Frequently asked questions

What is CamAPS Liberty?

The CamAPS FX app uses an adaptive algorithm to control insulin delivery.

When the CamAPS Liberty feature is switched on, a more proactive version of the algorithm is used.

When the CamAPS Liberty and ***Auto mode*** is on, users can eat carbohydrate-containing meals and snacks without announcing carbohydrates or delivering a pre-meal bolus.

Both algorithms learn in the same way from available glucose, insulin and carbohydrate data at the same time.

They continue learning, even when one is active and the other is switched off.

Why has CamAPS Liberty been added to the CamAPS FX app?

Living with type 1 diabetes can be overwhelming due to all the decisions people have to make on a daily basis, causing mental fatigue and burnout.

Counting carbohydrates and giving insulin boluses is often described as one of the main burdens, negatively impacting on quality of life and glucose levels, if done incorrectly.

There may be times when users find counting carbohydrates and delivering meal boluses more difficult than usual, such as when on holiday, travelling etc.

Others may find carbohydrate counting and giving insulin boluses challenging due to literacy, learning or other barriers.

CamAPS Liberty is a tool that offers users a break from counting carbohydrates and delivering meal boluses.

When should CamAPS Liberty be used?

CamAPS Liberty can be turned on and off when users wish to reduce the burden of routine meal-related decisions.

It is an optional feature within the app. Some people may find it beneficial, while others may not.

CamAPS Liberty is NOT recommended during pregnancy or in children under 13 years of age, as its use in these groups has not been studied. As a result, there is a risk that glucose levels may worsen.

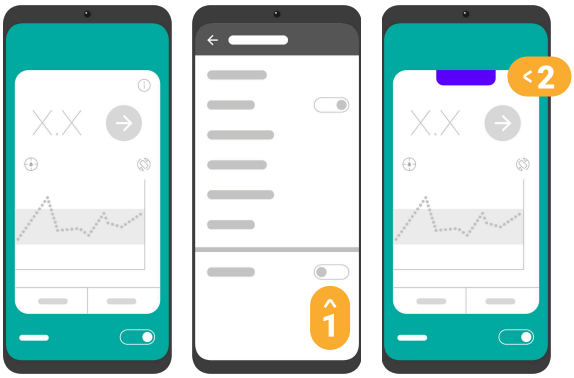
When turning CamAPS Liberty on, users need to acknowledge that they are 13 years of age or older and not pregnant or actively planning pregnancy.

CamAPS FX users should consult their diabetes team for individualised advice.

How is CamAPS Liberty turned on?

1. Slide the toggle at the bottom of the Settings menu to activate.
2. It will remain active until the user manually switches it off again.

There is no time limit to how long CamAPS Liberty can remain turned on.



How do you know CamAPS Liberty is turned on?

When CamAPS Liberty is active, a purple badge appears on the app's home screen, and the landscape graph is shaded purple.

1. CamAPS Liberty: OFF
   Auto mode: ON
2. CamAPS Liberty: ON
   Auto mode: ON
3. Landscape graph
   CamAPS Liberty: ON



How is automated insulin delivery different when CamAPS Liberty is active?

The CamAPS FX algorithm learns in three ways:

- Overall insulin needs over the 24 hours of the day,
- Diurnal/hourly learning to adjust to day-to-day differences and
- Post-meal learning (MealAssist®), if a user announces carbohydrates and gives an insulin bolus.

CamAPS Liberty learns in the same way but has been enhanced by having:

- An accelerated response to rising and falling glucose trends,
- Hourly adaptivity – increasing the speed of adaption,
- Same high-level robust safety limits governing insulin delivery, but with enhanced flexibility, and
- Scaling of insulin needs based on the time of day to manage the risks of hypo- and hyperglycaemia (low and high glucose levels).

Turning on CamAPS Liberty does not result in any loss of previous CamAPS learning.

- CamAPS FX and CamAPS Liberty learn continuously, even when one is active and the other is switched off. Intermittent use of CamAPS Liberty will not impact on the learning.
- The algorithm will always prioritise minimising the risk of hypoglycaemia over achieving the Personal Glucose Target.
- CamAPS Liberty may initially adjust insulin delivery more cautiously while building its learning, so users should expect a short optimisation period.

Is there CamAPS Liberty training?

Before CamAPS Liberty can be activated for the first time, users must watch a 2 minute training animation. Users only have to watch this training once.

