



You have been given this leaflet because you are taking or are about to take an SGLT-2 inhibitor for the treatment of diabetes, heart failure or chronic Kidney Disease (CKD).

The name of these drugs end with 'gliflozin'. Examples include:

Empagliflozin (Jardiance®)
Dapagliflozin (Forxiga®)
Ertugliflozin (Steglatro®)
Canagliflozin (Invokana®)

What is an SGLT-2 inhibitor?

Sodium glucose co-transporter-2 (SGLT-2) inhibitors are medicines commonly used in the management of diabetes. Recently they have been shown to have other benefits, particularly in patients with heart failure or chronic kidney disease, with or without diabetes.

How do SGLT-2 inhibitors work?

These medicines work by blocking the SGLT-2 protein in your kidney which allows your kidneys to remove excess water, salt (sodium) and sugars (glucose) from the body via your urine.

What are the benefits of SGLT-2 inhibitors?

- Improvement in blood glucose
- Weight loss
- Lowering of blood pressure
- Protecting the kidneys and heart
- Reducing the risk of heart attacks and strokes
- Slowing the decline in kidney function
- Reducing symptoms of heart failure and risk of being hospitalised due to heart failure

Are there any side effects?

SGLT-2 are generally well tolerated and serious side effects very rare. However, we have listed some side effects below:

Very common:

An increase in the risk of hypoglycaemia (low blood sugar) when used in combination with some other diabetes medication. This is uncommon in people without diabetes.

Common

Genital infections (including thrush) which may cause itching and/or rash in the genital area or unusual discharge.

Urinary tract infections which may cause burning when passing urine or the need to urinate more frequently. In some cases may also cause a temperature or pain in your back or sides – if this occurs then seek medical attention.

Passing more urine more often which can lead to dehydration, dry mouth, increased thirst or low blood pressure.

The best way to prevent these side effects is good personal hygiene and keeping well hydrated. If you experience any symptoms relating to these infections, please speak to your GP or pharmacist to receive appropriate treatment.

Rare:

The following two side effects are extremely rare, but it is important to be aware of them:

Diabetic Ketoacidosis (DKA)

Necrotising fasciitis of the perineum (**Fournier's Gangrene**) [pain, tenderness, erythema, or swelling in the genital or perineal area, with fever or malaise].



What is DKA? It is a rare but serious side effect **if you have diabetes**. It occurs when the body does not have enough insulin which results in the build-up of harmful substances called ketones in the body. This can be life threatening if not treated quickly.

What are the symptoms of DKA?

Feeling sick, vomiting, stomach pain



Rapid breathing, fruity smelling breath



Dry and dehydrated



Feeling very thirsty

Feeling drowsy/tired or confused



Urinating often



What is Fournier's Gangrene?

This is also an extremely rare but serious bacterial infection affecting the tissue under the genitals and surrounding area. The symptoms to look out for are pain, tenderness, redness and swelling of the genitals or the area between the genitals and anus, as well as having a fever and feeling generally unwell.

When to stop taking SGLT-2 inhibitors:

If you develop signs/symptoms of any of the rare side effects listed above (DKA, Fournier's gangrene) even if your blood sugars are within normal range – **Stop and seek URGENT medical attention.**

If you are having major surgery, stop this medication 24-72 hours before your surgery – **to restart only after you are mobile and eating/drinking normally again**

What to do if I feel unwell?

It is best practice when you are unwell to use **sick day guidance**. You should stop taking your SGLT-2 inhibitor especially in presence of vomiting, diarrhoea or fever with sweats and shaking.

If you have diabetes and have access to blood sugar monitoring at home, increase the frequency of checking to 2-4 hourly. If they run too high or low, seek medical advice. Never stop taking your insulin – you may have to adjust your dose.

Stay well hydrated at least 100ml (half a cup) of water every hour.

Do not fast. If you cannot eat or drink, or are vomiting, replace your meals with sugary drinks or ice creams.

Note sick day guidance may apply to other medication you take. The medications listed below are common medicines which should also be stopped. This list is not exhaustive. If you are

unsure or have any questions, please seek medicate advice:

- Blood pressure medication – e.g. Ramipril, losartan or medicines ending with 'pril' or 'artan'
- Diuretics (water tablets) – e.g. Furosemide, Bumetanide, Spironolactone
- NSAIDS –e.g. Ibuprofen, Naproxen
- Metformin

Restart your medication as soon as you are well and eating, drinking normally

Please keep this leaflet for future information. If you require further information or would like to discuss this leaflet further, contact your GP or Pharmacist.

Your GP surgery details:

NAME:.....

ADDRESS:.....

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CONTACT:.....