

# Medications for Type 2 Diabetes

Maine Independent Clinical Information Service, 2023



## SGLT-2s (sodium-glucose co-transporter-2 inhibitors)

*FDA approved in 2013-4* **NICKNAME:** the “flozins”

**MECHANISM OF ACTION:** works in the kidney to increase urinary glucose excretion by decreasing glucose resorption

**BENEFITS (not all drugs in class have data on all benefits, see individual drug information):** decreases mortality, decreases MACE (major adverse cardiac events), slows progression of CKD, decreases hospitalization in HFrEF (heart failure, EF<40%), benefit in HFpEF (heart failure, EF>40%), lowers blood pressure

**INCREASED RISK FACTORS FOR DKA:** acute serious illness, surgery & colonoscopy (hold 3d prior), low carbohydrate diet (i.e. keto), fasting, sudden decrease in insulin dose, hx of DKA, alcohol use, type 1 DM, age >65

**CONTRAINDICATIONS:** severe renal or hepatic impairment (check individual drug dosing and GFR parameters)

**DRUG INTERACTIONS:** monitor diuretics and anti-hypertensives, insulin/sulfonylurea-may need decreased dose due to risk of hypoglycemia, chronic NSAIDs-risk of AKI if hypovolemic

**MONITORING:** counsel patients to significantly increase water intake; caution regarding volume status, blood pressure; check creatinine, sodium, and potassium at baseline and 4 weeks after initiation (expect a mild decrease in GFR, stop if GFR increases 30%); after a period of abstinence, wait 4-6 weeks before increasing dose

**OTHER FDA APPROVED USES:** Heart failure, chronic kidney disease

### SIDE EFFECTS:

**Common:** increased urinary frequency and volume (resulting in thirst, hypovolemia, acute kidney injury, orthostatic hypotension), infection (genital mycotic, UTI), DKA-euglycemic

**Rare:** Fournier's gangrene, acute pancreatitis, increased fracture (canagliflozin), amputation (canagliflozin)



*Information summarized by the Maine Independent Clinical Information Service (MICIS). MICIS is a program of the Maine Medical Association, funded by Maine DHHS. MICIS does not accept pharmaceutical support. Updated 07/06/23.*

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### Sources:

- VA Clinician's Guide ([www.pbm.va.gov/PBM/AcademicDetailingService/Documents/508/1B10-1402\\_Type2DiabetesCliniciansGuide\\_508Conformant.pdf](http://www.pbm.va.gov/PBM/AcademicDetailingService/Documents/508/1B10-1402_Type2DiabetesCliniciansGuide_508Conformant.pdf))
- Alosa Health Diabetes module ([alosahealth.org/wp-content/uploads/2022/05/RefCard\\_Diabetes\\_5.22\\_final.pdf](http://alosahealth.org/wp-content/uploads/2022/05/RefCard_Diabetes_5.22_final.pdf))
- RxFiles Drug Comparison Charts, 13th Ed. ([www.rxfiles.ca/RxFiles/home.aspx](http://www.rxfiles.ca/RxFiles/home.aspx))