

## METFORMIN FOR BLOOD GLUCOSE MANAGEMENT IN T2D

**Metformin** (also called *Glucophage®*) helps to manage blood glucose levels by making it easier for your body to use insulin. Metformin is an oral medication that belongs to a class of drugs called biguanides and works by decreasing the amount of glucose released from the liver, and by decreasing absorption of glucose and other sugars in the intestine.

### What do we expect when starting metformin?

- Potential side effects of metformin can be an upset stomach or other gastrointestinal symptoms such as cramping, stomach pain, nausea, gas, diarrhea, and/or vomiting (rarely). These can occur when starting metformin OR after increasing your dose.
- Some people who take metformin report a temporary metallic taste in their mouth.
- Some generic brands can taste or smell fishy. Speak with your diabetes doctor or pharmacist to switch to a different formulation if this is causing you difficulty in taking your medications.
- Some people may feel less hungry when using metformin.

### These side effects often improve over time and can be minimized by:

- Starting with a lower dose then increasing it slowly to the desired dose.
- Always taking metformin with food to help decrease the nausea.
- Cutting back on spicy foods and fried or high-fat foods.
- Eating smaller, more frequent meals.
- Speaking with to your dietitian about other ways to address nausea.

### How do you start taking metformin?

	Morning/Breakfast	Dinner/Bedtime
Week 1	—	500 mg (1 tablet)
Week 2	500 mg (1 tablet)	500 mg (1 tablet)
Week 3	500 mg (1 tablet)	1000 mg (2 tablets)
Week 4	1000 mg (2 tablets)	1000 mg (2 tablets)

- The tablet must be swallowed whole, and it **cannot be crushed, cut, or chewed**.

**How to be successful with metformin:**

- Take your medication each day as prescribed; if you miss a dose, take it as soon as possible. **Do not double your dose.**
- Continue to have balance in your meals:
  - Do not skip meals.
  - Limit juice, pop, bubble tea, chocolate milk, iced tea or other sweetened beverages.
  - Try to include a fruit and/or vegetable in each meal.
- Move your body by walking, taking the stairs, biking, or participating in a sport or activity that you like! Try to aim for a goal of 45 to 60 minutes of body movement per day.
- Maintain a healthy sleep routine with 7-9 hours of sleep a night for children 12 years and above.

**Do not take metformin if you:**

- Have become **dehydrated from illness** or having severe vomiting or diarrhea. Metformin can build up and cause an increased risk of low blood glucose if the body does not have enough fluids. Whenever you are sick, drink plenty of fluids to stay hydrated.
- **Are pregnant** or plan to become pregnant. Please discuss with your diabetes team if you plan to or become pregnant while on metformin.
- Have consumed a lot of **alcohol**, as this can increase the effect of metformin and can keep blood glucose levels lower for prolonged periods of time, potentially causing hypoglycemia. To prevent low blood glucose, always be sure to have snacks when drinking alcohol (also see [Diabetes and Alcohol](#) handout).
- Developed liver or kidney failure.
- Going for imaging (CT scan or MRI) with an injection of contrast dyes.
- Going for surgery with general anaesthesia; restart your metformin when you can eat and drink normally again.

**When to contact the Diabetes Team at [dcnurse@cw.bc.ca](mailto:dcnurse@cw.bc.ca) OR phone 604-875-2868:**

- If you are having lethargy, severe muscle pain, severe abdominal pain, increasing gastrointestinal side effects, or are unable to tolerate the tablet.
- If you are having frequent low blood glucose levels (hypoglycemia).