Everything You Need to Know About Type 1 Diabetes

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What Is Type 1 Diabetes?

Diabetes mellitus is an umbrella term for a lot of different types of diseases that affect the pancreas. Most assume there are just two types of diabetes – type 1 and type 2 diabetes, but there are actually over five types of diabetes which can make it confusing at times to understand what the term means.

The word **diabetes** comes from the Greek origin “to pass through,” and **mellitus** means “honey-sweet.” Physicians named it this because of the sugar that was being passed through into the urine of patients with diabetes.

What Is Type 1 Diabetes Exactly?

Type 1 diabetes is an autoimmune disease that occurs when the body’s immune system attacks the insulin-producing beta cells in the pancreas. This condition is not curable or manageable by only diet and exercise (although diet and exercise can have a positive effect).

In every case, the person diagnosed must take insulin in the delivery method of their choice whether it be through needles or an insulin pump is up to lifestyle, resources, and personal preference.

Type 1 vs Type 2 Diabetes

The main difference between type 1 and type 2 diabetes is that type 1 is an autoimmune disease, and type 2 is a metabolic disorder. They are different diseases, and the only thing they have in common is the fact that they both affect the pancreas.

The Management of Type 1 vs Type 2 Diabetes

Management for the two types of diabetes is also completely different.

Type 1 diabetes has a very fast onset, whereas type 2 diabetes tends to develop over a longer period of time. More often than not, type 1 diabetes will require hospitalization and will require intensive coaching on learning how to manage the disease.

When diagnosed with type 1, the patient will need to go on insulin right away to bring their blood sugar to a healthy level. Type 2 diabetes doesn’t usually require hospitalization and the patient diagnosed will go on pills before possibly having to go on insulin as well. It can be managed with proper nutrition and exercise, whereas those things can help a type 1 diabetes, but they will always be dependent on insulin.

The Development and Treatment of Type 1 vs Type 2 Diabetes

Type 1 diabetes occurs when the body's immune system attacks the insulin-producing beta cells in the pancreas. There is no known reason why this happens, but speculations believe a virus can trigger it. Once the onset of type 1 has begun, there is no way to stop it. A person diagnosed with type 1 diabetes will have to take insulin for the rest of there life because there is no way to stop or reverse the destruction of their beta cells.

Type 2 diabetes is caused by insulin resistance (inability to utilize insulin properly so that carbohydrates can be metabolized). We need insulin to be working at its optimal level to metabolize carbs properly; when our bodies are unable to do so, blood glucose levels start to rise and eventually there will be a diagnosis of type 2 diabetes.

Fortunately, there are ways to decrease insulin resistance and increase insulin sensitivity. Diet and exercise play a huge role in the management of type 2 diabetes and can allow a person afflicted with the disorder to live freely and without having to take medication. There are plenty of resources and programs available to help people with type 2 diabetes increase insulin sensitivity.

What Are the Symptoms of Type 1 Diabetes?

Two of the most classic type 1 diabetes symptoms are extreme thirst and frequent urination.

As somebody who has type 1 diabetes myself, I'd like to emphasize the word frequent. Leading up to my diagnosis I was urinating almost 20 times a day and drinking water constantly.

Every case varies slightly, but those are the two biggest giveaways of type 1 diabetes. Some other symptoms may include increased appetite, weight loss, fruity smelling breath, dry mouth, and fatigue.

What Causes Type 1 Diabetes?

There are no proven causes of type 1 diabetes. However, there are many speculations. Once a patient is diagnosed with type 1 diabetes, there is no way to get rid of it, and there is also no way of preventing it from happening.

Unfortunately, the stereotype for a person living with type 1 diabetes is that they caused it by an unhealthy lifestyle; this couldn't be farther from the truth. There are many hypotheses surrounding the onset of type 1. Here are the most popular ones:

A Virus

There are speculations that specific viruses could be the cause of type 1 diabetes. It is thought that certain viruses can play a part in unmasking autoimmunity in the body and confusing the immune system on which are the bad and good cells that need to be destroyed. The fancy, scientific term for this confusion is called molecular mimicry.

Another factor to consider when attributing the diagnosis of type 1 diabetes to a virus is the specific timing of the infection. The body needs to be the perfect host, with the perfect cells present that allow autoimmunity to occur.

There is also speculation that some anti-viral immunizations can trigger the onset of type 1 diabetes, and there have been cases of people who were diagnosed closely after getting specific immunizations.

