

Medicines and Dehydration – Sick day Rules

Dehydration can be a significant risk to patients taking certain medicines, particularly when intercurrent illness (see Fig.1) is present with existing medical conditions e.g. Diabetes (for detailed information about sick day rules for patients suffering from Diabetes Mellitus type 2, please see this [link](#) for type 1 more information available [here](#)).

The advice in this document does not apply to minor sickness and diarrhoea, meaning single episodes.

Dehydration, Acute Kidney Injury (AKI) and complications of diabetes can be reduced by applying sick day rules for certain medications during acute severe intercurrent illness.

The common medications that should be paused or stopped during illness, i.e. sick days, as they can result in dehydration can be remembered by using the SADMAN Mnemonic (See Table 1 below).

Fig.1. Intercurrent illness that can cause dehydration and/or increase in glucose levels in diabetics (not exhaustive)

- The common cold
- Influenza
- Diarrhoea and vomiting
- Urinary tract infection
- Chest infection
- Pneumonia
- Abscess
- Injury (e.g. fracture)

Table 1: SADMAN Rules: classes of medication that should be temporarily stopped in conditions that could lead to complications (non-exhaustive)			Examples
S	SGLT-2 Inhibitors	If taken during an acute illness that can lead to dehydration, there is an increased risk of developing euglycemic diabetic ketoacidosis.	Names ending in: 'flozins' – <i>canagliflozin, dapagliflozin, empagliflozin, ertugliflozin</i>
A	ACE-I inhibitors	If taken during an acute illness that can lead to dehydration, there is an increased risk of developing AKI due to reduced renal efferent vasoconstriction.	Names ending in: 'prils' – Ramipril, lisinopril, perindopril, enalapril, captopril
D	Diuretics	If taken during an acute illness that can lead to dehydration, there is an increased risk of developing AKI.	Names ending in: 'ide' – Bendroflumethiazide, furosemide, bumetanide
M	Metformin	If taken during an acute illness that can lead to dehydration, there is an increased risk of developing lactic acidosis.	Metformin, Metformin SR
A	ARBs	If taken during an acute illness that can lead to dehydration, there is an increased risk of developing AKI.	Names ending in: 'sartans' – losartan, candesartan, valsartan, irbesartan
N	NSAIDs	If taken during an acute illness that can lead to dehydration, there is an increased risk of developing AKI due to reduced renal afferent vasodilation.	Ibuprofen, Naproxen, Ketoprofen, diclofenac
Once the person is feeling better and is able to eat and drink for 24–48 hours, these medications should be restarted.			

Patient Counselling

- Explain what dehydration is and the conditions that can cause this e.g., vomiting, diarrhoea, fever (high temperature, sweats, shaking).
- Certain medications need to be stopped during severe illness.
- Explain which medicine(s) affect the patient.
- For over-the-counter cough, cold & flu products, patients should seek advice from their community pharmacist.
- Provide the sick day rule card (appendix 1), ticking the relevant medicine(s).

The decision regarding pausing a diuretic used for the treatment of heart failure should be based on the patient's current fluid status, which should be assessed by a clinician before pausing medication.

References

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The leaflet listed as Appendix 1 (<https://www.nottsapc.nhs.uk/media/1876/sick-day-rules-patient-leaflet.pdf>) was developed with permission from Chesterfield Royal Hospital Foundation Trust, part of NHS Derby & Derbyshire ICS.

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