7.6m) ≤ 60 mins

Bolus/Basal

Bolus Range:
N/A

Increments:
N/A

Insulin-to-Carb
N/A

Increments:
N/A

Infusion

No infusion set needed

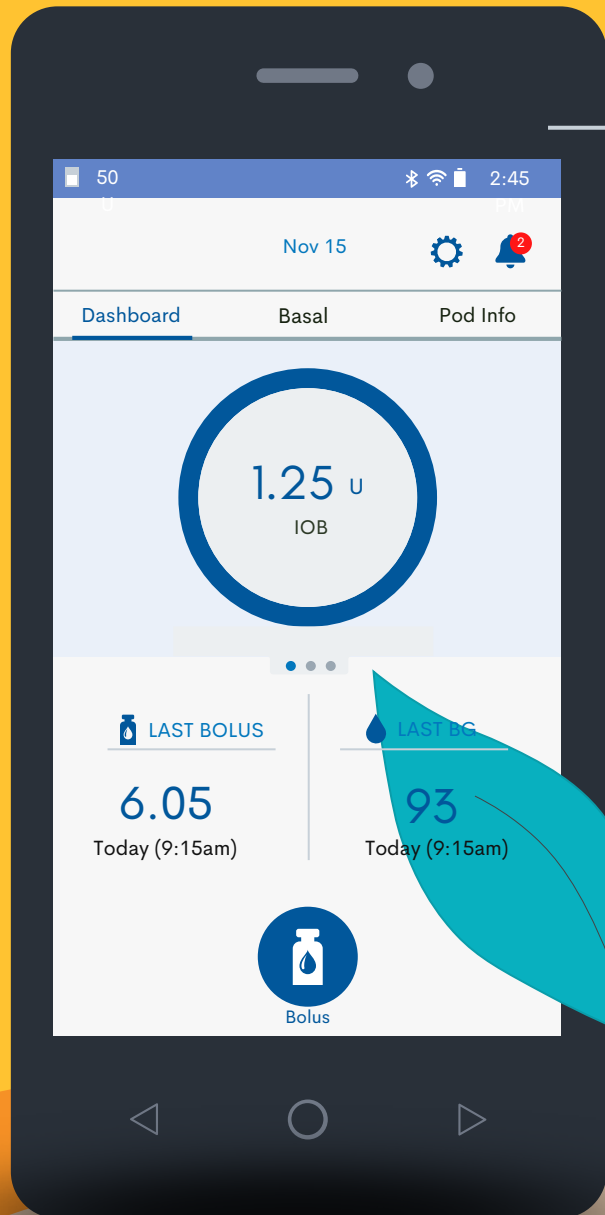
- Insulin delivery via cannula attached to pod

Omnipod
5

G6

Notes

- Approved for T1Ds ages ≥ 6 yrs old.
- SmartAdjust does not replace pre-meal bolus.



PDM:

Functions as Freestyle blood sugar meter. Carries nutrition info of $\geq 1,000$ foods & ≤ 36 personalized easy-to-reach carb info.

Tubeless & wireless pod & Personal Diabetes Manager (PDM) & Contour Next One.



Pod:
(lasting ≤ 72 hrs)

Omnipod Dash

Specifications

Pod:
1.53 x 2.05 x 0.57 in
(3.9 x 5.2 x 1.4 cm)
Wt: 1.2 oz (34g) (with full reservoir); battery included
200-unit built-in reservoir

PDM:
3.7 oz (106g)
Battery: rechargeable
Watertight: 25ft (7.6m) \leq 60 mins

CGM/BG

Pod:
3-day use

CGM: none

BG Meter: Contour Next One Blood
Glucose Meter

Key Features

- Tubeless & wireless insulin pump, controlled with Personal Diabetes Manager (PDM).
- Color touch screen PDM for viewing blood sugar data & insulin delivery.
- Contour Next One: Delivers blood glucose data to PDM wirelessly, can be viewed from PDM & selected smartphone devices with Omnipod Display app.
- PDM: Programmed with Calorie King food library (\geq 80,000 foods/drinks & \leq 50 personalized, easy-to-reach carb info)

Bolus & Basal

Bolus Range:
0.05–30 units

Increments:
• 0.05 units
• 0.1 units
• 0.5 units
• 1 unit

Insulin-to-Carb:
0.1 unit

Optional zero basal rate setting

0.05–30 units/hr

Increments:
0.05 units

Infusion

No infusion set needed
Insulin delivery via cannula attached to pod

Notes

- Approved for ages \geq 2 yrs old.
- Requires PDM to be \leq 5 ft from pod for successful bolus delivery. (not applicable for basal)
- Compatible Software:
 - Tidepool
 - Glooko
- Apps:
 - Omnipod Display (for self-management)
 - Omnipod Vie (for \leq 12 caregivers)
- Warranty: \leq 4 yrs for PDM from purchase date



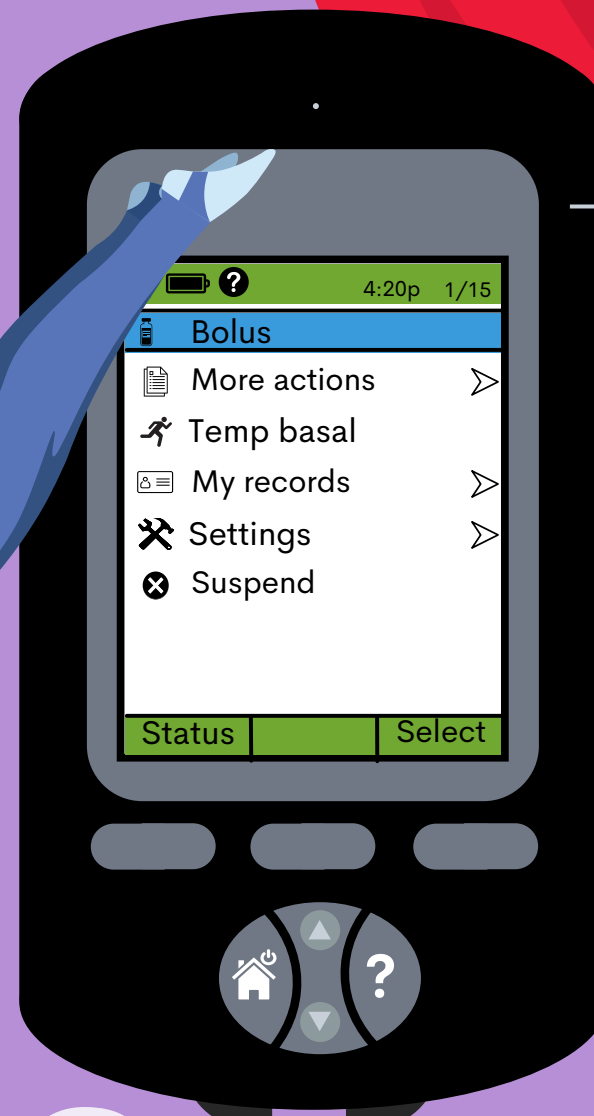
Omnipod
Dash

Tubeless & wireless
insulin pump (3-day
use), with Personal
Diabetes Manager
(PDM)

Pod:
(lasting ≤ 72 hrs)

PDM:

Functions as Freestyle
blood sugar meter.
Carries nutrition info of
 $\geq 1,000$ foods & ≤ 36
personalized easy-to-
reach carb info.



Omnipod System

Specifications

Pod:

1.53 x 2.05 x 0.57 in

(3.9 x 5.2 x 1.4cm)

Wt: 1.2 oz (34g) (with full reservoir); battery included

200-unit built-in reservoir

Watertight: 25ft (7.6m) \leq 60 min

PDM:

2.4 x 4.4 x 0.82 in

(6.1 x 11 x 2.1 cm)

Wt: 4.4 oz (125g) (with batteries)

Battery: AAA (2); Alkaline

CGM/BG

PDM functions as both wireless insulin pump & blood glucose meter

CGM: none

BG Meter:
FreeStyle Blood Glucose Meter

Pod:
(duration: \leq 3 days)

Key Features

- First tubeless & wireless insulin pump.
- Consists of pod (lasting \leq 72 hrs) & Personal Diabetes Manager (PDM) which also functions as Freestyle blood sugar meter.
- PDM: Carries nutrition info of \geq 1,000 foods & \leq 36 personalized easy-to-reach carb info.

