

# TRANSCRIPT EP1

## Understanding Type 1 Diabetes

[00:00:00] **Dr Darren Green:** Hello, I'm Dr Darren Green, your host for this mini series of The Health Wrap, powered by Mediclinic. Today we're diving into all things diabetes, particularly type 1 diabetes. In the rest of this very important series, we'll be unpacking the other kinds of diabetes, type 2, gestational, and pre-diabetes.

[00:00:24] **Dr Darren Green:** We'll also take a look at diabetes in children. and the specific mental health challenges that people living with diabetes face. This is a series for anyone whose life is impacted by diabetes. A safe space to speak about living with this chronic condition. We know that it can be a tricky one to live with for you and your loved ones and we want to offer you expert opinions that you can trust while recognizing that everyone with diabetes will have their own unique experience.

[00:00:57] **Dr Darren Green:** I also have to remind you that the views shared by any of our guests in the podcast may not necessarily reflect the views of Mediclinic. So please consult a medical professional if you have any concerns and particularly if you want to change your medication in any way. So today we'll be unpacking type 1 diabetes, what it is, and what it is not.

[00:01:21] **Dr Darren Green:** The intricacies of insulin and checking, blood glucose, diabetes burnout, and how you can support a person living with type 1 diabetes. But first, what is type 1 diabetes? The International Diabetes Federation estimates that ten percent of people with diabetes are living with type 1. The remaining ninety percent are living with type 2 diabetes.

[00:01:48] **Dr Darren Green:** They explain that if you have type 1 diabetes, your pancreas does not make insulin or makes very little. It can affect people at any age, but is often diagnosed in children or young adults with usually without any family history. People living with type 1 diabetes need daily insulin injections to control their blood glucose levels.

[00:02:11] **Dr Darren Green:** But what does that mean, really? Well, think about your day-to-day and now add in type 1 diabetes. When you wake up, you check your blood glucose either by pricking your finger or by looking at a reading on your phone. You have to inject before you eat breakfast, before you eat anything, ever, and then continue checking your blood glucose at least five times a day, but probably even more often.

[00:02:40] **Dr Darren Green:** The goal is to keep your blood glucose stable between 4 and 10, but there are more than 42 factors that affect blood glucose. Not only what you eat and how much insulin you inject, but the weather, stress, sleep, hormones, exercise, and much more. If your blood glucose goes too low, you feel spinny and dizzy.

[00:03:07] **Dr Darren Green:** You can't think straight. With rapid breathing, and a heart rate, and sweaty hands. You have to urgently eat some sugar to bring your blood glucose up again, or you could fall into a coma. If your blood glucose goes too high, you feel a bit cloudy and thick-headed, sometimes thirsty, tired and even confused.

[00:03:29] **Dr Darren Green:** You have to inject some more insulin to bring your blood glucose level down. And if it stays very high for too long, you could also fall into a coma. And this is your everyday life. Forever. Never getting a day off. Can you imagine? Let's hear from Siabonga Zuma about what he wishes people knew about type 1 diabetes.

[00:03:57] **Voicenote:** My name is Siabonga Wanile Zuma. I am a poet and a diabetes advocate with a YouTube series called Living With Diabetes. I've been living with type 1 diabetes for fifteen years now. What I wish people knew about type 1 diabetes is that firstly, there is nothing one can do to prevent it. Secondly, people living with it are at a higher risk of developing mental health issues.

[00:04:21] **Voicenote:** Diabetes as a whole is stigmatized, which leads to those living with it not being able to manage it. Because of the diabetes stigma, one ends up not seeking education about it, which may lead to diabetes distress. This is when you're overwhelmed by the demanding nature of diabetes and end up not taking care of yourself as you should.

[00:04:40] **Voicenote:** One last thing, to those who are living with type 1 diabetes but may be in denial, I just want you to know that you are not alone. It's the lack of awareness that makes you feel like you are, but trust me, you are not.

