A Guide to Insulin Pumps at School

Many students with type 1 diabetes use insulin pumps, which are wearable medical devices that supply a continuous flow of insulin underneath the skin. All current insulin pumps can also communicate with glucose sensors and are able to make adjustments to the amount of insulin that is continuously delivered. This helps to keep glucose levels as close to a normal target range as possible.

Although pumps are becoming increasingly automated, they still require the user to activate an insulin dose (a "bolus") before they eat. The user enters the amount of carbohydrates to be eaten (meal or snack); based on this information and the blood glucose level detected by the sensor, the pump calculates the amount of insulin to deliver. See below for a full explanation of terms.

With any pump, the infusion site must be replaced every 2 or 3 days (students typically do this at home). If for some reason the pump stops delivering insulin, blood sugar levels will rise quickly. If this happens during the school day, consult the student's care plan for instructions on what to do.

The table below shows the features of pumps commonly used in Canada as of September 2026.

Explanation of terms

- **CGM:** Continuous glucose monitor
- **Standard bolus**: A bolus is a dose of insulin given before eating. See the student's care plan for details: For all pumps, give insulin as described in the plan: Enter carbohydrates and confirm sensor glucose level. The pump will calculate the dose to be given.
- **Automatic adjustment basal**: This is a specific feature where the pump automatically alters the amount of insulin given every 5 minutes in response to the glucose readings from an integrated CGM.
- **DIY automated insulin delivery:** This is a form of automated insulin delivery pumping that uses open source programming codes to determine insulin delivery. Current options include Loop, OpenAPS and AndroidAPS.

	Insulet Omnipod (Tubeless)	T:slim: Control IQ	Medtronic 780G	Ypsomed CamAPS FX	DIY Loop
					
Automation	Yes with Omnipod 5 Not with Omnipod Dash	Yes (optional)	Yes (optional)	Yes	Yes
Bolus	Using touchscreen controller	Using pump touchscreen or phone app	Using pump touchscreen	Phone app (Android)	Using phone app
Continuous Basal (background) insulin	Automated (Omnipod 5) OR Pre-set (Dash)	Automatic adjustment	Automatic adjustment	Automatic adjustment	Automatic adjustment
Glucose readings	Omnipod 5 – Dexcom CGM glucose autopopulated into controller Dash – manual entry	Dexcom CGM glucose level auto-populated into the pump	Guardian CGM glucose level auto-populated into the pump	Dexcom CGM glucose level auto-populated into the pump	Dexcom CGM glucose level auto-populated into the app
Exercise feature	Activity mode	Exercise activity	Temporary target	Ease off boost	Temporary overrides