bcdiabetes.ca
Patient Care + Research + Clinical Trials

Dr. Dale Clayton MHSc, MD, FRCPC
Associate Medical Director

400 - 210 W Broadway
Vancouver, BC
V5Y 3W2 Canada

phone: 604.683.3734
fax: 604.628.3821
email:questions@bcdiabetes.ca

Setting Expectations with Automated Insulin Delivery (AID) Systems

Hybrid closed loop systems—also called automated insulin delivery (AID) systems—can make managing diabetes easier and improve quality of life. However, they are **not a cure** and **do not replace daily diabetes care**. Understanding how they work will help you use them safely and successfully.

What These Systems Do

- Automatically adjust insulin based on sensor readings
- Help keep blood sugar in range more often
- Reduce, but do not eliminate, high and low blood sugars

Important Limitations

- Blood sugar will **not be perfect all the time**
- Low and high blood sugar can still happen
- The system only works well when sensor data is available
    - Sensor failures or warm-up times can limit performance

Meals and Insulin

- **Meal boluses are still needed**
- Insulin takes time to work, so telling the system when you eat helps prevent spikes

---

Diabetes Skills Still Matter

- Users must understand basic diabetes care
- Manual pump skills are important for times when the system is not working
- Knowing how to problem-solve helps you use the system more safely

---

Sensor and Pump Site Care

- Rotate sites regularly
- Keep sites clean and well maintained
- Pump site failures can still happen
- You may need to:
    - Change the pump site
    - Give insulin manually if blood sugar stays high

Understanding Alerts and Taking Action

- **Low blood sugar**
    - The system will suspend insulin and give warnings
    - You may still need to eat carbohydrates
- **High blood sugar**
    - The system will try to increase insulin to keep you in range
    - Extra insulin may still be needed

Key Takeaway

Hybrid closed loop systems are powerful tools—but they work best when combined with:

- Good diabetes knowledge
- Regular self-care
- Understanding system alerts and data

<u>You</u> are still the most important part of diabetes management.