Life with Diabetes

At the young age of two years old, I was diagnosed with Type One Diabetes. Diabetes is an autoimmune disease which inhibits the ability of the pancreas to make the hormones insulin and glucagon, both of which being important hormones to control the amount of sugar you have in your blood. As a diabetic, numbers, specifically blood sugar levels, have been an important part of my life every single day for eighteen years. Whether it be high blood sugar, low blood sugar, or somewhere in between, the number that comes up on the screen will always dictate what I have to do next. That is why I chose to make this project about diabetes and how numbers aren’t always just used as a quantitative measurement, but in some cases can have a much deeper meaning. For me, that number is a feeling, a decision, an action that needs to be taken, a matter of my own well-being in that moment. However, there is also a stigma connect with diabetes and these numbers. Many people believe that you get diabetes by being obese, or by eating too much sugar. It is also believed by many people that people with diabetes can’t have sugar at all or must closely monitor what they eat. In some cases, this is true, but in the majority of cases, especially for type one diabetics, this is not the case at all. This is why I chose to illustrate what it is really like to have diabetes and give people who may not be familiar with the disease, a firsthand look at what it is like to live with diabetes. Although the illustration itself does not really show the effects of diabetes, it will help give a visual representation of what these numbers mean to me, and how they affect my life.

In this project, I have illustrated the amount of sugar that is in the bloodstream when blood sugar is at different levels: 50 mg/dL, 100 mg/dL, 300 mg/dL, and 600 mg/dL. To do this, I took the average amount of blood in the human body (about 5.5 liter, or 55 deciliters) and multiplied that by each of the numbers above. I multiplied the 55 deciliters by the number above which gave me the amount of sugar that would be in the blood at each of those blood sugar levels. I measured out the total of each of those calculations and put them into clear containers to demonstrate how much sugar would
really be circulating through the bloodstream at each of those levels. The actual amount of sugar in the blood when your blood sugar is at a given level is not something that is commonly thought about. In reality, that’s not something that I think about when I test my blood sugar, nor has the visual of the amount of sugar ever been a concern. However, this visual representation helps to show people who are unaware what it looks like to have that much sugar in your blood. The visual representation is meant to be used as a shock factor to make other aware of just how serious it is when a diabetics blood sugar is not in the range that it is supposed to be in. For example, in the container that has 600 mg/dL, quite a bit of sugar, 33,000 milligrams to be exact. When you see that large amount of sugar altogether, it is quite shocking, even for me as a diabetic, to think that all of that sugar could be circulating through my blood at any given moment. This is why it is so important to me that we use this representation to make others aware of how serious diabetes can be, how it can affect the life of those with the disease, and that diabetes is much more complex than a joke you make with your friends when you eat something that contains a lot sugar.

In the life of a diabetic, the number that comes up on a blood sugar monitor is always going to be important and is always going to dictate the decisions we make in some way. If diabetes is not managed properly, there are potentially serious, even life-threatening side effects that could come later in life. High blood sugar and low blood sugar both carry a meaning and feeling along with them for diabetics and help us determine how to treat our blood sugar. A low blood sugar, or anything below 70 mg/dL, means that the body does not have enough sugar in the blood. A low number for me feels like shakiness, dizziness, fatigue, and sometimes even an irregular heartbeat. I know that if left untreated this could cause me to slip into a diabetic coma, or even lead to death if it goes too far. When I start to have these symptoms, I know that I must check my blood sugar as soon as possible to prevent it from dropping any lower. If the results end up being low when I check my blood sugar, I know that it is important to find a place to sit down, rest and find a food or drink that has plenty of sugar in it. After
consuming the sugary food, I must wait about fifteen minutes until I retest my blood sugar and make sure that it is coming back up. If it back to normal, I can carry on with whatever I was doing, but if it’s not, I must eat or drink more sugar, wait fifteen more minutes and repeat the process until it comes back to normal. High blood sugar on the other, has the adverse effect on the body. High blood sugar is typically considered anything over 250 mg/dL, but technically anything above normal is considered high. High blood sugar feels like increased thirst, increased urination, dry mouth and excessive fatigue. When I think that my blood sugar is high I know that I need to start drinking plenty of water and check my blood sugar. If my blood sugar is high, I have to put that number into my insulin pump and correct my blood sugar with the amount of insulin that it calls for. Drinking water and correcting with insulin makes sure that the blood sugar comes down by flushing sugar with hydration and using the insulin to help the body to absorb the sugar that is running loose in the blood stream. When blood sugar is around 100 mg/dL, that is when it is in the optimal range and typically, there are no abnormal symptoms and nothing that needs to be done to fix it. As I stated earlier, it is very important to make sure that the amount of sugar in the blood stays around 100 mg/dL or is corrected to get back down to that number because there could be serious complications such as kidney problems, loss of eyesight, diabetic neuropathy, or even the loss of a limb is diabetes is not controlled well.