[00:04:54] **Dr Darren Green:** To unpack more about living with type 1 diabetes, We welcome Dr Marius Wasserfall. Dr Marius works from Mediclinic Panorama in Cape Town. Welcome, Dr Marius. How are you doing there?

[00:05:06] **Dr Marius Wasserfall:** Thank you, Dr Green. Doing very well. And it's a privilege to be with you today.

[00:05:10] **Dr Darren Green:** Great. Tell us a little bit about your day-to-day life in terms of your work and the exposure you have in relation to what we're discussing today.

[00:05:19] **Dr Marius Wasserfall:** Well, I'm a specialist physician in private practice at Panorama Mediclinic. I've been here since 2008. My wife and I work together and we've got a very big diabetes practice comprising both type 1 and type 2 diabetes. From my side, I've got a special interest in, let's say, the novel treatments of diabetes.

[00:05:37] **Dr Marius Wasserfall:** And I've been involved with various pharmaceutical companies and involved in educating both doctors, as well as the public across South Africa via academic lectures, as well as television and radio interviews. On the other hand, I'm the Vice President for the Faculty of Consulting Physicians in South Africa.

[00:05:55] **Dr Marius Wasserfall:** And we regularly meet up with medical aides and try to improve our patients access to these novel treatments that have been proven to have better outcomes for patients, if you compare it to the medications that have been used before 2015. So that is, in a nutshell, who we are.

[00:06:12] **Dr Darren Green:** That's reassuring, and thank you so much for being willing to share some of your learnings and expert advice on this topic.

[00:06:19] **Dr Darren Green:** So let's just dive straight in and talk about type 1 diabetes firstly. How's it caused?

[00:06:25] **Dr Marius Wasserfall:** I think it's important for people to realize that there's a big difference between type 1 and type 2.

[00:06:30] **Dr Darren Green:** Okay.

[00:06:30] **Dr Marius Wasserfall:** Now type 1 diabetes has got nothing to do with what the patient did. This is an autoimmune process that happens.

[00:06:39] **Dr Marius Wasserfall:** So it may happen against the background of a genetic predisposition. Then there can be various environmental factors that you do not have control over. But in the end, your body creates an antibody that is directed against the pancreatic B cell, where insulin is produced. So over time you destroy your own pancreas, much like somebody with rheumatoid arthritis can destroy their joints for example.

[00:07:04] **Dr Darren Green:** Makes sense.

[00:07:05] **Dr Marius Wasserfall:** Now this happens over a long period of time and we've noticed that one can pick up antibodies long before but usually the clinical presentation of type 1 diabetes is in a younger adult who have not measured their sugars in the past.

[00:07:20] **Dr Marius Wasserfall:** They present with complications, they are usually not overweight, they are young, and as I said, they've done nothing wrong.

[00:07:28] **Dr Darren Green:** That's very good to know, because a lot of people want to know what could I have done to prevent myself becoming a diabetic in my childhood, you know, as you've described, the young children, young adults with no genetic history. So that's quite important, I think, in the folk that are asking the question.

[00:07:46] **Dr Darren Green:** So if we look at the problem that you've described there, you said the antibodies, they basically attack your own tissue. They attack the specialized cells in the pancreas, as far as I could read between the lines.

[00:07:56] **Dr Marius Wasserfall:** Correct. And it's interesting that if we could pick this up earlier. Now remember, it's children and young adults, so we don't usually test for them, but if you can pick it up earlier, there's ongoing research to show that if you can try and suppress this inflammatory response, this autoimmune process, you may be able to preserve a bit of the pancreatic function for longer.

[00:08:17] **Dr Marius Wasserfall:** But as I said, that's ongoing research. We're not there yet. And usually patients present or with high glucose readings because a big part of the pancreas has already been damaged.

[00:08:29] **Dr Darren Green:** Ah, got you. So in the event then that these beta cells of the pancreas have been wiped out by the antibodies, how do we compensate for the loss of insulin?

