

Open Doors Nursing Team

Top tips

What is diabetic ketoacidosis?

Diabetic ketoacidosis (DKA) is a life-threatening diabetes complication caused by a severe lack of insulin. It is an acute metabolic emergency characterised by a triad of hyperglycaemia, ketosis and metabolic acidosis. When patients are unable to move sugar into their cells for energy due to a lack of insulin their body breaks down fat for energy. The liver releases ketones and a build-up of this can result in DKA.

Staff resources

What is diabetic ketoacidosis (DKA) |
Diabetes UK [...click here](#)

The management of diabetic
ketoacidosis in adults [...click here](#)

When to suspect hyperglycaemic
emergencies [...click here](#)

When to suspect diabetic ketoacidosis
[...click here](#)

Sick day guidance for type-2 diabetes
[...click here](#)

Contact us

For any specific topic support and suggestions for upcoming content in Top Tips, please email the team via:
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Recognising it early and the role of primary care

Primary care clinicians are often the first and most frequent point of contact for patients with diabetes. This makes it essential that we are well-equipped to recognise diabetic ketoacidosis (DKA) early and play a key role in preventing its onset.

In addition to early identification, educating patients during medication reviews and prescribing consultations is crucial for ensuring they understand how to manage their condition and avoid complications like DKA.



What are the signs and symptoms of DKA

- Fruity breath, often referred to as pear drop breath but can also smell like nail varnish remover
- Polyuria
- Polydipsia
- Fatigue
- Confusion
- Abdominal pain
- Sickness and/or diarrhoea
- Shortness of breath
- Weight loss.

DKA can mimic several illnesses, leading to delayed diagnosis. Always consider the possibility of DKA. Here are some common conditions and their associating symptoms that could potentially be signs of DKA.

- Gastroenteritis – sickness and diarrhoea
- Viral URTI – fatigue,
- Anxiety / panic attacks – shortness of breath, confusion
- Simple dehydration from exercise/heat, feeling faint, thirsty and confused.

Urine dipstick vs ketone monitor when suspecting DKA

Some surgeries now stock ketone monitors which can measure ketones in the blood. Although this is preferable to urine ketones, if not available then use urine dipstick to check for ketones.

Note. if suspecting for DKA, test blood or urine for ketones, even if plasma glucose levels are near normal. Low blood ketone levels (less than 3 mmol/L) do not always exclude DKA.



Prevention of DKA and patient education

As primary care clinicians, our roles are fundamental to educating patients on the risk of DKA and how to prevent this severe condition.

This can include:

- Educating patients on the signs and symptoms of DKA
- Robust explanation of sick day rules
- Importance of not missing insulin doses
- Stopping SGLT2i's when unwell
- When and where to seek medical help if unwell.

Quick facts

- 23% of children with Type 1 Diabetes are diagnosed in DKA (Diabetes UK, 2025).
- In the UK, 4% of Type 1 Diabetics present with DKA annually.
- Incidence of DKA is not greater during Ramadan, however it's important to note the most common precipitating for DKA, during Ramadan, is missed insulin doses.

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