Next page: The potential causes of this condition, how it is diagnosed and treated, and more "what is type 1 diabetes?" education.

What Causes Type 1 Diabetes?

Genetics

While type 1 diabetes can be random and not be caused by genetics, the probability of developing it does increase if it runs in the family. However, genetic factors play a larger role in the development of type 2 diabetes rather than type 1.

In the case of direct family members, if a father has type 1 diabetes, the likelihood of passing it on is around 5% to 6% versus a 4% chance if the mother has type 1 diabetes. If instead a sibling has type 1 diabetes, the chance the other siblings will have it is around 5%, excluding the case of identical twins where the percentage jumps up to 50.

Another Autoimmune Disease

Twenty-five percent of people who have one autoimmune disease will develop another one in their lifetime. This could be another factor to take into consideration when accounting probable causes of type 1 diabetes. Most likely this is associated with genetics and having multiple autoimmune syndromes – which is another category in itself in terms of genetic predisposition.

To reiterate, all of these possible causes are speculation, and there is still no specific cause of type 1 diabetes. Ultimately your body has to be the perfect host for type 1 diabetes to be present, and even then, it rarely occurs.

Diagnosis

In a quarter of the cases, the person being diagnosed with type 1 diabetes will be in diabetic ketoacidosis – high levels of ketones in the body. Ketoacidosis is the body's last way of trying to getting rid of ketones and calls for immediate emergency intervention.

Diabetic ketoacidosis starts with dizziness and fatigue and will eventually turn into nausea, vomiting, and fainting. If left untreated, the person affected will slip into a coma and ultimately pass away.

Type 1 diabetes is usually diagnosed at a younger, age but anyone at any age can be diagnosed with the condition. It can be genetic, as well as be caused by environmental factors and a possible reaction to certain chemical drugs.

For example, if a father has type 1 diabetes, the chances the child will have it are around 5% to 6%; if a mother has it, the chances are around 4%.

Treatment

There is only one way to treat type 1 diabetes, and that is by taking insulin. There are two main methods to get into the body: multiple daily injections or insulin pumps. Also, there is a type of insulin which you inhale – Afrezza. However, it is only approved and available in very few countries.

Most type 1 diabetics will be put on MDI for the 1st year of diagnosis, to learn exactly how dosing works and to get comfortable with injections. Once they have mastered MDI, the option of an insulin pump will present itself.

Deciding which form of insulin delivery is best suited for your lifestyle can take some time and experimentation, but finding the one that feels right will have a hugely positive impact on your life!

There are some key aspects of MDI and insulin pumps to consider when deciding which method is best for your lifestyle. Here are some pros and cons to both:

Multiple Daily Injections (MDI)

Being on MDI means there isn't a ton of room for frequent change in schedule. One or two of the injections taken on MDI contains long-acting insulin, which means it is a big dose that will be used as background insulin all day and night. Because of this, having a routine each day that is somewhat similar is quite beneficial.

MDI is great for active people who dislike being connected to a medical device 24/7. For some professions, being on MDI might be the best options such as someone who works in extreme sports, is a model or stunt person.

MDI is not for people who dislike needles… the name itself is pretty self-explanatory, if you are on MDI, you will be doing multiple injections every day.

Insulin Pump

Having an insulin pump can take away a lot of the headspace that calculating doses for food and corrections takes up when living with type 1 diabetes. It only requires one injection every three days, but once you are connected to an insulin pump, your body is entirely reliant on it to get insulin (you can't take it off!).

Insulin pumps are great for those who have an abnormal schedule because of being able to adjust the basal (background) insulin. An insulin pump allows one to temporarily increase and decrease basal insulin for any amount of time, which is not possible on MDI.

There are many different kinds of insulin pumps available on the market and which ones are available for you personally is dependent on what country you live in.

Another factor to take into account when deciding if an insulin pump is right for you is your sleep sensitivity. I'm not exaggerating when I say I literally get tangled in my insulin pump tubing when I'm sometimes sleeping. If you are someone who is easily woken up while sleeping, you may want to test out an insulin pump overnight before fully committing. Also, even if you have a tubeless insulin pump (omnipod) the actual site and bulkiness of the device can be irritating to sleep with (I have tried it).

Insulin pumps are overall ideal for people who want more flexibility in their lifestyle and value being able to eat/exercise at any time of the day.

Next page: Type 1 diabetes complications, prognosis, and living with type 1 diabetes advice.