[00:08:42] **Dr Marius Wasserfall:** Insulin is a life-sustaining hormone. You need that hormone to move glucose out of your blood into the cells where they can be used to generate energy. If you have high glucose levels in your blood it circulates through your organs causing various complications. Now we want to try and mimic what the pancreas does.

[00:09:03] **Dr Marius Wasserfall:** Now remember the pancreas is destroyed, so the pancreas cannot produce insulin, therefore type 1 diabetics have to be treated with insulin from the get-go. Sure. If you think about the way things have happened over the past century, insulin was initially, let's say, isolated by Banting and Best in 1921, but we don't use that kind of human insulin anymore.

[00:09:25] **Dr Marius Wasserfall:** We have tried to develop insulins that are a bit more physiologic in their profiles that will help the patient have an individualized life insulin fitting in with their lifestyle. So we've got different insulins with different times of onset peak effects and duration of action, but all of these still have to be given by an injection.

[00:09:50] **Dr Marius Wasserfall:** They've tried to administer insulin with nasal sprays and lung pumps and tablets, but up until now, it unfortunately does not work. Insulin has to be injected. But we can't mimic the pancreas with a single injection. Remember your pancreas has got the ability to increase and decrease insulin secretion according to what you are eating, or what you have eaten and what your blood glucose levels are.

[00:10:16] **Dr Marius Wasserfall:** But we can't give you one injection that will increase and decrease by itself during the course of the day. Therefore, we've got short-acting insulins that will cover a mealtime and we've got long-acting insulins to cover the baseline. Now, a short-acting insulin, you have to inject about 15 minutes before a meal because you inject it under your skin.

[00:10:39] **Dr Marius Wasserfall:** It has to be available in the blood circulation by the time the glucose reaches the blood. But then that insulin is gone within 2 to 4 hours. While the long-acting insulins you inject once a day, they can last up to 42 hours. And that gives you the background level. Let's say it's like cruise control on your car, where you will have a background speed that you are always driving at.

[00:11:06] **Dr Darren Green:** Yes.

[00:11:06] **Dr Marius Wasserfall:** The problem with a rapid-acting insulins is that sometimes people inject but then therefore they don't eat immediately or they forget to inject and they want to eat now. So there's been a need for a more ultra rapid-acting insulin. If you look at them at the normal short-acting insulins, the ones we often use would be known as As Yuma Long or Nova Rapid or Edra, those have to be injected before a mealtime.

[00:11:33] **Dr Marius Wasserfall:** Ideally about 15 minutes before the meal. Now you've got an ultra rapid-acting insulin called fisp. This can be injected immediately before your meal. And even after your meal, and you'll still have significant effects controlling your mealtime glucose excursions.

[00:11:53] **Dr Darren Green:** That makes sense.

[00:11:54] **Dr Marius Wasserfall:** The long-acting insulins people may know as Lantus or Levomir or Basaglar.

[00:12:00] **Dr Marius Wasserfall:** Those are the ones that's injected once a day. The problem with those are that they do have a little bit of a peak profile, which means that you inject the insulin. It's got a little bit more action in the first 12 hours and less action in the last 12 hours. If you inject that insulin at night, it can happen that you dip your sugar levels during the early hours of the morning.

[00:12:22] **Dr Marius Wasserfall:** Something that is called nocturnal hypoglycemia. And this can actually be quite dangerous. So the newer insulins have attempted to create a more stable profile over 24 hours so that people do not dip their glucose levels in the early hours of the morning. So where you have got an improvement from short-acting to ultra fast-acting, you also have got an improvement from a long-acting to an ultra long-acting insulin.

[00:12:51] **Dr Marius Wasserfall:** Now, these ones last up to 42 hours, as we said, and is known as Tracebea or Togeo. But watch this space, because science is actually on a roll. And they have now

developed a once-weekly insulin. That is called Insulin Icodec. And this insulin has been shown to be just as effective as a daily basal insulin, but again with much less of the hypoglycemic risk.