Watch the animation here or on our website.

What happens in Attempting mode or when Auto mode is turned off?

Attempting mode occurs when ***Auto mode*** is switched on but communication with the sensor or pump is interrupted (e.g. when a new sensor is warming up).

The app will continuously try to re-establish the connection.

Approximately 30 minutes after the last glucose sensor reading, the algorithm will instruct the pump to revert to delivering the pre-programmed basal rate.

The algorithm will automatically resume control of the insulin delivery when sensor data becomes available again.

During ***Attempting mode*** (orange screen), or when ***Auto mode*** is manually switched off (grey screen), CamAPS Liberty will have no effect on insulin delivery. The purple, CamAPS Liberty badge on the home screen will be greyed out.



1. Auto Mode: ON
   CamAPS Liberty: ON and ACTIVE
2. Auto mode: Attempting
   CamAPS Liberty: ON and NOT ACTIVE
3. Auto mode: OFF
   CamAPS Liberty: ON and NOT ACTIVE

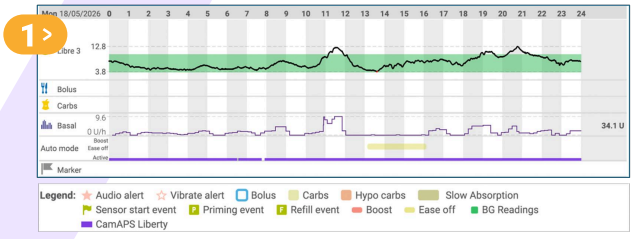
Users should give boluses for carbohydrates consumed when CamAPS Liberty is not active (greyed out badge).

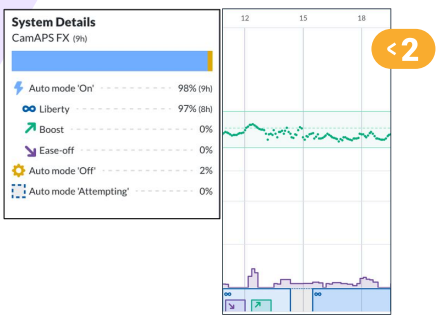
How will others see when CamAPS Liberty is turned on?

Periods when CamAPS Liberty is on will be shown on the CamAPS PDF, Glooko® and mylife Cloud reports.

Percentage time spent using CamAPS Liberty will also be shown on these reports as well as in the ***Statistics*** menu of the CamAPS FX app.

1. CamAPS PDF report
2. Glooko report





Are there any parental controls in place?

When CamAPS Liberty is active in the user's app, companions will also see a purple badge on their home screen and purple shading on the landscape graph.

Block, when activated, prevents the use of CamAPS Liberty and other features that influence insulin delivery e.g. starting or stopping ***Boost*** or ***Ease-off***, turning ***Auto mode*** on or off, giving a bolus, etc.

If ***Block*** is enabled, the CamAPS Liberty toggle cannot be changed.

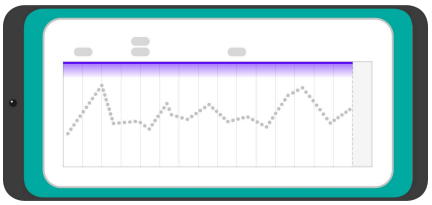
Block can be found in the ***Settings*** menu of the app.

What happens if a bolus is given for carbohydrates or as a correction?

Users can still choose to deliver a meal or correction bolus while CamAPS Liberty is active but caution should be exercised to avoid increased risk of hypoglycaemia.

Users are encouraged to review the landscape graph to see how much insulin has been delivered over the last 2–4 hours.

If a large amount of insulin has already been delivered by the algorithm, users may decide not to give a bolus or choose to reduce the insulin dose.



How might glucose levels change when CamAPS Liberty is turned on?

There will be an initial period of optimisation while CamAPS Liberty learns a user's insulin needs. During this time, it may be more cautious to help reduce the risk of low glucose levels.

Glucose levels will still be influenced by many factors, including:

- Diet and food choices
- Physical activity, alcohol and hot weather
- Stress, illness and hormones.

Continue to use ***Boost*** and ***Ease-off*** as usual to help manage short-term changes in insulin sensitivity.

If a low glucose level (hypoglycaemia) occurs, it is recommended to enter the amount of fast-acting carbohydrate eaten in ***Add meal*** as ***Hypo treatment.***

If glucose levels remain high, check for ketones and consider changing the infusion tubing, cannula and insulin reservoir.