This project is important to me for a lot of reasons. When I saw the options for this project, I knew almost immediately that I wanted to do something related to diabetes for the mere fact that many people are just unaware of what it is and what it really means. There is a common misconception, or a certain stigma that is associated with people with diabetes, or even in the way that a person gets diabetes and I decided that I wanted to share my story and show people just what diabetes is. Diabetes is often thought to be a disease that is only shown in older, overweight people who have spent their lives eating candy, fast food, greasy, unhealthy things. However, I can tell you personally, as a young, somewhat fit person who has eaten fairly healthy most of my life that diabetes can affect anyone, not
just older overweight people. Many people are also unaware that there are two different forms of diabetes that affect different kinds of people. The type of diabetes I have is an autoimmune disease that typically presents itself when the patient is younger, hence type one is also referred to as juvenile diabetes. According to Mayo Clinic, “Type one diabetes, once known as juvenile diabetes or insulin-dependent diabetes, is a chronic condition in which the pancreas produces little or no insulin.” This means that type one diabetes is autoimmune and that it could affect anyone if they are predisposed to it or if it runs in their family. Type two diabetes on the other hand is defined as “a chronic condition that affects the way your body metabolizes sugar. With type two diabetes, your body either resists the effects of insulin...or doesn’t produce enough insulin to maintain normal glucose levels (Mayo Clinic).” This type of diabetes, formerly known as adult-onset diabetes is more typical of people who are overweight. However, it is possible for it to occur in healthy people as well, which commonly believed to false. In this type of diabetes, it is most common for the fat cells to block the receptor sites for loose sugar to bind onto and create insulin to bring the blood sugar down. That is why type two diabetes often is onset slowly as the receptor sites start to lose sensitivity and begin to be insulin resistant. It is an important part of knowing what diabetes is and how it affects to people to know the difference between type one and type two diabetes.

Another reason for doing this project is to get a reaction out of the people viewing it. Showing them a visual such as how much sugar is actually present in the blood when someone has high blood sugar can be a somewhat startling realization. It makes them see just how much sugar there really is and how it surely can’t be good for you to have that much sugar in your body. While type one diabetes is not preventable, type two diabetes can in some cases be presented. I think it is important to stress how important it is to make sure you take care of your body so that one day down the road, you won’t end up a lifetime of dealing with diabetes. Most people wouldn’t be so fond of the idea of a lifetime of finger pricks, insulin shots, and a constant reminder that diabetes is something that you have to deal with and
take care of every single day for the rest of your life. This is why I hope that this project will help people realize that it is important to know the symptoms and to know that it is essential to see a doctor if they think they may have some of the symptoms of type two diabetes later in life.

Finally, this project is important to me because I want to make people aware of the symptoms of type one diabetes and how to catch it early. When I was diagnosed as a toddler, my blood sugar was over 600 mg/dL when I finally went to the emergency room. A blood sugar this high is extremely dangerous and could potentially put someone in a diabetic coma, or even led to death or other serious medical complications if left untreated for too long. When I first started having symptoms of diabetes my parents were worried out of their minds, because they weren’t aware of what those symptoms could mean. My symptoms at the time included loss of appetite, constant thirst and asking for more water, vomiting, and excessive fatigue. Due to the lack of knowledge by the everyday person of type one diabetes, it can be hard to catch the symptoms if you don’t know what you are looking for. I believe that it is important to educate people in case they start to see these symptoms in their children, other family members, or even in themselves. Another thing that people often don’t know about the onset of type one diabetes is that it is very commonly triggered by another autoimmune illness. In my case, it all started with an ear infection. As my ear infection started to go away, I started having the symptoms that were described above. Type one diabetes is a disease that the beholder is born with, but it may not be triggered until later in life and could be triggered by something as simple as an ear infection or a common cold. It is very important to me that we spread awareness of the disease and help others to catch it before it is too late.

Last but not least, I wrapped up my presentation with a short discussion question that helps tie the project back into what we have learned in this class over the course of the semester. Blood sugar levels, just like most other things we discussed in class is something that can be quantified, but it can also be put on a scale and seen as either objective or subjective. This is why I posed my question to the
audience to see what they thought. I gave a brief presentation on the background of diabetes, but also the use of scale in measure and the difference between objectivity and subjectivity. I think that this type of quantification can be viewed in many different ways, but also depends on the way you choose to look at it. The general consensus is that blood sugar levels can be looked at as either a nominal, ordinal, interval, or even a ratio scale. It can be seen as a nominal scale because it can be put into three general categories: low, high, and normal blood sugar. However, we can take it a step further in our scale and say that it is an ordinal scale. We could say that normal blood sugar would be the best, and high or low blood sugar would be considered worse. As for an interval scale, we could apply blood sugar levels because there is a clear different between one number and another. For example, it is clear that a blood sugar of 100 mg/dL and a blood sugar of 110 mg/dL is a difference of 10 mg/dL. Finally, we could even consider blood sugar to be on a ratio scale because all of the things above are true, and because it has a true negative due to the impossibility of a negative blood sugar. The other question that I posed was whether blood sugar would be considered and objective or subjective measurement. This could also be debated depending on how you look at it. As someone without diabetes, most people would say that it an objective measurement because its purpose is to tell you exactly what that number mean, with no debate as to what that number means. However, as someone with diabetes, I personally feel as though it should be considered a subjective measurement. This is due to the fact that for me, it is more than just a number, but it is a feeling. I know how it feels to have high blood sugar, low blood sugar, or anywhere in between. This goes to show that measurement can be seen in many different ways depending on who is looking at it, and the perspective in which they bring when they are considering their measurements.

This project has been important to me because it has given me the opportunity to show what diabetes is through the eyes of someone who has dealt with it for their whole life. I want to educate more people, make them aware of the symptoms of diabetes, and help to alleviate the stigma that is associated with it. I hope that this project will help people to understand the severity and the
symptoms, and maybe even help them recognize the symptoms for someone they love in the future. Just like any other disease, it is important to be educated about the topic so you can take steps to prevent it, or catch it early if it does happen. This project also goes to show that measurement can be viewed in very different ways depending on the person looking at it and the perspective that they bring with it. It is important to view measurements from the perspective of other people to get the most accurate representation and to make sure there are no biases. I hope that I was able to educate the people who saw this project, and to get them to think about measurements and what they mean in the process.