Bolus & Basal

Bolus Range:
0.05–30 units

Increments:
• 0.05 units
• 0.1 units
• 0.5 units
• 1 unit

Insulin-to-Carb:
Only whole unit increments available

0.05–30 units/hr

Increments:
0.05 units

Infusion

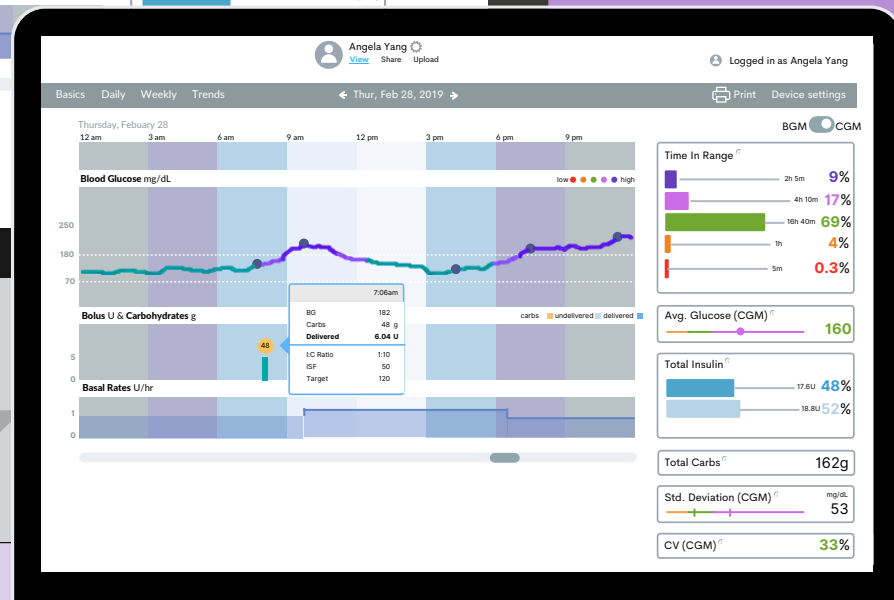
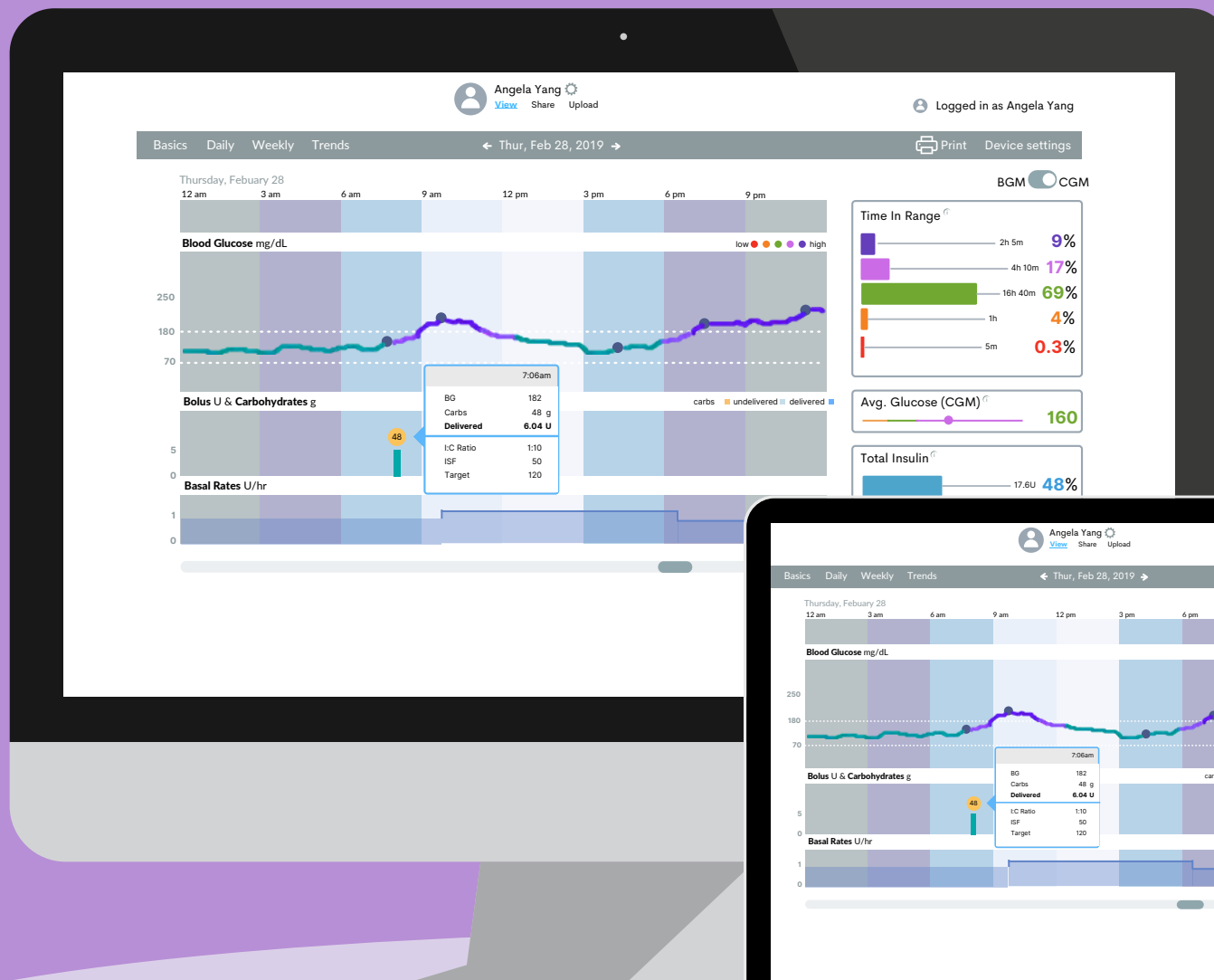
No infusion set needed

Insulin delivery with cannula attached to pod with PDM connection

Notes

- FDA-approved for all ages.
- Requires PDM to be \leq 5 ft from pod for successful bolus delivery. (not applicable for basal)
- Nightlight port for test-strip, food dictionary, bolus calculator/ changes (also for basal), setting reminders/alerts.
- Compatible Software:
 - Tidepool
 - Glooko
- Warranty: \leq 4 yrs for PDM from purchase date

Omnipod System



Omnipod 5

- First Omnipod hybrid closed-loop system: Pump & Dexcom G6 CGM.
- Automated Insulin Delivery System (AID): The SmartAdjust technology controlled w/ Omnipod 5 PDM/Receiver or with mobile app.
- SmartAdjust: Live basal adjustments every 5 mins, dependent on current/predicted glucose trends from several indicators; does not replace pre-meal bolus.
- Better personalized basal accuracy after 2-3 pods of use, or ~9 days.
- HypoProtect: automatic cessation for hypoglycemia, max limit at 150 mg/dL; lowering of basal insulin delivery for exercise.
- Approved for T1Ds ages ≥ 6 yrs old.

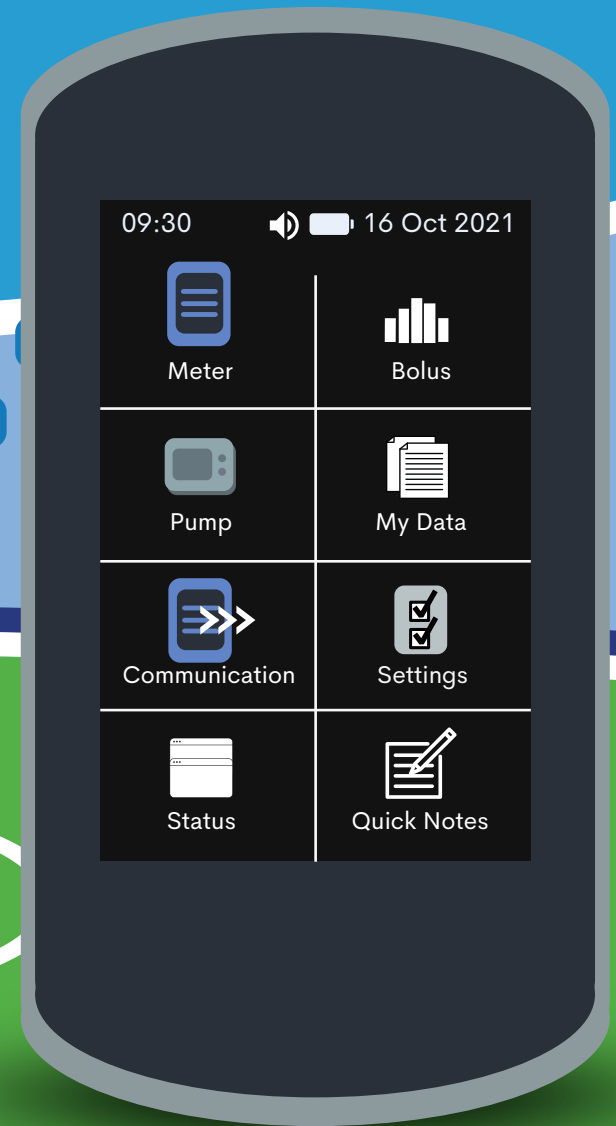
Omnipod Dash

- Second generation Omnipod system
- Upgraded PDM (the receiver): Color touchscreen
- Includes Contour Next One, an external blood glucose meter, from PDM system.
 - Delivers blood glucose data to PDM wirelessly, viewable from PDM & with Omnipod Display app.
- Approved for ages ≥ 2 yrs old.

Omnipod System

- First generation Omnipod system
- PDM Controller: viewing blood sugar data & insulin delivery.
 - pre-programmed basal settings and bolus calculations
- FDA-approved for children & adults

Hassle-free & pre-filled
insulin cartridge:
programmed to deliver
customized bolus (even
simultaneously for different
settings) & basal.



Aviva Insight

Specifications

Pod:
1.53 x 2.05 x 0.57 in
(3.9 x 5.2 x 1.4cm)
Wt: 1.2 oz (34g) (with full reservoir);
battery included
200-unit built-in reservoir
Watertight: 25ft (7.6m) \leq 60 min

PDM:
2.4 x 4.4 x 0.82 in
(6.1 x 11 x 2.1 cm)
Wt: 4.4 oz (125g) (with batteries)

Battery: AAA (2); Alkaline

CGM/BG

PDM functions as both wireless insulin pump & blood glucose meter

CGM: none

BG Meter:
FreeStyle Blood Glucose Meter

Pod:
(duration: \leq 3 days)

Key Features

- First tubeless & wireless insulin pump.
- Consists of pod (lasting \leq 72 hrs) & Personal Diabetes Manager (PDM) which also functions as Freestyle blood sugar meter.
- PDM: Carries nutrition info of \geq 1,000 foods & \leq 36 personalized easy-to-reach carb info.