[00:13:20] **Dr Marius Wasserfall:** And then lastly, science has now been able to give us insulin pumps. Remember your pancreas is actually a reservoir of insulin that keeps on secreting small amounts of insulin throughout the day, increasing more when you have a meal. Now we can take a rapid-acting insulin, put it in a little vial in an insulin pump that's about, let's say the size of, let's say half the size of a small cell phone.

[00:13:47] **Dr Marius Wasserfall:** You can wear it on your belt and

[00:13:49] **Dr Darren Green:** like a pack of cards.

[00:13:50] **Dr Marius Wasserfall:** Correct. And this insulin pump continuously delivers small amounts of insulin under the skin. So when most diabetic patients would currently be using insulin injections, they would typically be using a basal insulin once a day, the long-acting ones, and then three short-acting insulins during the course of the day to cover their meals. But the insulin pump technology is very exciting and that'll allow people to use continuous insulin deposition to give them better glucose control in the future. The catch, however, is that whether you use injections or whether you use an insulin pump, You need to know your glucose reading.

[00:14:34] **Dr Darren Green:** We need to monitor, don't we?

[00:14:36] **Dr Marius Wasserfall:** Absolutely.

[00:14:37] **Dr Darren Green:** And what are the options for type 1 diabetics that we have available now for monitoring?

[00:14:42] **Dr Marius Wasserfall:** The gold standard at this stage is still blood glucose monitoring. Unfortunately, there are other things we'll chat about the possibilities, but that remains the gold standard.

[00:14:51] **Dr Marius Wasserfall:** The only way to test blood glucose is by pricking your finger. You have to break the skin. You have to get blood onto a little strip. Put it in what we call a glucometer and that will give you your sugar reading. Now these glucometers are widely available at pharmacies, but as we said, they need a blood sample.

[00:15:09] **Dr Marius Wasserfall:** Now we said type one diabetics are often young children and adolescents. Now imagine the complexity. When you've got a young child, you have to prick their fingers, not once or twice, but typically six times, eight times or 10 times per day. I've heard about children that go and hide in the cupboards when their parents come towards them with this little pricker and they have to prick their finger.

[00:15:31] **Dr Marius Wasserfall:** But it's not only children. It's, most adults don't like pricking their fingers either. And people rebel against that. They avoid it. And that then leads to uncontrolled glucose levels. Remember the brain is a hundred percent dependent on glucose. If you don't have enough glucose in the blood, because you've injected too much insulin, your glucose levels drop, your brain functioning drops, and you can actually lose consciousness or have a convulsion.

[00:15:57] **Dr Marius Wasserfall:** On the other hand, if you've got high levels continuously, that circulates through the body and that can lead to all kinds of organ damage in the long run. And even in the short run, it can lead to a diabetic coma. So ignorance really is not bliss, but pricking your finger to test your blood sugar level becomes a massive challenge.

[00:16:19] **Dr Marius Wasserfall:** And this is where technology is coming in again with glucose sensors. Now these little sensors can be implanted by the patient themselves every 10 to 14 days. It's a little device that you inject onto your arm or onto your abdomen. And this little plastic pipe sits right under the skin and it measures the glucose level in the interstitial fluid.

[00:16:45] **Dr Marius Wasserfall:** Now this level can then be transmitted to a cell phone with a Bluetooth device or you can use your cell phone, open an app, bring it close to the sensor and it will display your glucose reading.

[00:16:59] **Dr Darren Green:** Absolutely amazing.

[00:17:00] **Dr Marius Wasserfall:** So you can position these sensors every 10 to 14 days, which means you don't have to prick yourself six times a day.

[00:17:08] **Dr Marius Wasserfall:** These sensors will read your glucose level every one to five minutes. So instead of having six or eight blood glucose readings, you can now have as much as 280 glucose readings every single day displayed on the home screen of your cell phone. Or if you want to open the app and bring it close to the sensor, you immediately know what you're reading is without having to break the skin.

