

# SGLT2 inhibitors

Patient information: **medicines**



Sodium-glucose co-transporter-2 (SGLT2) inhibitors are medications that were initially approved for treating type 2 diabetes. They are sometimes called 'gliflozins' or 'flozins' based on their brand names, which include Dapagliflozin, Canagliflozin and Empagliflozin.

Some SGLT2 inhibitors have been proven to slow the progression of chronic kidney disease (CKD), even in people without diabetes. Your healthcare team will discuss if any of these SGLT2 inhibitors are a suitable treatment option for you.



## How do SGLT2 inhibitors work?

SGLT2 inhibitors are used to treat CKD as well as diabetes and heart failure. They work by blocking the reabsorption of glucose in the kidneys, increasing the amount that leaves the body through the urine. This helps to lower blood glucose levels, while also reducing blood pressure and weight.

## How do I take SGLT2 inhibitors?

SGLT2 inhibitors are taken as tablets, once a day. They can be taken with or without food.

Try to take the tablets at the same time each day, ideally before the first meal of the day.

If you miss your normal time slot and remember later in the day, take the tablet then. If you do not remember until the next day, just take that day's dose – do not take two doses together.

## What are the benefits of taking SGLT2 inhibitors?

Research studies have shown that taking SGLT2 inhibitors alongside your other medications can improve life expectancy and reduce the risk of both diabetes and CKD getting worse.

They can also reduce the risk of having a heart attack or developing heart failure.

## Are SGLT2 inhibitors suitable for everyone?

SGLT2 inhibitors are not suitable for people who:

- are receiving dialysis
- have Type 1 diabetes
- are pregnant or breastfeeding
- have frequent urine infections

There is not currently enough evidence to know if SGLT2 inhibitors are effective for people who:

- have a kidney or other organ transplant
- have polycystic kidney disease (PKD), lupus nephritis or ANCA vasculitis
- take immunosuppressant medications

Treatment recommendations may change in the future if research studies show that SGLT2 inhibitors are safe for and will benefit people with these conditions.



## Are there any side effects of taking SGLT2 inhibitors?

Most people will not experience any side effects with SGLT2 inhibitors. When they do occur, common side effects include:

**Dehydration** SGLT2 inhibitors can make you produce more urine, which can make you dehydrated. This is more likely to happen if you are also taking water tablets (**diuretics**). It is important that you drink enough water to keep hydrated.

**Low blood sugar (hypoglycaemia)** This is more likely to happen if you have diabetes and are taking other diabetes medications, as well as SGLT2 inhibitors. Tell your diabetes healthcare team if you are prescribed SGLT2 inhibitors as you may be advised to change your current diabetes medicines.

**Urine and fungal infections** This may include thrush around the vagina or penis. You can reduce your risk of developing infections by maintaining good hygiene of the genital area. This includes:

- avoiding perfumed soaps or shower gels
- wearing loose-fitting cotton underwear
- avoiding latex condoms, spermicidal creams or lubricants
- washing your hands thoroughly after going to the toilet

Tell your healthcare team about any infections that do develop so that they can be treated quickly. This is usually by over-the-counter tablets or creams from a pharmacy. If you have a sexual partner, they may also need treatment.





Rarer side effects of SGLT2 inhibitors include:

**Ketoacidosis** This is when acids called ketones build up in your blood. You may feel sick, confused, drowsy, dizzy and breathless. You or other people may notice that your breath smells like nail varnish remover. The risk of developing ketoacidosis increases if you do not eat for a long period of time, have a diet that is very low in carbohydrates, become dehydrated or drink lots of alcohol. **Stop taking the SGLT2 inhibitors and seek urgent medical attention if you think you may have developed ketoacidosis.**

**Foot disease** There is a small risk that SGLT2 inhibitors may make any existing foot ulcers or infections worse. These are more common if you have diabetes. It is therefore very important that you maintain regular preventative foot care, attend all podiatry appointments and seek medical attention if you develop foot ulcers or infections.

**Fournier's gangrene** This is a severe deep skin infection that can cause pain, swelling and/or redness around the genital area. **Stop taking the SGLT2 inhibitors and seek urgent medical attention if you have any of these symptoms.**



## What happens if I feel unwell while taking SGLT2 inhibitors?

If you feel unwell, your kidney team may recommend that you temporarily stop taking some medications, including SGLT2 inhibitors, until you feel better again. This is known as **Sick Day Guidance** or **Rules**.

SGLT2 inhibitors should be stopped temporarily if you:

- are not eating or drinking as normal
- have a urine infection or severe thrush
- have a high temperature
- are dehydrated
- have diarrhoea or vomiting
- have low blood pressure
- are admitted to hospital
- are about to have an operation

You will usually be able to start taking SGLT2 inhibitors again when you have been feeling better for two days (48 hours). **Ask your healthcare team if you are unsure or if you think that the SGLT2 inhibitors made you unwell.**



## What happens if I receive a kidney transplant?

If you are on the transplant waiting list and get called for a transplant, you should let your healthcare team know as soon as possible that you are taking SGLT2 inhibitors.

If you are receiving a living kidney donation you should ask your transplant co-ordinator if you need to stop taking SGLT2 inhibitors for a few days before your operation.

## Can I drive while taking SGLT2 inhibitors?

Yes, unless you are experiencing any of the severe symptoms listed earlier, especially those related to ketoacidosis as this can cause confusion, drowsiness and dizziness.

You should tell the **Driving and Vehicle Licensing Agency (DVLA)** if you are diabetic and your doctor has told you that you are at risk of low blood sugar (**hypoglycaemia**).

## How will I be monitored on SGLT2 inhibitors?

Your healthcare team will monitor your kidney function as usual. You are unlikely to need any extra blood or urine tests unless you feel unwell or your healthcare team think there could be a medication side effect.



# Where can I find out more information?

Talk to your healthcare team about whether SGLT2 inhibitors are a suitable treatment option for you.

Other sources of information include:

- **Kidney Care UK** Patient information - [www.kidneycareuk.org](http://www.kidneycareuk.org)
- **Diabetes UK** SGLT2 inhibitors - [www.diabetes.org.uk/about-diabetes/looking-after-diabetes/treatments/tablets-and-medication/sglt2-inhibitors](http://www.diabetes.org.uk/about-diabetes/looking-after-diabetes/treatments/tablets-and-medication/sglt2-inhibitors)

## Contact us to see how we can support you

Call free on  
**0808 801 00 00**

(Monday to Friday, 9am-5pm)

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If you have feedback about this leaflet, please let us know at: [feedback@kidneycareuk.org](mailto:feedback@kidneycareuk.org)

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