Bolus & Basal

Bolus Range:
0.05–30 units

Increments:
• 0.05 units
• 0.1 units
• 0.5 units
• 1 unit

Insulin-to-Carb:
Only whole unit increments available

0.05–30 units/hr

Increments:
0.05 units

Infusion

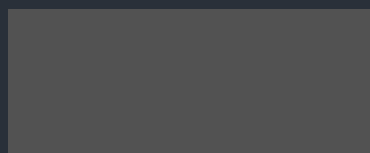
No infusion set needed

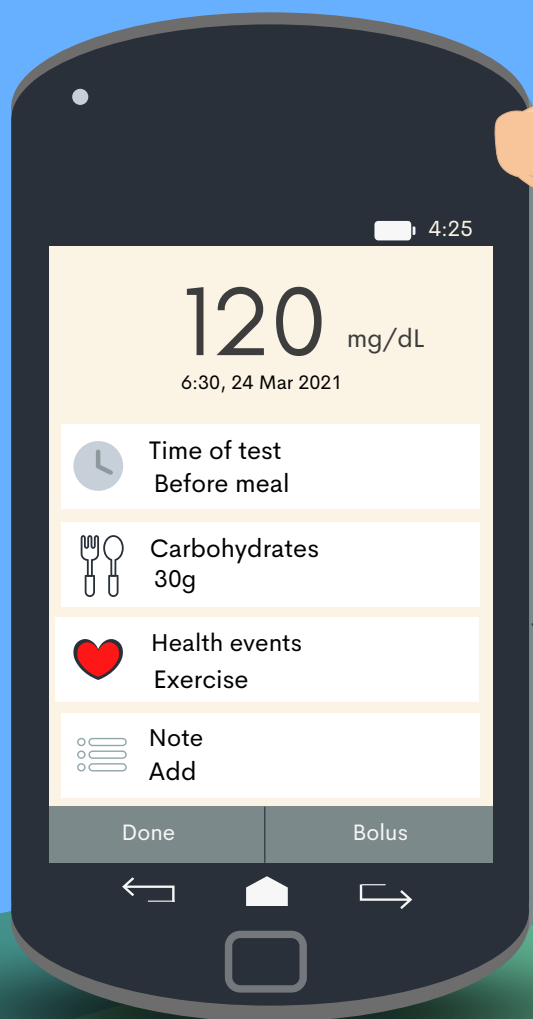
Insulin delivery with cannula attached to pod with PDM connection

Notes

- FDA-approved for all ages.
- Requires PDM to be \leq 5 ft from pod for successful bolus delivery. (not applicable for basal)
- Nightlight port for test-strip, food dictionary, bolus calculator/ changes (also for basal), setting reminders/alerts.
- Compatible Software:
 - Tidepool
 - Glooko
- Warranty: \leq 4 yrs for PDM from purchase date

Aviva Insight





Aviva Solo

Specifications

Pump:
2.4 x 1.5 x 0.51 in
(6.1 x 3.8 x 1.3 cm)
Wt: <29g (with full reservoir)

Battery: 1.4V zinc-air

80–200 units of insulin

PDM:
12.4 x 6.4 x 1.7 cm
Wt: 140g

CGM/BG

PDM functions as both wireless insulin pump & blood glucose meter

CGM: compatibility for some

MicroPump:
(duration: \leq 4 days)

Bolus & Basal

Bolus Range:
0.2–50 units

Types:
Standard bolus
Quick bolus
Extended bolus
Multiwave bolus

*Time extension for extended bolus
& multiwave bolus adjustable every 15 min for \leq 24 hrs.

Increments:
• 0.05 units
• 0.1 units
• 0.2 units
• 1.0 unit

Quick bolus
• 0.2 units
• 0.5 units
• 1.0 unit
• 2.0 units

Basal:
0.1–25.0 units/hr

5 customizable profiles

Increments:
• 0.01 units
• 0.1 units

Temporary Basal Rate:
0–90% & 110–250%: increments of 10% and adjustable every 15 mins \leq 24 hrs.
5 is max TBRs.

Infusion

2 cannulas: different length and insertion depth
• Orange: 6mm
• Blue: 9 mm

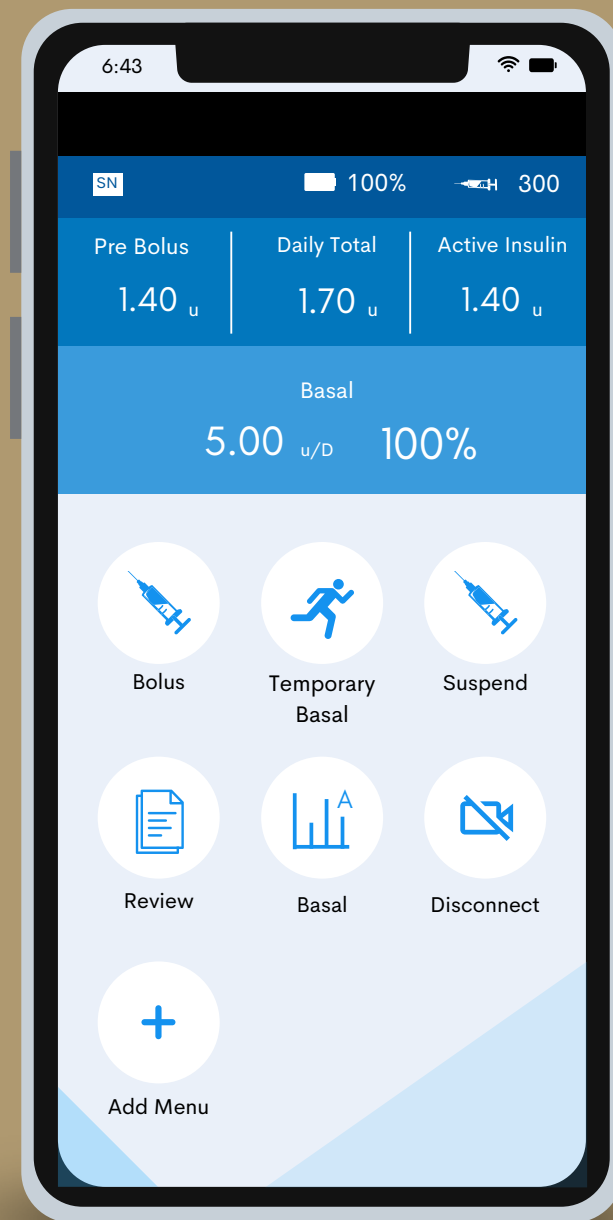
Key Features

- Tubeless, detachable micropump with touchscreen PDM integrated with blood glucose meter for optimal dosing and delivery of insulin.
- Customizable notifications and alarms.
- Can be used interchangeably with MDI without data loss.

Aviva Solo

Notes

- FDA-approved
- 1.5 meters between devices



Specifications

Pump:
2.95 x 1.77 x 0.74 in
(7.5 x 4.5 x 1.9 cm)
Wt: 2.15 oz (61g)

300-unit reservoir

Battery: 3.6-volt DC lithium (1)

Waterproof: 3.3 ft (1m) \leq 1 hr

Bolus & Basal

Bolus Range:
0.1-80 units

Increments:

- 0.1 units
- 0.5 units
- 1 unit

0.04-16 units/hr

Increments:

- 0.01 units
- 0.1 units

Infusion

Infusion set: 3 different types

- Soft Release O/ST
- Easy Release I/II
- Superline-ST

CGM/BG

None

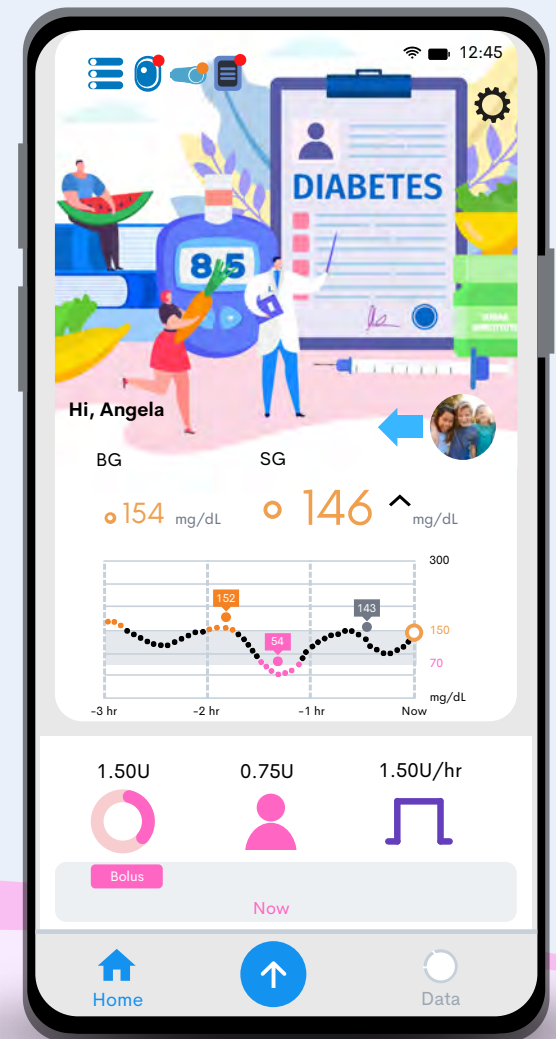
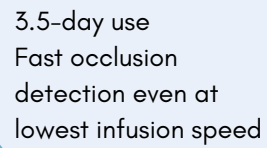
Key Features

- Simplistically designed pump device with icon display delivering insulin, both bolus & basal.

Notes

- Approved for T1Ds ages \geq 7 yrs old.
- Compatible App: DiabecareDana-I
- Warranty: 4 yrs





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Specifications

Patch:
49.5x39x14.5mm
12 mos shelf life
200-unit reservoir; 80 unit min

Battery:
3.7V, 1,130 mAh

Controller:
116.5x64.5x114 (mm)
110g with battery
Korean/English

Waterproof:
IPx8 (1m) ≤ 24hrs

Bolus & Basal

8 bolus and basal programs

Infusion

Soft cannula: insertion depth: 4.75mm (vertical)

CGM/BG

Patch:
3.5 days

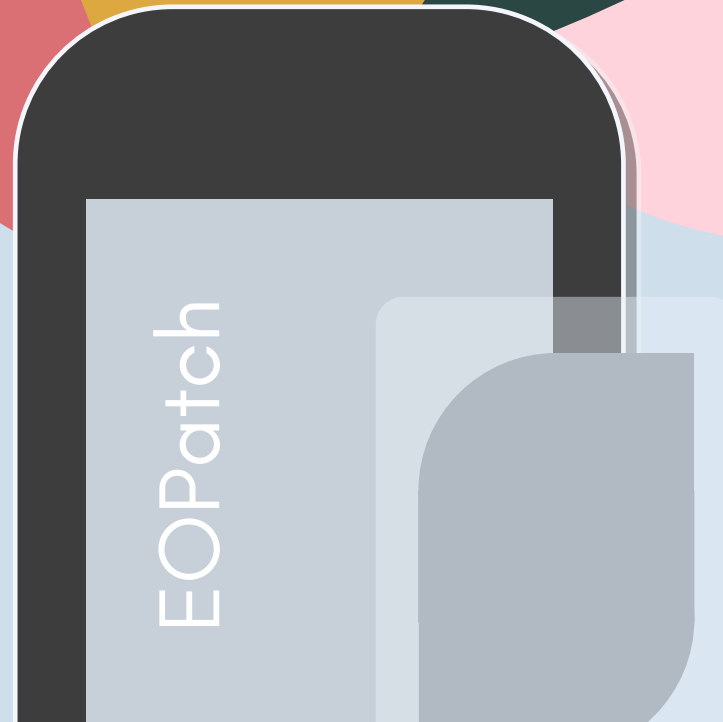
CGM:

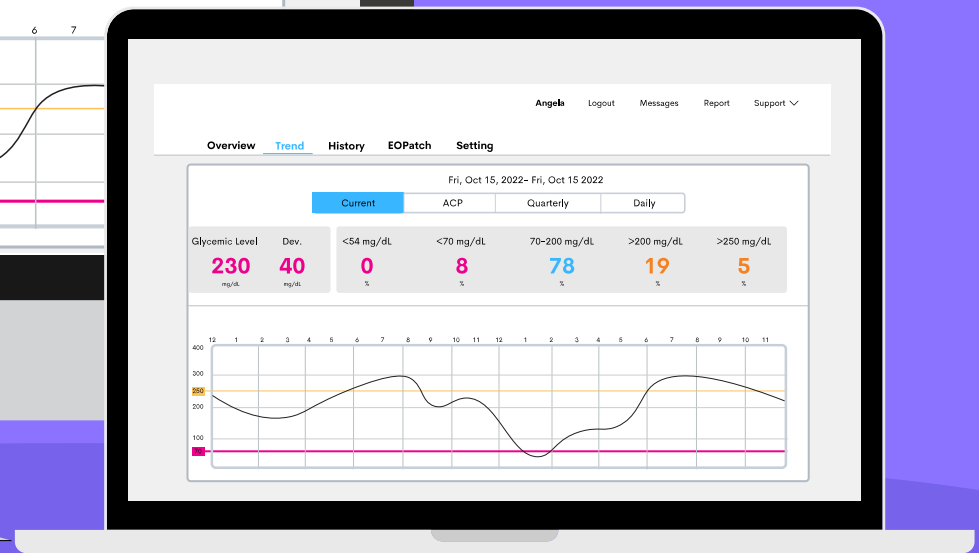
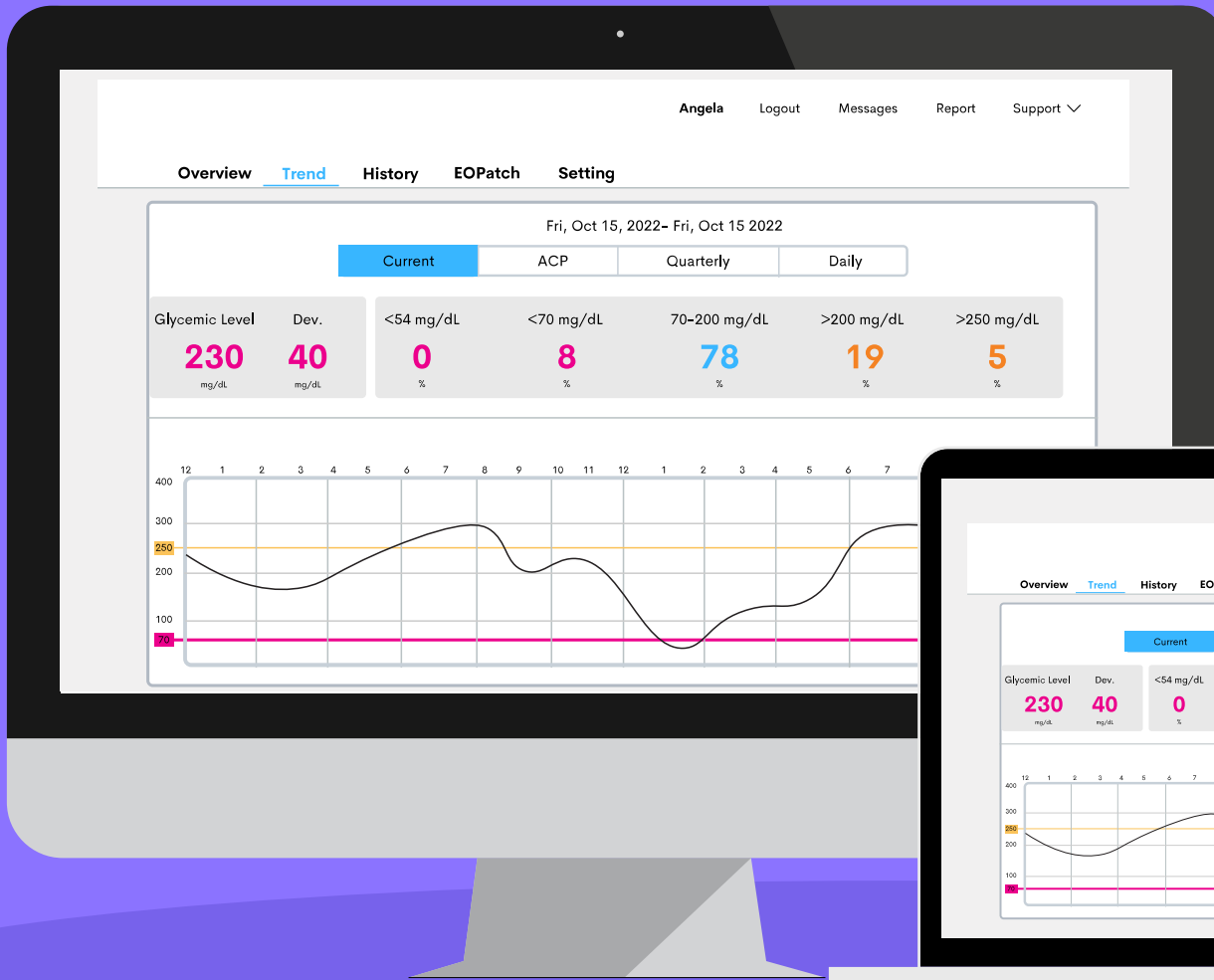
Key Features

- 3.5-day use (84 hrs)
- Fast occlusion detection even at lowest infusion speed
- Notification for secure insertion
- Insertion speed painless and soft cannula

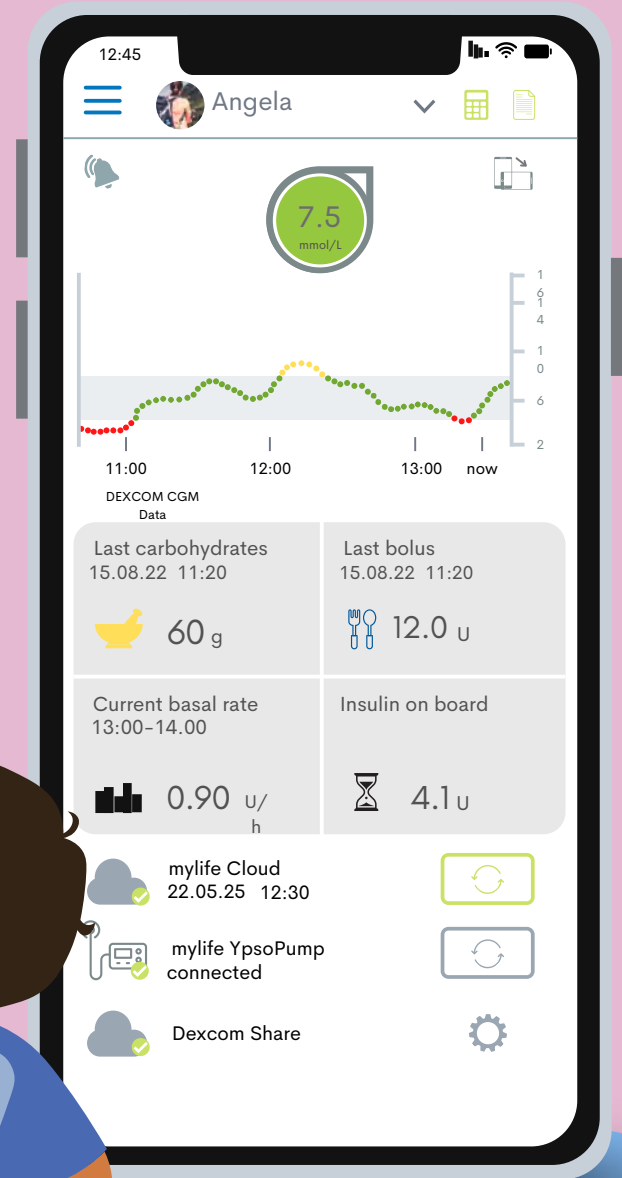
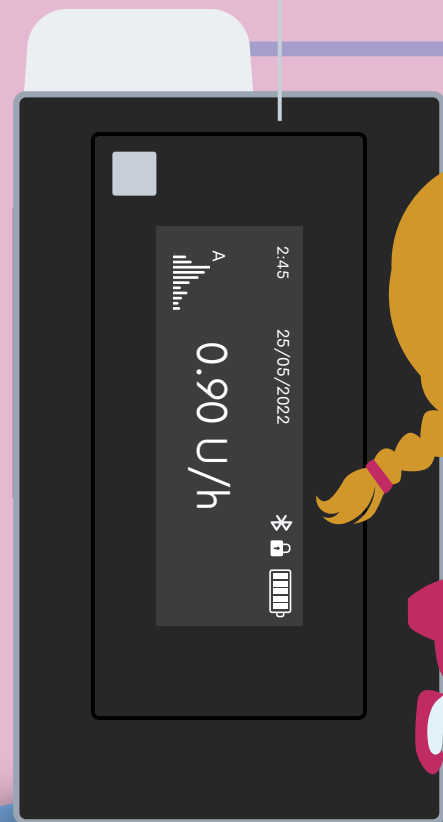
Notes

- Narsha: smartphone app EOBridge software





Simplistic design
for efficient insulin
delivery and blood
glucose monitoring



Compatible with
Dexcom G6

Ypsopump

CGM/BG

Reservoir:

1.6ml (160 units)

100 U/ml, rapid-acting insulin analogue.

- Fiasp
- NovoRapid
- Humalog
- Apidra
- Insulin lispro Sanofi

Key Features

- Compatible with Dexcom G6
- Empty reservoir filled with Prefilled insulin cartridge
- Refilled insulin: 16ml (160u)
- Bluetooth connection

Specifications

Pump:

7.8x4.6x1.6cm

83g (including battery & filled cartridge)

Pre-filled/self-filled single-use insulin cartridge:

1.6ml/160 units

Battery:

Battery: 1.5 V alkaline (LR03), AAA;

avg 30-day use (54 U/day)

Controller:

OLED touchscreen, 4.1x1.6cm

Waterproof:

IPX8 according to EN 60529 (immersion to depth of 1 m for up to 60 mins).

