

SGLT2 inhibitors - Patient Information

What are SGLT2 inhibitors?

SGLT2 inhibitors are medications used to treat diabetes, disease and heart disease. They work by blocking sodium and glucose transporters in the kidney, therefore increasing the amount of sugar and water passed in the urine. While originally only used to treat patients with diabetes, they are now used in patients without diabetes as well.

Common SGLT2 inhibitors are Dapagliflozin (Forxiga) and Empagliflozin (Jardiance).



How effective are SGLT2 Inhibitors?

SGLT2 inhibitors have been shown **reduce kidney failure progression by approximately 30%** in both diabetic and non-diabetic patients

They can also be used in patients with heart failure (with reduced and preserved ejection fraction) and have shown to reduce hospitalisations and in some cases, reduce the risk of death related to cardiovascular causes

What are the side effects?

Common

- **Hypoglycaemia** (low blood glucose). This usually only occurs in diabetics, when given in combination with other diabetic medications such as insulin and sulfonylureas such as gliclazide.
- **Dehydration and increased thirst.** Ensure you drink sufficient fluid to avoid dehydration.
- **Fungal genital infections** (Thrush). SGLT2 inhibitors increase the risk of thrush around the vagina and penis. This causes a red, itchy rash. This is usually easily treated with medications (creams). Washing the genital area with warm water will reduce the risk of thrush.

Rare

- **Diabetic Ketoacidosis (DKA).** Taking SGLT2 inhibitors may cause ketones to build up in the blood. This can occur even when your blood glucose is normal. Symptoms include nausea, vomiting, abdominal pain, dehydration, rapid breathing, fruity breath and even coma.
 - The major risk factor for DKA is fasting. Avoid diets involving prolonged fasting or ketogenic (very low carbohydrate) diets.
 - If you think you may have DKA, stop the SGLT2 inhibitor and seek urgent medical attention.
 - DKA is extremely rare in non-diabetic patients



Sick days and fasting

If you are sick, for example you have gastroenteritis or an infection, it is important not to take your SGLT2 inhibitor (temporarily).

You should also **stop your SGLT2 inhibitor 3 days prior to any surgery** where you are required to fast.

You may resume your medication when you are eating and drinking normally again.

If you plan on fasting for religious reasons or are going to make a major change in your diet, consult your doctor before doing so.

I'm worried my kidney function will drop

One way SGLT2 inhibitors work is by reducing blood flow to the kidneys. This will make your kidney function lower as it is receiving less blood and therefore will clear less waste. However in the long term, the reduction in blood flow reduces pressures in the kidney, which will reduce scarring. This will benefit your kidneys long term. A drop in the kidney function after starting an SGLT2 inhibitor is an expected effect and usually indicates the drug is working properly.

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