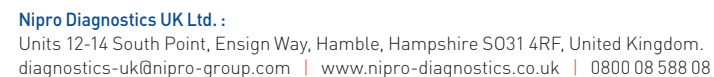


Global IDF/ISPAD guideline for diabetes in childhood and adolescence
Diabetic ketoacidosis and hyperglycemic hyperosmolar state
<https://www.nhs.uk/conditions/diabetic-ketoacidosis/>
Blood ketones: Measurement, Interpretation, Limitations, and Utility in the Management of Diabetic Ketoacidosis. Dhatariya K., et al., Rev Diabet Stud. 2016 Winter; 13(4):217-225.
Diabetic Ketoacidosis: Risk Factors and Management Strategies, Umpierrez, G.E. & Kitabchi, A.E. Mol Diag Ther (2003) 2:95.



Call Nipro Customer Service for more information on products or for help in switching patients to the 4SURE portfolio.

Our portfolio of meters, test strips, pen needles, and lancets capture the essentials of self-testing in the most simple, accurate, and accessible form. This way we ensure the best life possible!



A woman with brown hair tied in a ponytail is sitting on a light-colored couch. She is wearing a light blue button-down shirt over a white top and blue jeans. She has a distressed expression, with her right hand covering her face and her head bowed. In her left hand, she holds a clear glass of water. The background is a plain, light-colored wall.

Bro-Diabetic Ketoacidosis - EN UK - 05 Sep2019

HOW TO RECOGNIZE AND PREVENT



What is diabetic ketoacidosis (DKA)?

When we eat carbohydrates, they are broken down by our bodies, breaking down of carbohydrates results in glucose, which is then released into our bloodstream. Glucose is our principle source of energy, but to free the energy, glucose must be processed within our cells. Insulin acts as the key, allowing glucose to enter our cells.

When our cells are lacking glucose (e.g. because of an insulin deficiency), our body will start burning fat as an alternative source of energy. The breakdown of fat produces ketones. In people living with diabetes, high levels of ketones in the blood can lead to a dangerous condition known as diabetic ketoacidosis.

This leaflet is designed to help you recognize and prevent DKA.

Risk factors of DKA

For persons living with Type 1 diabetes (or Type 2 diabetes in exceptional cases):

- Fasting
- Prolonged exercise
- Pregnancy
- Gastroenteritis
- Having an infection, injury, or surgery
- Alcohol intoxication
- Illegal drug use

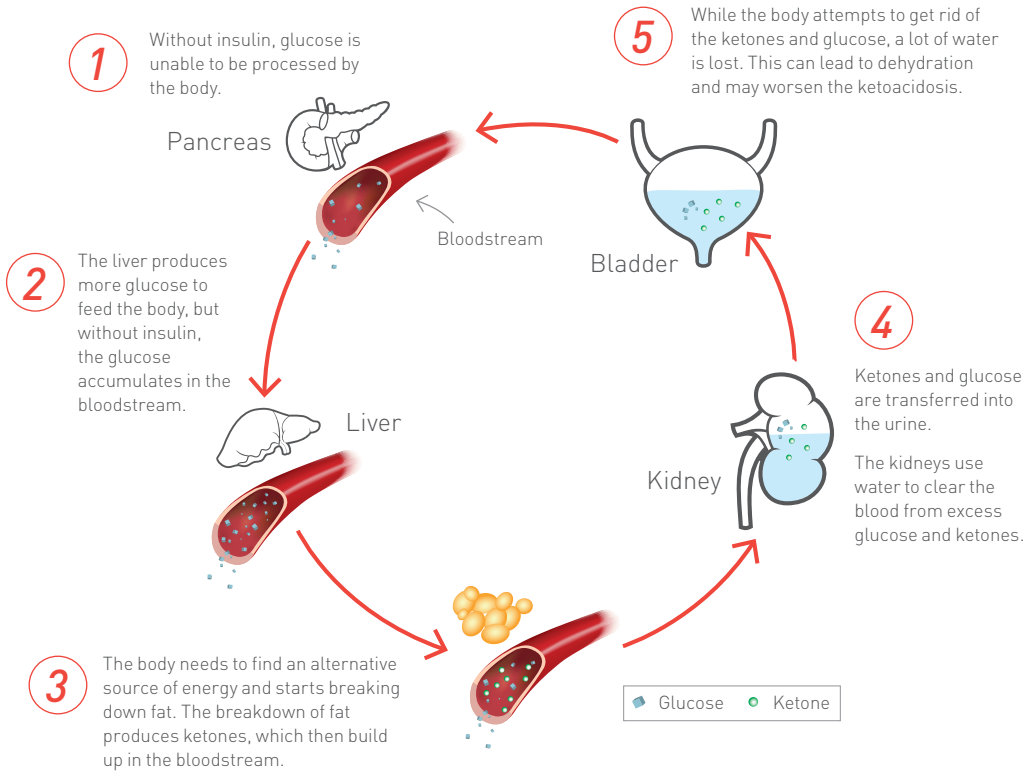
Recognizing DKA symptoms

- Dry mouth, strong thirst
- Urinating more than usual
- Deep breathing, with a fruity smell/odor
- Feeling nauseas, vomiting, and/or stomach pains
- Feeling confused, being sleepy, and/or loss of consciousness

If you experience any of the above symptoms, contact your diabetes team immediately.

Recognizing higher-risk situations

- During illness with fever and/or vomiting
- When blood glucose values rise above 14 mmol/L (250 mg/dL)
- When you are frequently urinating and having elevated blood glucose values (especially if combined with abdominal pains and rapid breathing)
- Days where you do not manage to control your blood glucose and you have uncontrolled hyperglycemia



How to prevent DKA

Since DKA occurs when an overabundance of ketones circulate in the body, prevention is a matter of knowing what to look for.

Step 1: recognize DKA symptoms and higher-risk situations

Step 2: monitor your...

Blood glucose levels (also known as blood glucose), as advised by your diabetes team

AND



Ketone levels (also known as β -ketone), when experiencing DKA symptoms or in higher-risk situations

Understanding your blood β -ketone levels


If you experience any of DKA symptoms or if you encounter any higher-risk situations described above:

- Test your blood glucose levels frequently (every 2-4 hours)
- and
- Test your β -ketone levels


This color chart will help you to interpret your β -ketone test result.*




Interpreting β -Ketone Blood Results*




Below 0.6 mmol/L
Normal reading. No action required.




Between 0.6 and 1.5 mmol/L
Slightly increased risk of DKA.**
Test again in a few hours.



Between 1.6 and 2.9 mmol/L
Increased risk of DKA. Contact your diabetes team or GP as soon as possible.



3 mmol/L or higher
Very high risk of DKA.
Seek medical help immediately.



*Source: Diabetic ketoacidosis (2017, April). Retrieved from: <https://www.nhs.uk/conditions/diabetic-ketoacidosis/>

**Diabetic ketoacidosis



Other considerations

- It is important to stay hydrated (especially when you are ill), so remember to drink plenty of unsweetened fluids.
- Do not stop taking your insulin under any circumstances. It is possible that you may need more insulin than you would normally administer.
- If you are worried or if you have any questions, please contact your GP, practice nurse, or diabetes team.