Bolus & Basal

Mylife YpsoPump Orbit infusion set with mylife Orbit Inserter

Range: 0–40 units/hr

2 personalized programs: A & B.

Temporary basal rate available

- Increments:
- 0.01 ($\leq 1.00\text{u/hr}$)
- 0.02 ($\leq 2.00\text{u/hr}$)
- 0.1 ($\leq 15.0\text{u/hr}$)
- 0.5 ($\leq 40.0\text{u/hr}$)

Infusion

Bolus Types:

- Standard
- Extended
- Combination
- Blind bolus
- Stacked bolus

Bolus Range:

0.1 – 30 units

Increments:

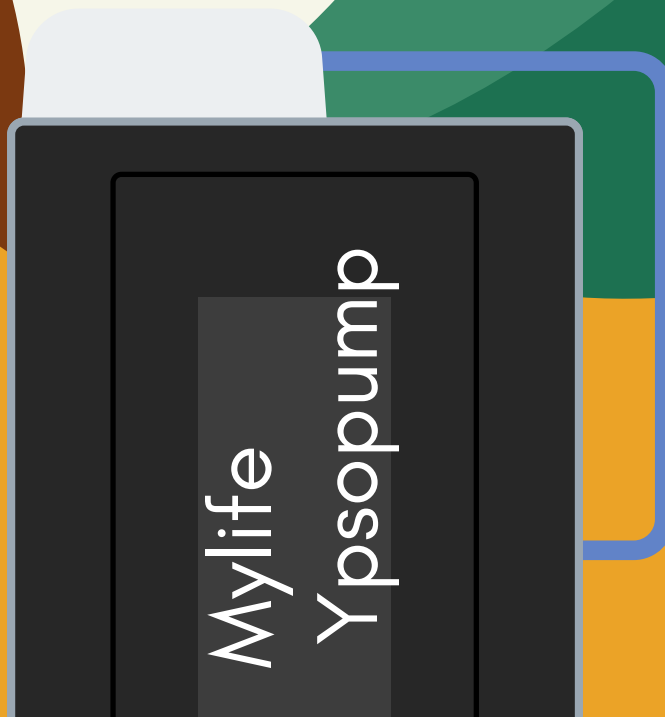
- 0.1u
- 0.5u
- 1.0u
- 2.0u

Notes

Compatible App:

- mylife Assist
- mylife App

Mylife Software





Incompatible
with any
software/
meters/CGMs.

Delivers bolus by
pressing button
instead of
electronic
signaling.

V-Go

Specifications

Pump:
2.4 x 1.3 x 0.5 in
(6.1 x 3.3 x 1.3 cm)
Wt: 0.7-1.8 oz (20-51g) (with full cartridge)

Battery: None required

Reservoir types:

- V-Go 20: 56 units
- V-Go 30: 66 units
- V-Go 40: 76 units

Bolus & Basal

V-Go 20: 36 units
V-Go 30: 66 units
V-Go 40: 76 units

Increments:
2 units only

V-Go 20: 20 units in 1 day
V-Go 30: 30 units in 1 day
V-Go 40: 40 units used in 1 day

Infusion

Tubeless, built-in stainless-steel needle

CGM/BG

None

Key Features

Non-electric, manually functioning, insulin patch that delivers bolus incrementally with a push of a button.

- Patch: replaced daily, cost-saving, co-pay card available.
- Basal rate: Preset & administered with needle instead of attached tube.
- Incompatible with any software/meters/CGMs.

V-Go

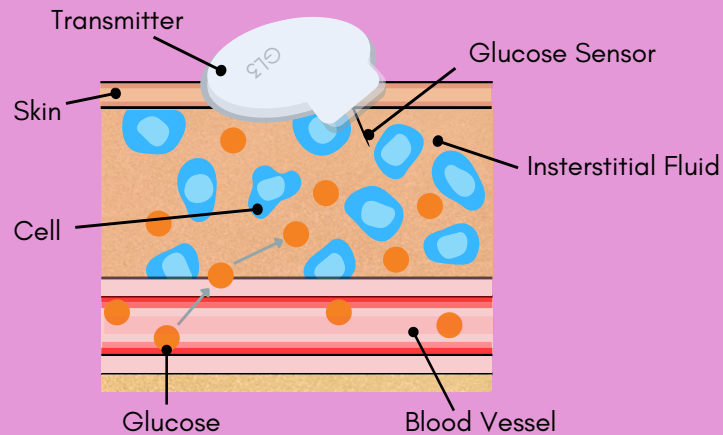
Notes

- Approved for T1D & T2D adults

Continuous Glucose Monitor



Continuous glucose monitors (CGMs) are devices that monitor blood glucose every few minutes, display past, current, and predicted blood glucose frequently throughout the day.

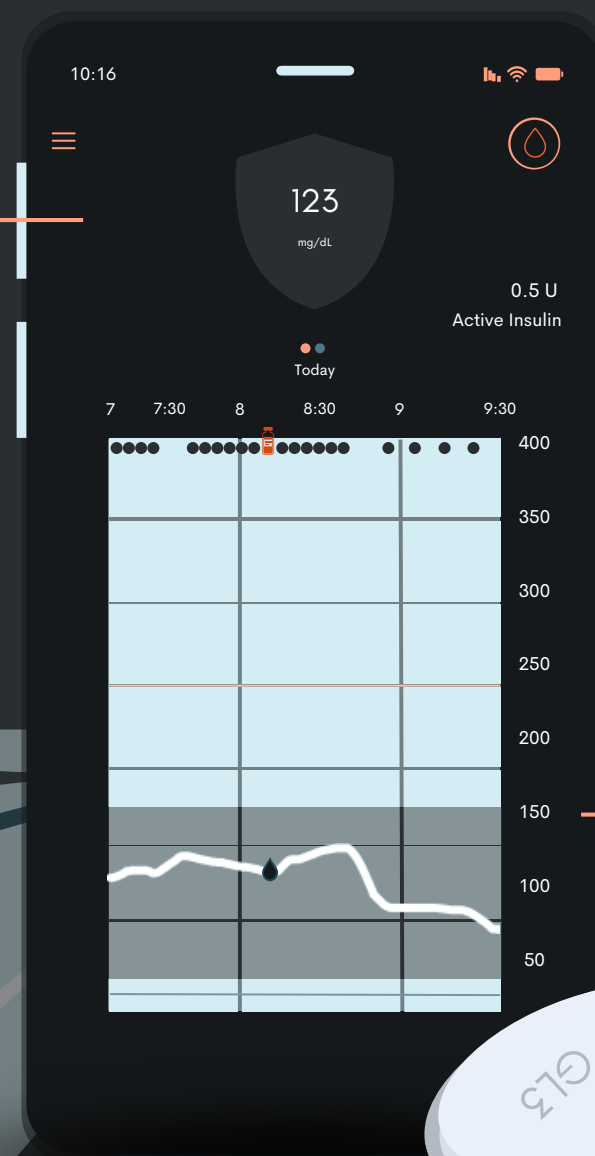


People with both Type 1 and Type 2 diabetes can use continuous glucose monitors. Most often, these devices are compatible with Apple/Android phones for convenient blood glucose view.





**Guardian
Connect App:**
View real-time glucose
data; customizable alert
with fully integrated
Medtronic device



Readings:
BG updated
every 5 mins

Connection/ Calibration

- Transmitter must be ≤ 20 ft from smartphone device
- When dosing insulin, glucose reading must be confirmed with fingerstick reading.
- Calibration every 12 hrs

Specifications

Real Time CGM

Sensor Life: ≤ 7 days

Transmitter:

1.41 x 1.13 x 0.38 in

(3.58 x 2.9 x 0.97 cm)

0.04 oz (1.13g) with sensor; rechargeable

Battery: AAA (1) (charger)

Waterproof: 8 ft ≤ 30 mins

Notes

- 670G: Approved for children & adults ≥ 7 yrs old
- Guardian Connect System: Approved for children & adults ≥ 14 yrs old.
- Acetaminophen may change accuracy of blood glucose readings.
- Compatible with Apple Watch.

Key Features

- Designed for 7-day use with Guardian sensor and transmitter
- Readings: BG updated every 5 mins
- Alerts: Personalized & preset alerts prior to hypoglycemia & hyperglycemia episode. (Urgent low [55mg/dL] alarm always on.)
- Tracking markers: insulin delivery, meal, exercise
- Guardian Connect app: View real-time glucose data; customizable alerts

