

# How might diabetes medicines help the heart in people living with type 2 diabetes?

Date of Summary: December 2020

- This plain language patient summary is intended for a non-clinician audience. It summarizes content from one chapter in the supplement **Type 2 Diabetes 2021**, a collection of articles written for family physicians and other family health care professionals.
- The medicines discussed in this summary are approved to treat type 2 diabetes.

## What did this chapter look at?

- Type 2 diabetes is a common condition where the levels of sugar (glucose) in the blood are increased.
- People with type 2 diabetes may also develop other conditions, such as heart failure.

**Around 3 out of 10 people with type 2 diabetes will develop heart failure.**



- Heart failure is when the heart can no longer pump blood around the body as well as it should.
- This can reduce the amount of oxygen getting to organs, which may stop working properly.
- It is important to know if medicines for treating type 2 diabetes can affect people's risk of serious heart problems.
- This chapter looks at studies to see whether newer type 2 diabetes medicines for people with diabetes affected their risk of being admitted to the hospital with heart failure.
- This chapter also talks about new and ongoing studies of blood sugar-lowering medicines in people living with heart failure who may or may not have type 2 diabetes.

## What type 2 diabetes medicines have been studied in patients with heart problems?

### Sodium-glucose co-transporter 2 inhibitors (SGLT2 inhibitors)

Help the kidneys remove extra sugar from the body when you urinate.

- Canagliflozin (Invokana®)
- Dapagliflozin (Farxiga®)
- Empagliflozin (Jardiance®)
- Ertugliflozin (Steglatro®)

### Glucagon-like peptide-1 receptor agonists (GLP-1 RAs)

Increase incretin levels, which help the body produce more insulin and lower blood sugar levels when needed.

- Dulaglutide (Trulicity®)
- Exenatide (Byetta®)
- Exentide XR (Bydureon® and Bydureon® BCise™)
- Liraglutide (Victoza®)
- Lixisenatide (Adlyxin®)
- Semaglutide (tablet: Rybelsus®; injection: Ozempic®)

### Dipeptidyl peptidase-4 inhibitors (DPP-4 inhibitors)

Help the body produce more insulin and lower blood sugar levels when needed.

- Alogliptin (Nesina®)
- Linagliptin (Tradjenta®)
- Saxagliptin (Onglyza®)
- Sitagliptin (Januvia®)

## Do these medicines affect people's risk of being admitted to the hospital with heart failure?



### Type 2 diabetes medicine



### Does it affect the risk of being admitted to the hospital for heart failure?

#### SGLT2 inhibitors

- Canagliflozin (Invokana®)
- Dapagliflozin (Farxiga®)
- Empagliflozin (Jardiance®)
- Ertugliflozin (Steglatro®)



Risk decreases

#### GLP-1 RAs

- Dulaglutide (Trulicity®)
- Exenatide (Byetta®)
- Exentide XR (Bydureon® and Bydureon® BCise™)
- Liraglutide (Victoza®)
- Lixisenatide (Adlyxin®)
- Semaglutide (tablet: Rybelsus®; injection: Ozempic®)



Risk stays the same

#### DPP-4 inhibitors

- Alogliptin (Nesina®)
- Saxagliptin (Onglyza®)
- Linagliptin (Tradjenta®)
- Sitagliptin (Januvia®)



Risk may increase



Risk stays the same

## What are the key take-home points?

- People with type 2 diabetes who have heart problems should avoid blood sugar-lowering medicines that make them more likely to get heart failure.
- SGLT2 inhibitors may lower the risk of being admitted to the hospital with heart failure.
- Health care professionals may recommend that you take an SGLT2 inhibitor to lower certain risks related to heart failure.



## How to say

- **Alogliptin** (a-low-GLIP-tin). It is also called **Nesina** (ness-EE-na)
- **Canagliflozin** (can-A-gli-FLOW-zin). It is also called **Invokana** (in-VO-CAHN-a)
- **Dapagliflozin** (dap-A-gli-FLOW-zin). It is also called **Farxiga** (far-ZEE-ga)
- **Dipeptidyl peptidase-4** (die-PEP-ti-dyl PEP-tie-days-4)
- **Dulaglutide** (DOO-la-gloo-tide). It is also called **Trulicity** (TRUE-liss-ity)
- **Empagliflozin** (em-PAH-gli-FLOW-zin). It is also called **Jardiance** (JAR-dee-ance)
- **Ertugliflozin** (err-TUG-gli-FLOW-zin). It is also called **Steglatro** (ste-GLA-trow)
- **Exenatide** (eck-SEN-a-tide) and **exenatide XR**. It is also called **Byetta** (bi-ET-ta) and **Bydureon** (bi-door-E-ON)
- **Glucagon-like** (GLUE-ca-gon-like)
- **Linagliptin** (lin-ah-GLIP-tin). It is also called **Tradjenta** (tra-GENT-a)
- **Liraglutide** (leer-a-GLOO-tide). It is also called **Victoza** (VIC-toe-za)
- **Lixisenatide** (LICK-see-SEN-a-tide). It is also called **Adlyxin** (ADD-eh-licks-en)
- **Saxagliptin** (SAX-a-GLIP-tin). It is also called **Onglyza** (on-GLEE-za)
- **Semaglutide** (sem-a-GLOO-tide). The tablet is also called **Rybelsus** (rie-BELL-sus). The injection is also called **Ozempic** (OH-sem-pick)
- **Sitagliptin** (sit-ah-GLIP-tin). It is also called **Januvia** (jan-OO-vee-a)