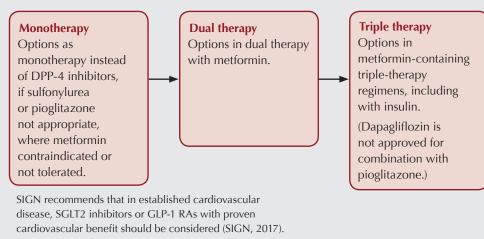


When to use SGLT2 inhibitors in T2D

NICE and SIGN guidelines

Sodium-glucose cotransporter-2 inhibitors (SGLT2is) recommended as:



NICE (2017) does not currently make specific recommendations for glycaemia management in those with established cardiovascular.

About this series

The aim of the "How to" series is to provide readers with a guide to clinical procedures and aspects of diabetes care that are covered in the clinic setting.

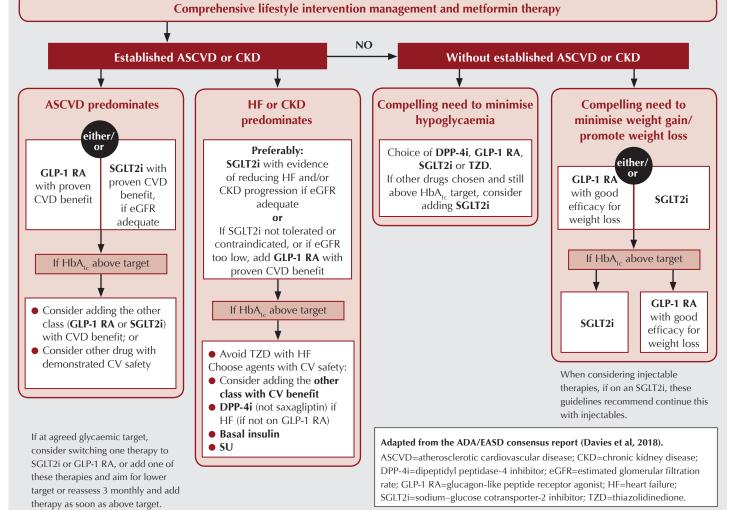
What and why

- SGLT2 inhibitors are a class of oral antidiabetes drug that block reabsorption of glucose in the kidneys.
- NICE and SIGN recommend their use in a process of stepwise intensification. The recent ADA/ EASD consensus report suggests individualising SGLT2i use based on comorbidities and needs.
- When prescribing SGLT2 inhibitors, safety and tolerability should be considered for each individual based on the latest scientific evidence.

Citation: Brown P (2018) How to use SGLT2 inhibitors safely. *Diabetes & Primary Care* 20: 173–4

Author: Pam Brown, GP in Swansea.

American Diabetes Association (ADA) and European Association for the Study of Diabetes (EASD) consensus report