Complications to Be Aware Of

Type 1 diabetes is a disease that, if ignored and not managed well, will cause very serious complications. Many type 1 diabetics will experience some complications in their life even if they are decently managed.

Complications occur when blood glucose levels are too high for an extended period of time or if low blood sugar episodes arise too often. Here are lists of the complications associated with high and low blood sugar.

Complications of high blood sugar levels:

- Eye damage (Diabetic retinopathy, can lead to blindness)
- Kidney disease
- Amputation caused by nerve damage
- High blood pressure
- Heart disease
- Stroke
- Urinary tract infections

Complications of low blood sugar levels:

- Seizures
- Brain damage
- Worsened memory and cognitive health

Sadly, these complications are very real, and many type 1 diabetics will develop at least one of these complications after 25 years of living with type 1 diabetes. This is why careful management is so critical to thriving and living a long life with diabetes.

Prognosis

On average, type 1 diabetic females live 13 years less than females without type 1 diabetes, and males with type 1 diabetes live 11 years less. These numbers are being improved quickly with newer technologies always hitting the market and scientific advancements being made to optimize the function of insulin.

Over the past 30 years, death rates associated with type 1 diabetes have dramatically been reduced as well as the rate of serious complications.

Recently, continuous glucose monitors (CGMs) and flash glucose monitors (FGMs) have become popular and more widely available for type 1 diabetics, this new technology is a game changer for management and is helping this generation of type 1 diabetes avoid complications. We are lucky to be living in a time that has so many amazing diabetes technologies available to make our lives healthier and longer.

Tips for Living With Type 1 Diabetes

Once diagnosed with type 1 diabetes, there isn't any way of getting rid of it. A person living with type 1 diabetes will have to manage the disease for the rest of their life. That means taking insulin every day, calculation dosages, measuring carbohydrates, being mindful of exercise and routine changes in day to day life.

Living healthfully with type 1 diabetes requires a complete lifestyle adjustment and acceptance of the disease, and getting to a place of proper management can take some time. It is important to invest in your health and not let bad blood sugar days affect your mental health too much, they are inevitable, and they will happen.

Looking at a bad blood sugar day as a learning experience and a lesson on how to get better instead of beating yourself up about it will help in the short and long term. Doing your own research and figuring out the best management hacks that work for your body is so key to living life to the fullest as a person with type 1 diabetes.

Is it a good idea to seek psychotherapy when first diagnosed with type 1 diabetes. Half the battles when getting diagnosed with type 1 diabetes is the mental aspect of accepting that your reality is entirely different now. Many clinics offer therapy and resources to those recently diagnosed.

Here are a few ways to improve your overall lifestyle with type 1 diabetes:

Diet

Finding a diet and workout plan that works for you and your diabetes is key. It took me years to find a way of eating that helps my body as a whole.

There are many different ways to eat as a type 1 diabetic that may work for you including low-carb/high-fat, low-carb/high-protein, whole foods plant-based, high-carb/low-fat.

Test Your Blood Sugars Often

At the beginning of a type 1 diabetes diagnosis, test your blood sugar often and look into getting a continuous glucose monitor (CGM) or flash glucose monitor (FGM). Knowing what is going on with your blood sugar is vital for making smart food and activity choices.

A CGM or FMG is a great choice because it allows you to see your blood sugar levels every five minutes without pricking your fingers. It also allows you to see trends and predictions on what direction your blood sugar levels are heading. Having one of these devices is like taking blinders off to your blood sugar levels and allows you to make

more informed decision in your day-to-day life.

Remember that multiple things may affect your blood sugars. Food and exercise are the most obvious, but may not always be the reason you're experiencing unpredictable blood sugar. Some other factors include stress, lack of or excess sleep, dehydration, adrenaline, and hormones.

Find Support and Community

Out of all people diagnosed with diabetes mellitus only about four to five percent have type 1 diabetes. That means that the chances of you randomly having a friend or knowing someone closely with type 1 diabetes are quite slim.

It's so important to seek out your tribe online, and chances are you'll find a community of beautiful humans all living with the same struggles as you who are open and willing to talk about issues relating to type 1 diabetes.

The diabetes community online has brought so much comfort and positivity to my life. There are also ways to find local meetups for people living with type 1 diabetes, usually posted on the websites of larger diabetes organizations. However you go about finding your community, just do it, your mental well-being will be so uplifted.