What All Diabetics Need to Know About Ketones

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What You Need to Know About Diabetes and Ketones

When one has ketones in the body, it means that the body is no longer burning glucose for energy and has started burning fat instead. Ketones, in people with type 1 diabetes, commonly occur when there is a lack of insulin, and the body physically can't unlock the glucose it needs for energy.

Having ketones can be extremely dangerous and potentially fatal in diabetics, and any sign of them needs to be attended to immediately.

In a person without type 1 diabetes, ketones still exist, but because of the regular secretion of insulin, they can never get to a dangerous level. In a person with type 1 diabetes, ketones can build up quickly and sneakily, and the warning signs can be similar to lots of other common maladies so it can be hard to catch.

How Are Ketones Produced?

A common misconception is that the blood glucose levels have to be extremely high in order for one to be producing ketones. The reality is that even if your glucose is only slightly elevated or if you suspect ketones might be present, then there is a chance they are.

Random, unassuming incidences such as a kinked insulin pump tube, old or overheated insulin, infection, dehydration or lack of insulin, in general, can cause ketones to be present in the blood.

The Dangers of Diabetes and Ketones: Diabetic Ketoacidosis

When ketones are left untreated, eventually, diabetic ketoacidosis (DKA) will develop. DKA is when the acidity of the ketones have reached a toxic level in the blood, and the body is in its last stage of survival. If DKA is occurring, emergency care is needed, and the individual experiencing it must go to the hospital for further care. If DKA goes on for too long, the person will ultimately slip into a DKA induced coma and eventually pass away.

There are also some folks in the type 1 diabetes community who choose to eat extremely low carb and are able to keep their blood sugar in an extremely tight range. These people with diabetes may also experience ketones, but if unaccompanied by negative symptoms, they are okay.

Another uncommon and often overlooked way to experience high ketones is doing extreme sports. When someone is burning so much energy naturally, there are times where the glucose will keep going low, but ketones will be present, in this incident DKA can develop because of the total lack of insulin. When doing extreme sports, it is always good to test for ketones if you have been eating a lot of extra carbs and not administering insulin for fear of going low.

One of the most common ways DKA can develop in a person with type 1 diabetes is when an infection in the body

is present. Either the flu or a virus can cause high levels of ketones because of the bodies lack of insulin absorption during this time. It was very important to test for ketones when experiencing infection.

Many diabetics experience high levels of ketones or DKA when first diagnosed. Months before the diagnosis of types 1 diabetes, the body is producing less and less insulin causing it to burn fat instead, raising the levels of ketones in the body. When I was diagnosed I had very high levels of ketones in my blood, I wasn't in full blown DKA but if I had gone a couple more days without insulin, I would've definitely been there.

Experiencing Diabetic Ketoacidosis

If you're in DKA, your body will feel bad. You aren't going to feel normal at all some potential symptoms such as these ones will occur.

- Extreme exhaustion
- Throwing up
- Dizziness
- Shortness of breath
- Confusion
- Nausea

If you are experiencing these symptoms and you have tested high ketone in your urine, definitely go o the emergency room and explain your situation. They will give you the proper care you need.

Thankfully, we live in a time where high levels of ketones are easy to test for and can be taken care of before progressing to DKA.

How to Test Your Ketone Levels

It is very important to own ketone test strips for when ketones are suspected, if you test and there are high levels of ketones in your urine, then the appropriate steps can be taken to get the ketones down and out before it progresses to DKA.

Some steps I like to take if ketones are present in my urine are:

1. Change my pump site – most likely I am not absorbing the insulin properly and need a new spot to fully utilize the insulin I am administering.
2. Drinking lots of fluids will help flush the ketones from the body.
3. Eat something balanced so my body can stay energized and utilize the glucose properly and efficiently.
4. Keep retesting for ketones every hour. Knowing what is going on in your body is key to staying healthy.