

## Ottawa Anesthesia Primer Supplement

Table 3.5 Preoperative management of oral diabetic medications.<sup>1</sup>

Diabetic Medications Class, Generic and Canadian Trade Names	Mechanism of Action to Decrease Blood Glucose Levels	Recommendation
<b>AGIs</b> <ul style="list-style-type: none"> <li>Acarbose (Prandase®)</li> </ul>	Inhibits intestinal breakdown and absorption of carbohydrates	Omit on the day of surgery
<b>SGLT2 inhibitor</b> <ul style="list-style-type: none"> <li>Empagliflozin (Jardiance®)</li> <li>Canagliflozin (Invokana®)</li> <li>Dapagliflozin (Farxiga®)</li> </ul>	Inhibits renal reabsorption of glucose	For SDC: Stop 2 days before surgery. For SDA and ONDS: Stop 3 days before surgery.
<b>Sulfonylureas</b> <ul style="list-style-type: none"> <li>Glyburide (Diabeta®)</li> <li>Gliclazide (Diamicron®)</li> <li>Gliclazide MR (Diamicron MR®)</li> <li>Glimepiride (Amaryl®)</li> <li>Chlorpropamide (Diabinese®)</li> </ul>	Increases pancreatic insulin release	Take last dose the day before surgery.
<b>Biguanide antihyperglycemic</b> <ul style="list-style-type: none"> <li>Metformin (Glucophage®)</li> </ul>	Multiple mechanisms: decreases appetite, increases insulin sensitivity, and decreases hepatic glucose production	For SDC/ONDS: continue unless IV contrast dye used or eGFR < 60 For SDA: hold on am of surgery
<b>Meglitinides</b> <ul style="list-style-type: none"> <li>Repaglinide (Gluconorm®)</li> </ul>	Increases pancreatic insulin release	Omit on the day of surgery
<b>GLP-1 analogs</b> (SC administration) <ul style="list-style-type: none"> <li>Semaglutide (Ozempic®)</li> <li>Exenatide (Byetta®)</li> <li>Liraglutide (Saxenda®)</li> </ul>	Glucose-dependent GLP-1 receptor-enhanced insulin release and reduced glucagon release	Take as normal on the day before and day of surgery. <i>In 2023, concerns over Ozempic and other GLP-1 analogs resulted in new recommendations. The CAS editorial below suggests they be held for 3 half-lives prior to elective surgery.<sup>2</sup> For Ozempic this is equivalent to three weeks.</i>
<b>DDP-4 inhibitors</b> <ul style="list-style-type: none"> <li>Sitagliptin (Januvia®)</li> <li>Saxagliptin (Onglyza®)</li> <li>Linagliptin (Tradjenta®)</li> </ul>	Increases incretin levels, inhibits glucagon release, increases insulin secretion, and decreases gastric emptying	Take as normal on the day before and day of surgery
<b>TZDs</b> <ul style="list-style-type: none"> <li>Pioglitazone (Actos®)</li> <li>Rosiglitazone (Avandia®)</li> </ul>	Decreases insulin resistance in the periphery and in the liver	Take as normal on the day before and day of surgery

AGI = alpha-glucosidase inhibitor; MR = modified release; NPH = neutral protamine Hagedorn; TZD = thiazolidinedione, SDC = surgical day care, ONDS = overnight day surgery, SDA = same day admit surgery.

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### References:

1. Guideline for perioperative care for people with diabetes mellitus undergoing elective and emergency surgery. CPOC, 2021.
2. Jones PM, Hobai IA, Murphy PM. Editorial: Anesthesia and glucagon-like peptide-1 receptor agonists: proceed with caution! [Can J Anesth July 2023](#)