How to use SGLT2 inhibitors

	w to use SGLI2	innibitors		
Low risk Evidence supports SGLT2i prescribing	Moderate risk Prescribe SGLT2i with caution		High risk Do not prescribe SGLT2i	
First-line (metformin intolerant) Second-line to metformin Third-line (add-on to second-line therapies) Combination with basal insulin or multiple daily injections of insulin Established cardiovascular disease No history of lower-limb amputation No history of PAD Microalbuminuria eGFR ≥60 mL/min/1.73 m ² Overweight or obese Vulnerable to the effects of hypoglycaemia	intolerant)History of PADorminOsteoporosiso second-line therapies)Frail/elderlyasal insulin or multipleHistory of foot ulcerainsulinHistory of fracturesuscular diseaseGLP-1 receptor agonilimb amputationKetogenic dietHigh HbA _{1c} levels (86)Steroid therapy.73 m²Cognitive impairmenteBMI <25		Previous lower-limb amputation Existing diabetic foot ulcers DKA (or previous episode of DKA) Eating disorders Rapid progression to insulin (within 1 year) Latent autoimmune diabetes Excessive alcohol intake Diabetes due to pancreatic disease Stage 3 CKD/eGFR <60 mL/min/1.73 m ² Type 1 diabetes (diagnosed or suspected) Genetic diabetes Acute illness Pregnancy (or suspected pregnancy), planning	
Adapted from Wilding et al, 2018 (https://bit.ly/2DkWIZZ)			pregnancy or breastfeeding Recent major surgery	
infections are common. SGLT2i tr Infections are more common early in treatment; providing information may improve continuation of treatment. UTIs are	LLA=lower-limb amputation;	 Diabetic ketoacidosis (MHRA (https://bit.ly/2 and EMA (https://bit.ly/2 and E	24eXtSC)particularly carbohydrates//2SDJYwg)- if dehydrated.regarding• Symptoms of DKA includenausea, vomiting, abdominalpor topain, generalised malaiseerapy.and shortness of breath.• Symptoms may be atypical andglucose may not be elevated.• Stop SGLT2i drugs duringacute illness and prior tossed need forsugical procedures – see	
 European Medicines Agency (EMA) has advised caution in using SGLT2is in those at high risk of LLA, as a class effect cannot be ruled out (https://bit.ly/2QcKnR). Absolute risk is low (0.6 per 100 person-years in cardiovascular outcome trials), but appears higher in those Bone fractures Small increased fracture risk and changes in bone mineral density (BMD) seen in the CANVAS trial compared with placebo (but not in the CANVAS-R population), Risk does be dose- MHRA h should re ongoing to preventive I deally aw with active or dapage 	vious amputation. s not appear to dependent. as advised all eceive advice and monitoring regarding re foot care. void SGLT2i in those ve foot ulceration us amputation. ifflozin studies. occurred mainly reatment and been linked to d falls due to volume and hypotension.	 Sick day rules for T2D When ill and at risk of dehydration, people wit T2D should be advised to Stop taking SGLT2i, m GLP-1 RA, SUs, ACEL/ diuretic medicines if to or drink, or persistent or diarrhoea; contact or specialist nurse for Contact their practice diabetes specialist tea emergency medical a if unsure what to do. Stay well hydrated (2- day) and eat little and If not able to eat norm 	to:Keep taking insulin and most other diabetes medicinesmetformin,other diabetes medicinesvARBs andeven if not eating.unable to eatGive people taking SGLT2ivomitingdrugs specific advice about the risk of euglycaemic DKA andadvice.to consult if they become ill, even if blood glucose levels are not high. Primary care teamsdviceshould be aware of the need to test for ketones as well as3 L of fluid/e''How to give sick day advice''	
Davies MJ, D'Alessio DA, Fradkin J et al (2018) Management of hyperglycaemia in type 2 diabetes, 2018. Aadults: ma London. A(2018) Management of hyperglycaemia in type 2 diabetes, 2018. ALondon. Aconsensus report by the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD). Diabetologia 4 Oct [Epub ahead of print]SIGN (2017)Down S (2018) How to advise on sick day rules. Diabetes & Primary Care Villar-Jones D (2016) Recent PCDSWilding J, Fer	SIGN 154: Pharmacological ent of glycaemic control with type 2 diabetes. bburgh. Available at: ly/2kzZiKT (accessed 01.11.18) nando K, Milne N et al (2018) ibitors in type 2 diabetes ent: key evidence and as for clinical practice. Diabetes	 Safe use: SGLT2i and re Check electrolytes ar prior to therapy; mon unless levels are <60 check eGFR 3–6 mor Modest reductions in occur when starting S ACEIs. These usually All three SGLT2i drug be initiated provided ≥60 mL/min/1.73 m². If eGFR falls but rema ≥45 mL/min/1.73 m², 	and eGFRcontinued at their lower doses.itor annuallyStop canagliflozin and empagliflozin if eGFR falls below 45, and dapagliflozin if eGFR <60.	