Guardian Connect CGM System

Apps/Software

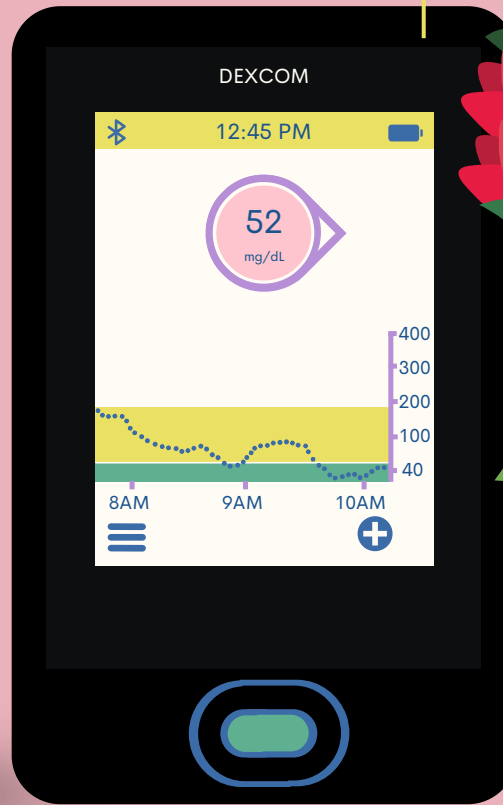
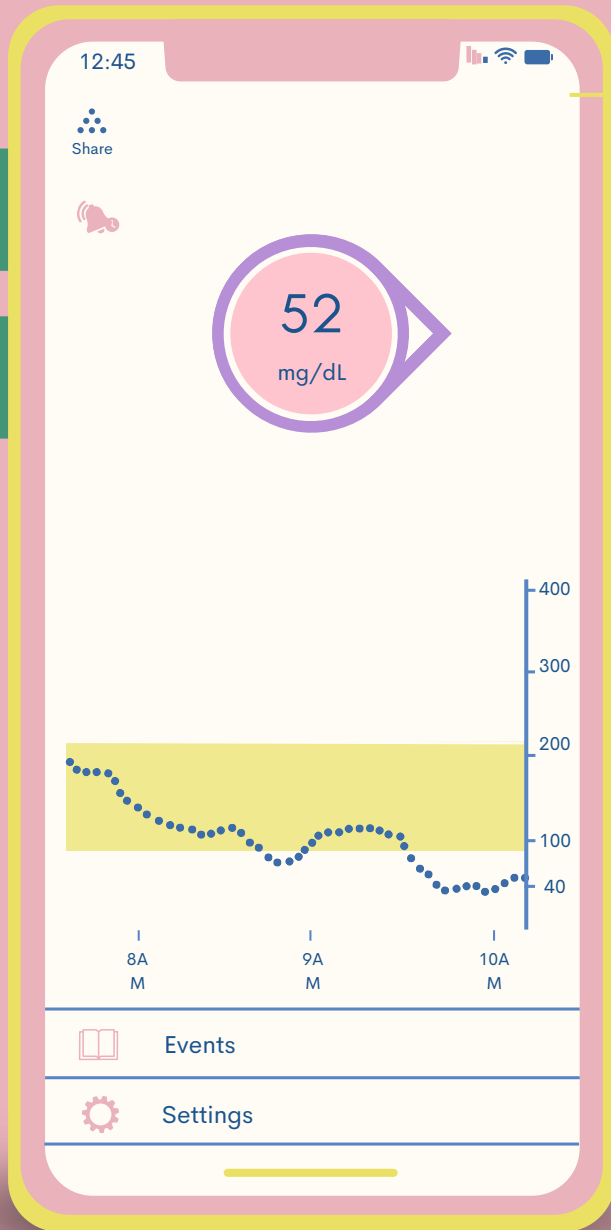
- Guardian Connect App (Apple & Android devices)
- Sugar.IQ App
- CareLink Software (for most Windows/Mac)

CGM Data:

Can be sent to selected smartphone devices with Dexcom G6 App downloaded. Share feature allows glucose data to be shared with ≤ 10 followers (e.g., parents, etc) for remote monitoring.

Designed for 10-day non-adjustive use & compatible with Tandem pumps.

G6 vs. G5: G6 doesn't require calibration, has longer wear time, & is slimmer in size for transmitter & larger for receiver.



Dexcom G6

Connection/ Calibration

- Receiver or smartphone with Dexcom app must be ≤ 20 ft from transmitter & sensor.
- 2 hrs after sensor setup
- No calibration

Key Features

- Designed for 10-day non-adjustive use & compatible with Tandem pumps.
- G6 vs. G5: G6 does not require calibration, has longer wear time, & is slimmer in size for transmitter & larger for receiver.
- Alerts: Personalized alerts for hypoglycemia & hyperglycemia episodes / trends. (Urgent low [55mg/dL] alarm always on.)
- CGM Data: Can be sent to selected smartphone devices with Dexcom G6 App downloaded. Share feature allows glucose data to be shared with ≤ 10 followers (e.g., parents, etc) for remote monitoring.

Specifications

Real Time CGM

Sensor Life: 10 days

Transmitter:

1.68 x 0.86 x 0.33 in

(4.23 x 2.18 x 0.84 cm)

Wt: 0.42 oz (11.91g) (with sensor; built-in battery lasting ~3 mos.)

Waterproof: 8 ft \leq 24 hrs

Receiver:

4.02 x 2.44 x 0.46 in

(10.21 x 6.2 x 1.17 cm)

Wt: 3.3 oz (93.6g)

Battery: rechargeable

Notes

- Approved for children & adults ≥ 2 yrs old.
- Glucose readings not affected by taking acetaminophen 1000 mg every ≤ 6 hrs.
- Compatible with Tandem pumps & Apple Watch.

Dexcom G6

G6

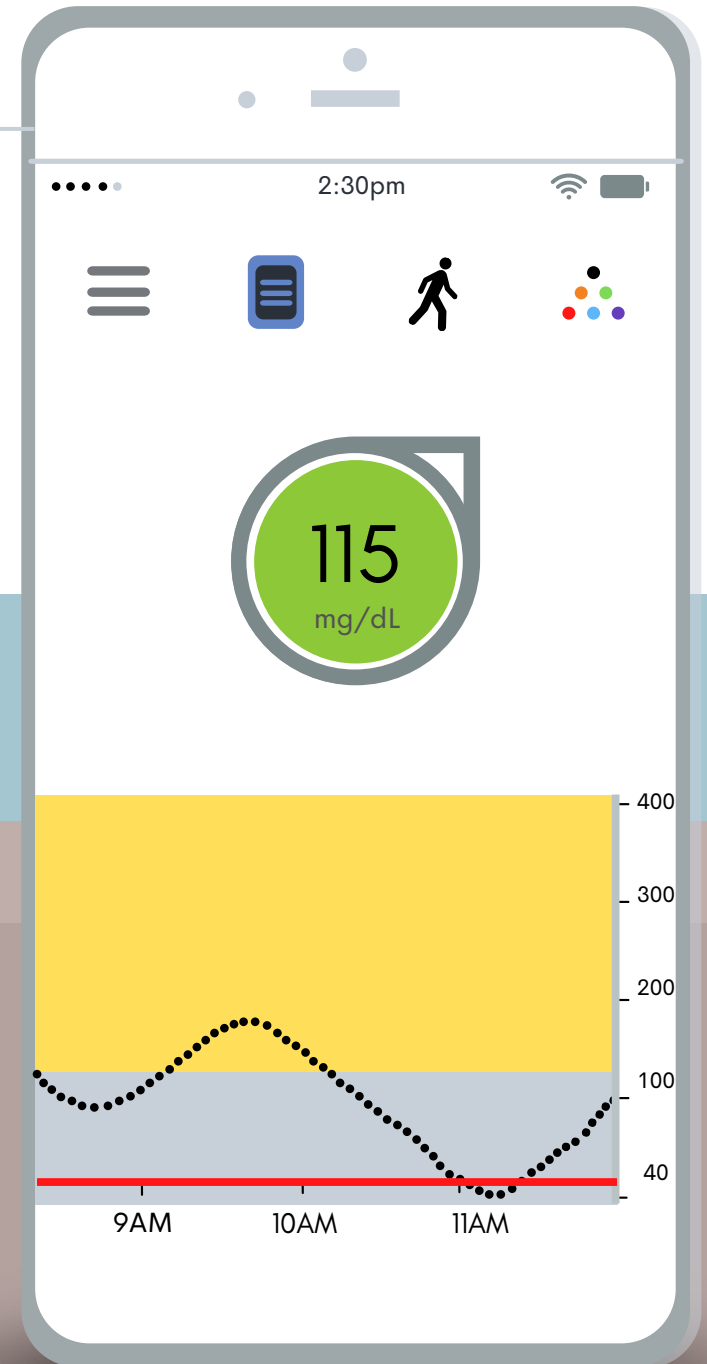
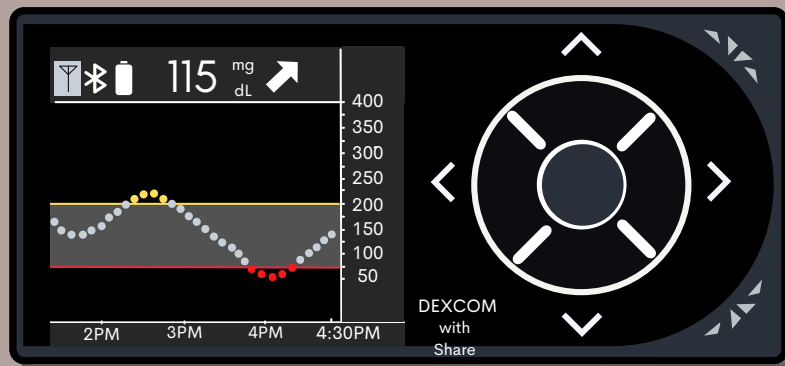
Apps/Software

- Dexcom Clarity App
- Dexcom Follow App (some Apple/Android devices, Tandem t:slim X2 pump): ≤ 10 people viewing current glucose level
- Glooko
- Tidepool

Dexcom G5 App:

CGM data & alerts
transferrable

Designed for
non-adjustive
use (7-day) &
compatible
with Tandem
pumps.



Connection/ Calibration

- Receiver/smartphone with Dexcom app must be ≤ 20 ft from transmitter & sensor.
- 2 hrs after sensor setup
- Finger-stick reading not required
- Calibration every 12 hrs: manual input required
- BG reading range: 40–400 mg/dL.