What should people consider when using CamAPS Liberty while exercising?

Insulin on board (IOB) is key in managing glucose levels when active.

Exercising fasted or before a meal is often easier to manage.

If activity takes place ***within 1–2 hours of eating carbohydrates***, users may wish to choose meals or snacks that cause a smaller rise in glucose, to reduce the chance of increased IOB before exercise.

Consider starting ***Ease-off*** 60–90 minutes before planned activity and continuing during and after the activity, if delayed hypos are an issue.

Consider temporarily raising the Personal Glucose Target (PGT) by 1–2 mmol/L (18–36 mg/dL) for extended activities, such as active holidays or marathon events.

Consume carbohydrates in small amounts when active, based on glucose levels and trends.

Announce exercise carbohydrates in ***Add meal*** as hypo treatment, if possible.

What should people consider if alcohol is consumed?

As usual, consuming alcohol increases the risk of hypos, especially if larger quantities than usual are consumed or if alcohol is being consumed in hot weather or together with physical activity.

Consider using ***Ease-off*** to reduce the risk of delayed hypos.

Consider programming ***Ease-off*** in advance so that it covers the likely delayed hypo-risk period, often overnight and into the following morning.

Should any settings be changed in the app when CamAPS Liberty is used?

CamDiab does not recommend any specific setting changes that should be routinely made, when users switch on CamAPS Liberty.

Please refer to CamDiab's onboarding and optimisation guidelines for best practice recommendations for the CamAPS FX app settings.

If TIR is not optimal, please review the personal glucose target.

Should users wish to bolus while using CamAPS Liberty, consider giving less insulin for carbohydrates than usual.

All setting changes should be reviewed and agreed on an individual basis with the diabetes team.

What insulin can be used?

Rapid-acting insulins (e.g. Apidra, Humalog and NovoRapid), as well as ultra rapid-acting insulins (e.g. Fiasp and Lyumjev) can be used, where permitted by the local CamAPS FX, pump and insulin instructions for use/labelling. Age, pregnancy and market-specific restrictions may apply.

What does current CamAPS fully closed-loop research in people living with type 1 diabetes show?

Evidence from fully closed-loop studies has shown that, in adults and young people with elevated HbA1c levels, fully closed-loop therapy improves overall glycaemic outcomes compared with sensor-augmented pump therapy, while also reducing treatment burden and improving quality of life[1–4].

Is the CamAPS Liberty feature available on iOS and Android?

Yes, CamAPS Liberty is available on iOS and Android.

Users can use CGM sensors and insulin pumps supported by their local CamAPS FX app version, phone operating system and market configuration.

The roll-out of the CamAPS FX app with the CamAPS Liberty feature is pending market-specific approvals and availability.

CamAPS Liberty is designed to complement a user's existing diabetes management plan; not to replace it.

Users should always seek the advice and support of their diabetes healthcare team.

1. Lakshman R, Hartnell S, Ware J, Allen JM, Wilinska ME, Nwokolo M, et al. Lived experience of fully closed-loop insulin delivery in adults with type 1 diabetes. Diabetes Technol Ther. 2024 Apr;26(4):211–221
2. Boughton, C. K., Hartnell, S., Lakshman, R., et al. Fully Closed-Loop Glucose Control Compared With Insulin Pump Therapy With Continuous Glucose Monitoring in Adults With Type 1 Diabetes and Suboptimal Glycemic Control: A Single-Center, Randomized, Crossover Study, Diabetes Care 2023 46(11): 1916–1922
3. Kadiyala, N., Lakshman, R., Allen, J., Ware, J., Boughton, C. K., Wilinska, M. E., et al.. Fully Closed-Loop Improves Glycaemic Control Compared to Pump With CGM in Adolescents With Type 1 Diabetes and HbA1c Above Target: a Two-Centre, Randomised Cross-over Study. Diabetes Technol Ther. 2025 Sep;27(9):719-727.
4. Kadiyala N, Allen J, Lakshman R, Boughton CK, Wilinska ME, Thankamony A, Hartnell S, Thabit H, Willemsen RH, Shah P, Ware J, Hovorka R. Lived experience of fully closed-loop insulin delivery in adolescents with type 1 diabetes and HbA1c above target. Diabetes Research and Clinical Practice. 2026;232:113078

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