[00:17:35] **Dr Marius Wasserfall:** This is a massive advance in seeing what is going on so that you can actually react to it. Now you can take it one step further and say, well, you can actually combine the insulin pumps that we just spoke about with these glucose sensors and now using artificial intelligence, these pumps are able to not just see your glucose readings throughout the day because of these sensors, it can actually adjust the amount of insulin it is delivering in an attempt to keep the glucose levels well controlled in your type 1 diabetic.

[00:18:13] **Dr Darren Green:** Like simulating the pancreas obviously.

[00:18:16] **Dr Marius Wasserfall:** That is the whole idea is kind of creating an artificial pancreas. Unfortunately, the sensors are still quite expensive not to speak about the cost of the pumps. And you are looking at it for the sensors at between 2000 to four and a half thousand Rand a month.

[00:18:33] **Dr Marius Wasserfall:** And most medical aides will only contribute about 1000 Rand. The rest will have to be funded by the patient, but again, it opens up your eyes to see what's going on. It influences what people eat, because if you can see your glucose reading throughout the day, you will think twice about what you are about to put in your mouth.

[00:18:53] **Dr Darren Green:** Fantastic. The quality of life, obviously, is another big one that's affected by, obviously, the use of these modern devices for continuous glucose monitoring.

[00:19:02] **Dr Marius Wasserfall:** Absolutely. Now the interesting thing here is that all of these still need to break the skin, either getting a blood glucose reading or the reading from the fluid under the skin.

[00:19:14] **Dr Marius Wasserfall:** Now, there's a big race in the smartwatch world without

[00:19:19] **Dr Darren Green:** I've seen a lot of those ads everywhere about infrared and monitoring on your pulse, etc., on your wrist.

[00:19:26] **Dr Marius Wasserfall:** And technology has been amazing where you can read saturation levels. Some watches even claim to be able to read your blood pressure. Now imagine in the world of diabetics,

type ones and type twos, if you can read the glucose reading without having to break the skin through a smartwatch on your wrist, that will be a game changer, but we are not there yet.

[00:19:48] **Dr Marius Wasserfall:** Both Apple and Android engineers are working very hard to create a wrist wearable device that'll test your sugar through the skin. But those devices that are out there currently are very inaccurate and really should not be used, but watch this space. It's going to be a very exciting future.

[00:20:06] **Dr Darren Green:** That's great to know is another aspect that I think a lot of listeners want to know about.

[00:20:11] **Dr Darren Green:** And that is. How important is family support for the person living with type 1 diabetes? I mean, I know from personal experience about the partners that sleep, for example, with someone that has type 1 diabetes that are in total fear of them developing a hypo episode during the night and having a seizure and traumatized, obviously, by not knowing and being able to predict these attacks.

[00:20:36] **Dr Darren Green:** So maybe we can elaborate on the importance of the families.

[00:20:40] **Dr Marius Wasserfall:** Yeah, living with type one diabetes can be overwhelming and stressful, not only for the patient, but for the families, the caregivers and so forth. But we have to remember that the diabetic patient always grieves the life of normality that they will never have.

[00:20:59] **Dr Marius Wasserfall:** And we know the phases of grief that involve denial. You know, why me? Why can't I also eat the candy in the party packs, mommy? Why can I not have a normal life? Why can't I have normal snacks at a cocktail bar?

[00:21:13] **Dr Darren Green:** True that.

[00:21:13] **Dr Marius Wasserfall:** That leads to anger, then you try and bargain either with yourself or with a parent or a spouse, or try and argue and bargain even with God.

[00:21:23] **Dr Marius Wasserfall:** And then you've got these phases of depression where they really try to get to grips with what's going on and then phases of acceptance. But that's often temporary because it's only until the next time you are faced with the same situation. Now remember that only about 1 in 400 people in the world are type 1 diabetics, so they are looking onto the majority of people who have normal lives.

