

What is diabetic ketoacidosis (DKA)?

- DKA is **rare** but serious condition that can develop in people taking SGLT2 inhibitors. It can occur even if blood glucose levels are normal.
- DKA usually occurs when the body does not have enough insulin but can also happen with these tablets.
- DKA is a serious condition which requires urgent medical treatment.
- DKA results in the formation of a chemical called ketones, which can lead to increased levels of acid in the blood. This is dangerous.

What are the symptoms of DKA?

- Feeling and/or being sick.
- Stomach pain.
- Rapid breathing or deep sighing breaths.
- Dehydration and thirst
- Drowsiness or extreme tiredness.
- Confusion.

If you experience any of these symptoms, even if your blood glucose levels are not high, you should contact your doctor or diabetes nurse or go to the nearest hospital and tell the emergency doctor that you are taking a SGLT2 inhibitor.

Stop taking your SGLT2 inhibitor in these circumstances:

You may need to temporarily stop your SGLT2 inhibitor tablets, in some situations, such as:

- If you are admitted into hospital
- At least 24 hours before starting to fast for any surgery or for a procedure which requires you to stop eating and drinking (fasting) beforehand. Your medical team can advise you.
- If you are unable to eat or drink anything e.g. due to severe nausea or vomiting with a risk of dehydration.
- If you are unwell with an infection or illness with risk of dehydration.
- If you are drinking large amounts of alcohol.

See your doctor urgently:

- If you have a severe illness or infection.
- If you are very dehydrated.
- If you have had significant weight loss and have poor appetite.

Always explain to any healthcare professional that you are taking a SGLT2 inhibitor.

Restarting your medication

You can generally restart your SGLT2 inhibitor tablets when you have recovered from an illness and are eating and drinking normally. Your doctor can advise you.

Patient Information Leaflet for People with Type 2 Diabetes Starting Sodium-Glucose Co-transporter 2 (SGLT2) Inhibitors

You have been started on a tablet called a SGLT2 inhibitor. This leaflet provides you with information about how it works, benefits, possible side effects and circumstances in which you may need to seek medical advice.

They are a class of drug used in the treatment of type 2 diabetes.

SGLT2 inhibitors available are:

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

What are SGLT2 inhibitors?

- Sodium glucose cotransporter type 2 inhibitors - (SGLT2 inhibitors) are a class of drugs used in the treatment of type 2 diabetes.
- They reduce blood glucose levels by acting on the kidneys to increase the amount of glucose passed in the urine.
- They can be prescribed on their own or in combination with other diabetes medications including insulin.

What are the benefits of SGLT2 inhibitors?

This group of drugs can offer some protection from cardiovascular (heart) and kidney disease.

The risk of a major cardiovascular event is reduced by 37%, the risk of hospitalisation with heart failure reduced by 35% and progression to kidney replacement therapy is reduced by 55%.

Additional benefits are:

- Improvement in blood glucose.
- Weight loss.
- Lowering of blood pressure.
- Lowering risks of death in people with heart and kidney disease.

When should SGLT2 inhibitors be avoided?

- Previous history of diabetic ketoacidosis (DKA).
- Problems with recurrent urinary tract infections.
- Problems with severe recurrent genital infections ('thrush').
- Alcohol dependency.
- Women planning pregnancy/are pregnant or breastfeeding

What are the possible side effects of SGLT2 inhibitors?

For most people the benefits outweigh the possible side-effects.

Very common (more than 1 in 10 people affected)

An increase in the risk of low blood glucose levels if used in combination with insulin or sulfonylurea.

Common (between 1 in 10 to 1 in 100 affected)

- Developing genital infections (e.g. thrush) or urinary tract infections.
- Passing more urine more often.
- Increased thirst.
- Itching/rash.

Uncommon (between 1 in 100 to 1 in 1000 affected)

- Getting low blood pressure and dehydration.
- Pain/Difficulty passing urine (dysuria).

Rare (between 1 in 1000 to 1 in 10000 affected)

- Diabetic ketoacidosis known as DKA (*rare but serious side effect*).

Very Rare (fewer than 1 in 10000 affected)

- Fournier's gangrene is a very rare and severe spreading skin infection in the genital or groin area. The symptoms are pain, tenderness or swelling in the genital or groin area, with fever. It requires immediate treatment.