Key Features

- Designed for non-adjustive use (7-day) & compatible with Tandem pumps.
- G5 vs. G6: Compared to Dexcom G6, Dexcom G5 transmitter thicker but slightly smaller in size.
- Alerts: Personalized alerts for hypoglycemia & hyperglycemia episode / trend (Urgent low [55mg/dL] alarm always on.)
- Dexcom G5 App: CGM data & alerts transferable
- Dexcom Follow App: Glucose data shareable with ≤ 5 followers (e.g. parents) for remote monitoring

Specifications

Real Time CGM

Sensor Life: 7 days

Transmitter:

1.52 x 0.88 x 0.47 in

(3.86 x 2.24 x 1.19 cm)

0.4 oz (11.3g) with sensor; built-in battery lasting ~ 3 mos

Waterproof: 8 ft \leq 24 hrs

Receiver:

4 x 1.8 x 0.5 in

(10.2 x 4.6 x 1.3 cm)

2.4 oz (68g)

Battery: rechargeable

Apps/Software

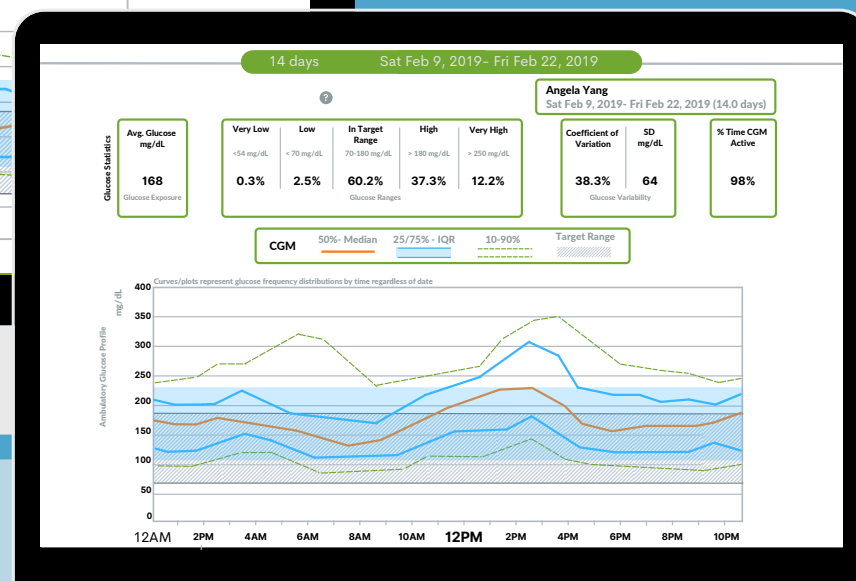
- Dexcom Clarity App
- Dexcom Follow App (some Apple/Android devices): ≤ 5 people viewing current glucose level
- Glooko
- Tidepool

Notes

- Approved for children & adults ≥ 2 yrs old.
- Acetaminophen may change accuracy of blood glucose readings
- Compatible with Tandem pumps & Apple Watch

Dexcom G5

G5



G6 CGM System

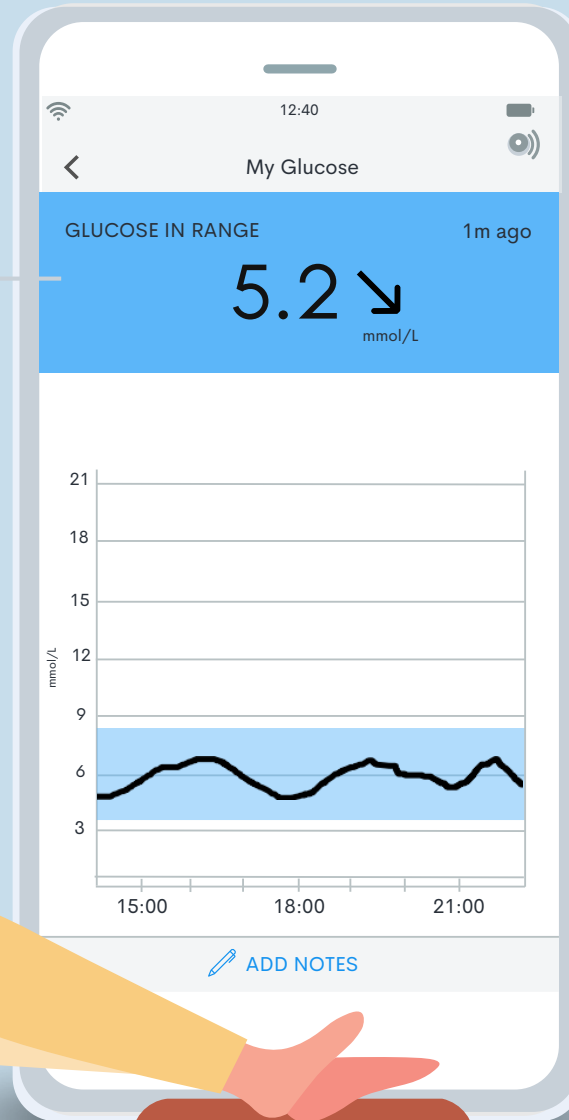
- 10-day use with optional calibration.
- Compared to G5, G6 does not require calibration, has longer wear time, & is slimmer in size for transmitter & larger for receiver.
- Dexcom Follow App shareable with ≤ 10 followers

G5 CGM System

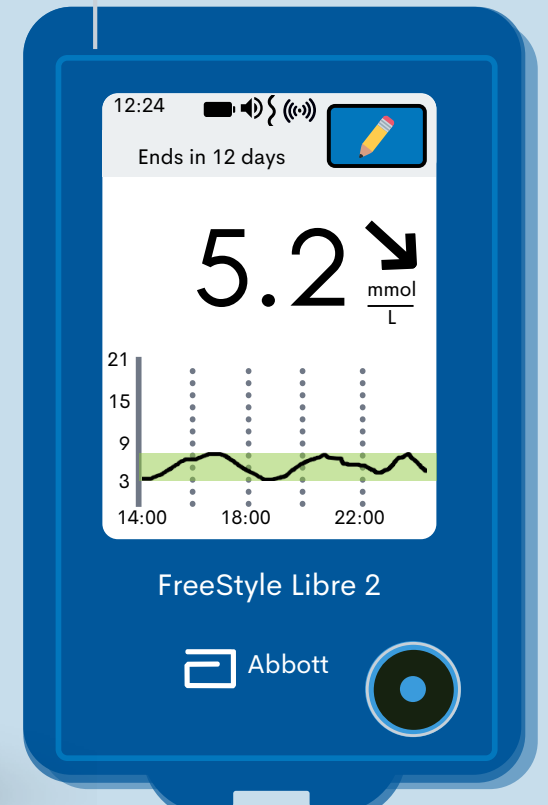
- 7-day use with calibration recommended.
- Compared to Dexcom G6, Dexcom G5 transmitter is thicker but slightly smaller in size.
- Dexcom Follow App shareable with ≤ 5 followers.



FreeStyle Libre
2 App:
Programmed as reader.



Readings: Manual scanning
(receiver to sensor) required.



Libre 2

Connection/ Calibration

- Reader must be ≤ 1.5 inches from sensor for scanning.
- 1 hr wait time following sensor setup & scanning
- No calibration

Key Features

- Designed for 14-day use with built-in FreeStyle blood sugar meter that shows glucose readings.
- Readings: manual scanning (receiver to sensor) required.
- Alerts: Alarms for hypoglycemia / hyperglycemia not built into device.

Specifications

Flash CGM

Sensor Life: 14 days

Transmitter:

1.38 in (diameter) x 0.2 in
(3.5cm x 0.51 cm)

0.18 oz (5.1g)

Battery: silver oxide (1)

Waterproof: 3 ft \leq 30 min

Receiver:

2.36 x 3.74 x 0.63 in
(6 x 9.5 x 1.6 cm)

2.3 oz (65.2g)

Battery: lithium-ion rechargeable (1)

Apps/Software

- LibreView Software: ≤ 20 people for viewing (downloadable on Windows & Mac)
- FreeStyle LibreLink (for some Apple & Android devices)

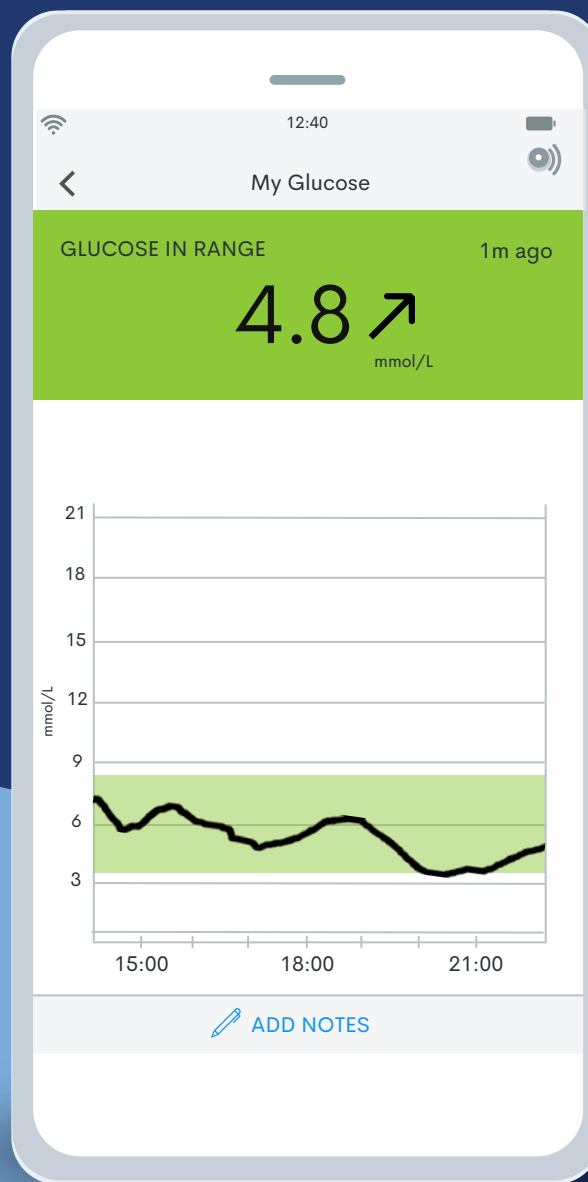
Notes

- Approved for adults ≥ 18 yrs old.
- Glucose readings not affected by taking acetaminophen 1000 mg every ≤ 6 hrs.