[00:21:47] **Dr Marius Wasserfall:** Imagine the burden that is on them. seeing what they'll never have. They feel isolated. They feel scared. So the emotional support of family really can not be overstated. Family and support structures needs to come alongside the patient and support them and encourage them and do your best not to judge them when they struggle cause you probably do not know what they are feeling in which phase of grief they are at, at that very moment.

[00:22:18] **Dr Marius Wasserfall:** You must try and create an environment where learning supersedes performance or outcome. Don't judge them for the glucose level that they've got at that moment, but rather show them ways to deal with that glucose level and create an environment where they can voice their frustrations and you can learn together.

[00:22:40] **Dr Marius Wasserfall:** If it's possible for family members and caregivers to attend the doctor's appointment once or twice a year.

[00:22:46] **Dr Darren Green:** Yeah.

[00:22:47] **Dr Marius Wasserfall:** So that you can have structured meal planning. Try not to have two meal plans where the type one diabetic has got one meal and the rest of the family are eating chocolates and chips and carbohydrates and everything that looks nice to the type one diabetic.

[00:23:02] **Dr Marius Wasserfall:** Come alongside them. change the eating structure for the whole family and the activity structure for the whole family and try and see type 1 diabetes as a challenge to conquer rather than a curse because it will be with that patient forever.

[00:23:20] **Dr Darren Green:** Hmm.

[00:23:21] **Dr Marius Wasserfall:** It's also important for the caregivers not to try and police or judge the patient when they struggle.

[00:23:28] **Dr Marius Wasserfall:** All diabetics will struggle at times. They need support and empathy and love and not necessarily controlling family members because they will probably just rebel against that.

[00:23:42] **Dr Darren Green:** We'll be back with Dr Marius in just a moment. We wanted to let you know about the Mediclinic 24/7 Helpline. We all know those moments when we have a medical question and need an answer right now.

[00:23:55] **Dr Darren Green:** Particularly when it comes to diabetes. You can save this number and have the Mediclinic on your phone if you need to call it. It's 0860 233 333.

[00:24:11] **Dr Darren Green:** And now, back to Dr Marius to continue our conversation about life with type 1 diabetes. Another term that's doing the rounds, certainly, is diabetes burnout in type 1 diabetics and psychologist Daniel Scherr offered this definition. He said, diabetes burnout's not a mental disorder. It's simply a natural emotional response.

[00:24:34] **Dr Darren Green:** Response to a very difficult situation, and there are just so many different things that people living with type one diabetes need to think about on a day-to-day basis. The level of stress, the preoccupation with sugar control, the planning, problem-solving, and troubleshooting and thinking ahead can really get you down after a while.

[00:24:54] **Dr Darren Green:** But there's also the blood glucose impact on your mental health. Perhaps, doc, you can tell us a little bit more about that.

[00:25:02] **Dr Marius Wasserfall:** Yeah, I think firstly we need to realize that diabetics fear two things. Number one, they fear the public embarrassment of low sugar levels or hypoglycemic attacks that can present as confusion, can even present as convulsions or losing consciousness.

[00:25:19] **Dr Marius Wasserfall:** That, they have to balance against the high readings that can in the short run lead to comas. But more importantly, over the long run, it can lead to various complications. They are always faced with glucose readings that need to be controlled. They are always faced with the stress and the preoccupation of trying to figure out how do I go to school?

[00:25:41] **Dr Marius Wasserfall:** What do I eat in a way that I don't have to pass out or inject myself in front of my friends? Now, people develop a sense of failure if they haven't been consistent with their healthy lifestyle choices and this creates a feeling of guilt and despair, which causes anxiety and depression if that lingers for too long.



[00:26:03] **Dr Marius Wasserfall:** But now, as we said, the brain is dependent on glucose levels. So having fluctuating glucose levels can literally impact not only a person's energy levels, but the functioning of their brain as well. When someone is anxious or depressed or stressed, it becomes really difficult for that person to be able to think clearly and focus on glucose control as well.

