

## Hybrid Closed Loop (HCL)

A hybrid closed loop insulin pump is a type of insulin pump system that is designed to automatically adjust insulin delivery to a person with diabetes based on their current blood glucose level. It combines the features of a continuous glucose monitoring (CGM) system and an insulin pump to provide more precise and personalised diabetes management.

The system consists of a sensor that continuously measures the person's glucose levels, an insulin pump that delivers insulin, and a computer algorithm that controls insulin delivery based on glucose readings. The algorithm calculates how much insulin is needed to maintain the person's target glucose range, taking into account factors such as meal consumption, exercise, and insulin sensitivity.

With a hybrid closed loop system, the person with diabetes still needs to manually input information such as carbohydrate intake and exercise, but the system will automatically adjust insulin delivery based on this information and the person's glucose readings.

Hybrid closed loop insulin pumps have been shown to improve glucose control and reduce the risk of hypoglycemia, making them a valuable tool for managing diabetes. However, they are not a cure for diabetes and require ongoing monitoring and adjustments to ensure optimal glucose control