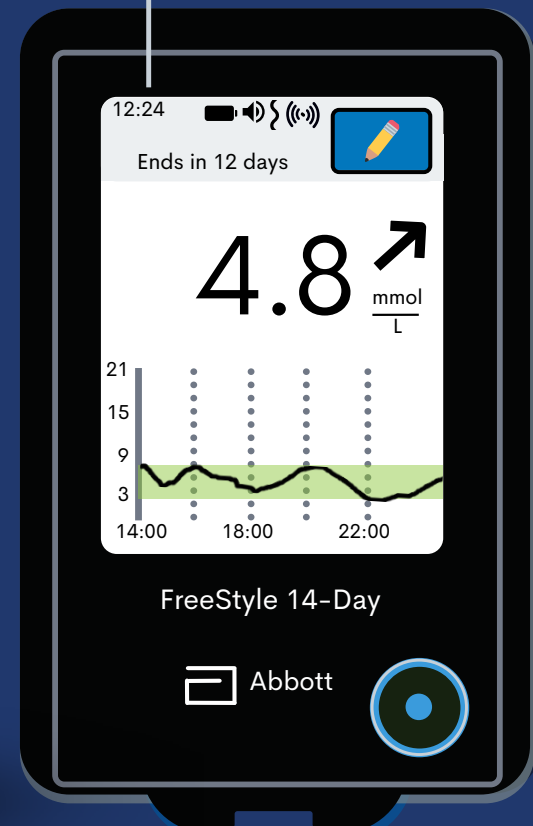
Libre 2



Designed for 14-day use with built-in FreeStyle blood sugar meter that shows glucose readings.



Readings: manual scanning (receiver to sensor) required.



Libre 14-Day

Connection/ Calibration

- Reader must be ≤ 1.5 inches from sensor for scanning.
- 1 hr wait time following sensor setup & scanning
- No calibration

Key Features

- Designed for 14-day use with built-in FreeStyle blood sugar meter that shows glucose readings.
- Readings: manual scanning (receiver to sensor) required.
- Alerts: Alarms for hypoglycemia / hyperglycemia not built into device.

Specifications

Flash CGM
Sensor Life: 14 days

Transmitter:
1.38 in (diameter) x 0.2 in
(3.5cm x 0.51 cm)
0.18 oz (5.1g)
Battery: silver oxide (1)
Waterproof: 3 ft \leq 30 min

Receiver:
2.36 x 3.74 x 0.63 in
(6 x 9.5 x 1.6 cm)
2.3 oz (65.2g)

Battery: lithium-ion rechargeable (1)

Apps/Software

- LibreView Software: ≤ 20 people for viewing (downloadable on Windows & Mac)
- FreeStyle LibreLink (for some Apple & Android devices)

Notes

- Approved for adults ≥ 18 yrs old.
- Glucose readings not affected by taking acetaminophen 1000 mg every ≤ 6 hrs.





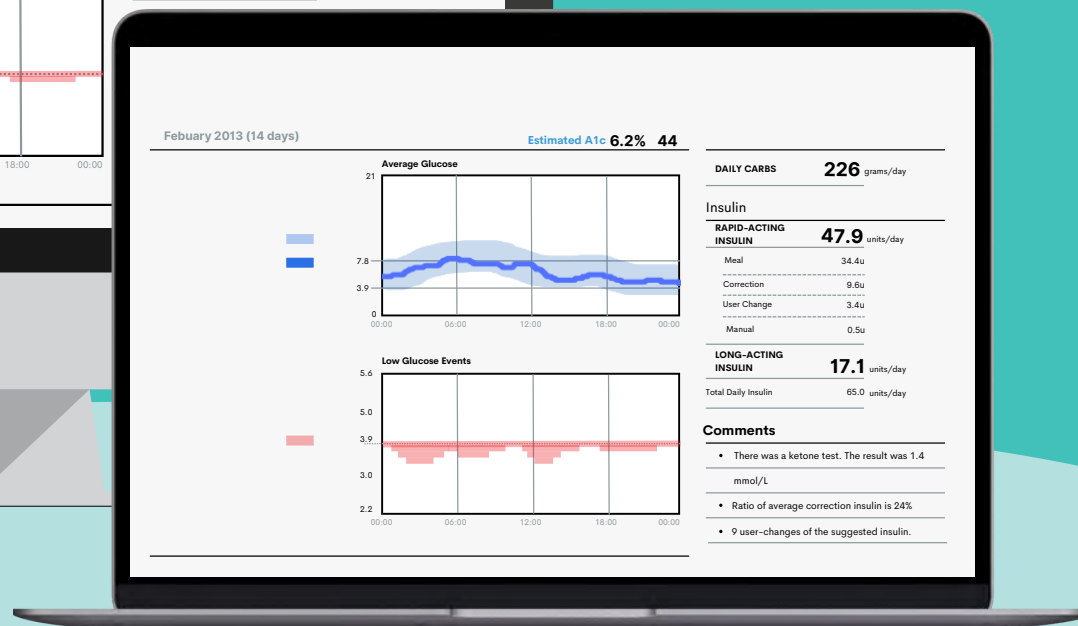
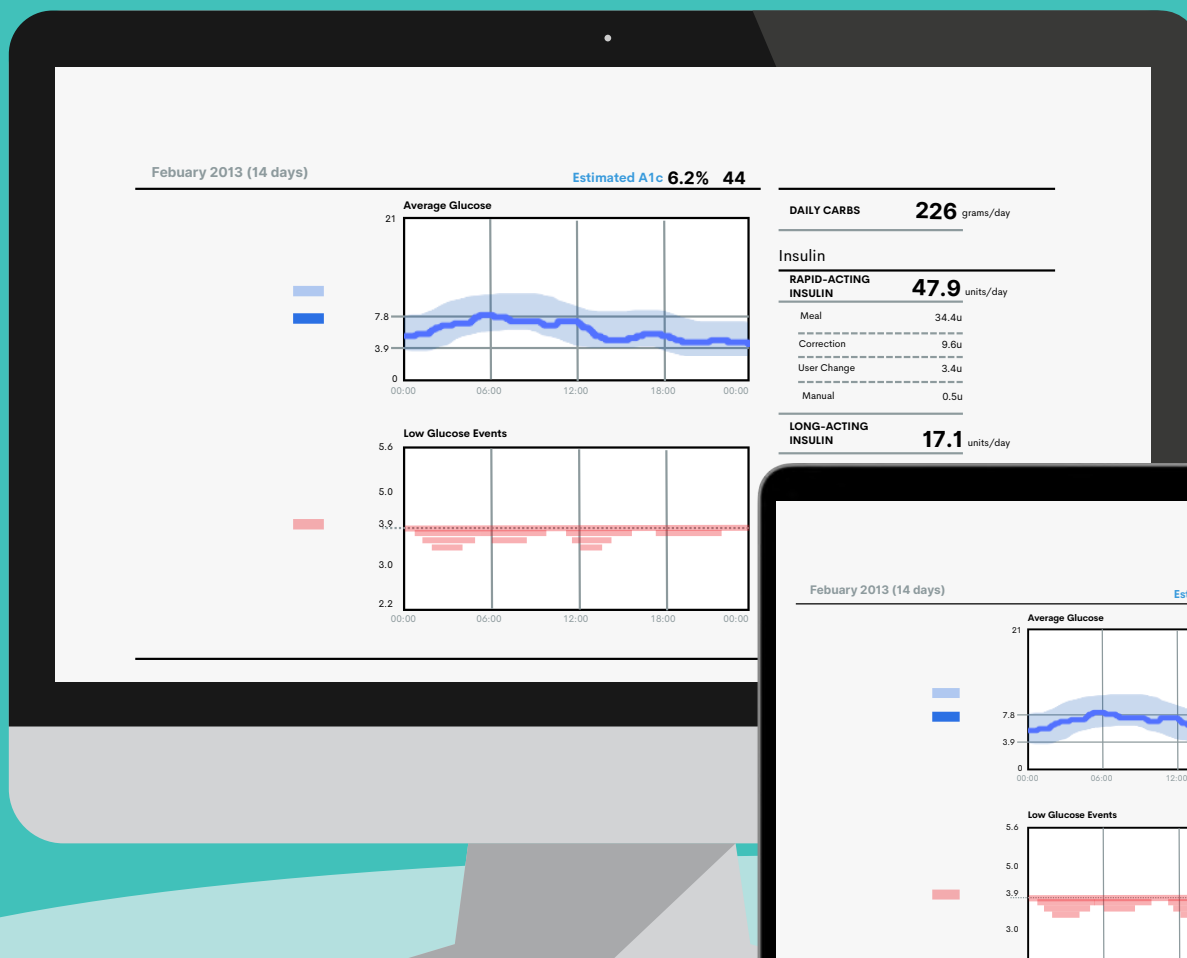
Freestyle Libre 14-Day System

- Designed for 14-day use with built-in FreeStyle blood sugar meter that shows glucose readings.
- Alarms for hypoglycemia / hyperglycemia not built into device.
- For adults and children ≥ 4 yrs old.



FreeStyle Libre 2

- Designed for 14-day use with FreeStyle Libre 2 App
- Alarms for hypoglycemia / hyperglycemia are built into device.
- FreeStyle Libre 2 App (iPhone only): Programmed as reader.
- For adults ≥ 18 yrs old.





Sensor (90-day use) surgically placed underneath skin in upper arm by trained healthcare provider.



Readings: Removable transmitter is positioned externally on to of sensor which sends blood sugar readings to selected smartphone devices, updating every 5 mins.



Specifications

Implantable CGM
Sensor Life: ≤ 90 days

Transmitter:
1.48 x 1.89 x 0.35 in
(3.8 x 4.8 x 0.89 cm)
0.39 oz (11.1g)

Battery: lithium polymer battery, rechargeable
Waterproof
No receiver needed

Apps/Software

- Eversense App: ≤ 5 people viewing current glucose level (on Apple/Android devices)
- Eversense Data Management System Software
- Glooko

Connection/ Calibration

- Transmitter must be ≤ 25 ft from smartphone device.
- 24 hrs wait time after sensor setup
- When administering bolus insulin, glucose reading must be confirmed with fingerstick reading & ≥ 2 calibrations/day required.
- BG reading range: 40-400 mg/dL.

Key Features

- Sensor (90-day use) surgically placed underneath skin in upper arm by trained healthcare provider.
- Readings: Removable transmitter is positioned externally on top of sensor which sends blood sugar readings to selected smartphone devices, updating every 5 mins.
- Alerts: On-body active vibration alert for dynamic/anticipated hypoglycemia & hyperglycemia episodes even without smartphone device nearby.
- Calibrations: When administering bolus insulin, glucose reading must be confirmed with fingerstick reading & ≥ 2 calibrations/day required.

Notes

- Approved for adults ≥ 18 yrs old.
- Approved for MRI scan.
- Glucose readings not affected by taking acetaminophen.
- Contraindicated in people for whom dexamethasone is not encouraged for use.

Eversense
CGM
System

