



**Wolverhampton
Diabetes Care**

Diabetic Ketoacidosis (DKA)

Most people with diabetes keep safe control of their blood sugar. For a variety of reasons the blood sugar can rise. This is not usually dangerous but it can be. One such situation is called Diabetic Ketoacidosis (DKA).

What is diabetic ketoacidosis?

The hormone, insulin, controls glucose and ketones in the blood. When the body cannot convert glucose into energy, it uses more fat which breaks down to ketones. They are not dangerous in small quantities. When people with diabetes, usually those with Type 1 diabetes on insulin, are lacking in insulin or insulin fails to work properly, ketones build up. Without insulin, the body carries on producing ketones even not needed. This excess leads to the blood becoming acid and a dangerous situation called Diabetic Ketoacidosis.

What causes diabetic ketoacidosis?

Anything that leads to high blood sugar levels especially if left uncorrected. Missing insulin or errors with insulin injection is a common cause. Never miss insulin even if vomiting. Infection and other illness forces up the blood sugar and can spark off ketoacidosis.

What are the symptoms?

High glucose and ketones cause drowsiness, confusion, coma, vomiting and abdominal pain. The ketones cause rapid breathing and a peculiar sweet smelling breath – like pear drops. The blood sugar test will usually be high – more than 15 mmol/l – and the urine contains large quantities of ketones.

How is it treated?

The most important thing is to avoid the situation. Stick to a good self care plan. Don't miss treatment. With high sugars take action to correct the problem. Take extra insulin when ill and if the blood tests are high. Know how to adjust insulin in this situation and understand the "sick day rules". Never miss insulin. Seek advice on what to do. If the blood test stay high or there is vomiting, seek urgent medical help. Call 999 as needed if you can't get help. Diabetic ketoacidosis can only be treated in hospital. It needs a drip injection through which insulin, fluids and salts are given, together with regular blood testing. Treated properly, it is readily corrected. Left untreated it is fatal. The cause of the problem must be understood and an explanation given on how to avoid it in the future. This means a full review and adjustment of treatment.

Seeking advice and what care to expect

You must seek help and advice if you feel you are slipping into this situation and such advice should be readily available to you.

Your medical team should teach you about high blood sugars, how to deal with them, what to do during illness, how to test your blood and urine and how to adjust insulin safely. If you are unwell, there should be access to advice and support from the emergency services. In hospital, the treatment should be prompt and the specialist diabetes team should see you. There will be a very clear treatment plan for people with DKA. When you have recovered you should expect the situation to be fully reviewed, the causes understood and a care plan made to stop problem from recurring. You will have close follow up after discharge to be sure everything settles down safely. You should end up being confident in being able to prevent the problem from happening in the future.