[00:26:27] **Dr Marius Wasserfall:** I mean, your brain goes into a fight, flight or freeze mode and, and it's so difficult to try and concentrate on your medical prescription or what you have to do at that moment. So diabetes burnout is very real and people often feel isolated because they feel like they are in this alone and the people around them have got normal lives.

[00:26:51] **Dr Marius Wasserfall:** People are overwhelmed and stressed and they can actually lose interest in their treatment and then they start not testing their sugar or students may not inject their insulin before they go to school, ending up with high readings and then they are judged. They're judged by family members and the rest and this is where we really need to try and create an environment that encourages participation and learning and engagement to help them with this episodes of burnout because it really, really happens a lot and all type 1 diabetics will have an episode where they just feel despondent and they feel in despair and depressed and they need support and encouragement and people to come alongside them and help to carry this burden.

[00:27:38] **Dr Darren Green:** That makes complete sense. You know, the T1 International is an international non-profit specifically focused on type 1 diabetes and we can see in their research that burnout suggests it's far more common than previously anticipated.

[00:27:54] **Dr Darren Green:** People living with type 1 diabetes are experiencing diabetes burnout at least once a year. And ah, as you've described, a lot of that you see in practice. Another example is Lorena Faree, who has been living with type 1 diabetes since she was 16 years old. And she described diabetes burnout as a broken tap that keeps dripping and dripping into a bucket.

[00:28:16] **Dr Darren Green:** If you ignore it, eventually the bucket does run over. So how can doctors and family members support someone who's feeling like Lorena does about their diabetes management?

[00:28:29] **Dr Marius Wasserfall:** I think it's important to realize that burnout is very real and diabetic patients are probably twice as likely to develop depression and have let's say extensive periods where they have these burnout feelings. As doctors and caregivers, it's important to realize that you cannot just treat the patient's glucose levels. You need to create a safe space where they can voice their frustrations and discuss their challenges and try and make it a team effort with the help of family members to address these burnout symptoms.

[00:29:04] **Dr Marius Wasserfall:** But you have to take small steps and celebrate small achievements. A few days of eating a little bit better. One or two parties where you got it right not to go for the candy. You know, a week or two of regular exercise. These small achievements need to be celebrated as much as possible. I mean, if you can get a uncontrolled diabetic to get their sugar levels down from 15 to 10, celebrate those small victories and maybe help them take a break from finger pricking, you know, get them a sensor once a year or twice a year where, you know, for 10 to 14 days, they can just not be faced with these pricklers that have to hurt them multiple times a day.

[00:29:47] **Dr Marius Wasserfall:** You know, change can be as good as holiday, but type 1 diabetics never get a holiday.

[00:29:53] **Dr Darren Green:** Yeah.

[00:29:53] **Dr Marius Wasserfall:** But you can try and change things up a little bit to avoid the dysphoria that's often associated with this stale, boring, inescapable, routine that they have to face and help the patient try and set attainable goals regarding the eating plans and the exercise plans.

[00:30:10] **Dr Marius Wasserfall:** And I think most importantly is see the patient holistically. Don't just see sugar levels, see somebody that is trying and encourage them and help them and don't judge them.

[00:30:23] **Dr Darren Green:** I think that's great advice as a supporter, a family member, but also to all practitioners listening to this podcast right now. Dr Marius, I think that's been an absolutely valuable session.

[00:30:34] **Dr Darren Green:** Before we say goodbye, I'd like to just remind our listeners to check out the show notes because we'll be sharing more information about the topics we've discussed today, as well as links to resources that you might find very useful. Helpful. Dr Marius, thank you so much for sharing your time and expertise with us.

[00:30:54] **Dr Darren Green:** You really helped us get a better understanding of type 1 diabetes. We really appreciate your input. And as we've learned today, type 1 diabetes is a challenging condition, but that doesn't mean it has to hold you back. With the right medication, medical care, support, and awareness of mental health, people living with type 1 diabetes can thrive.

[00:31:17] **Dr Darren Green:** And you can too. can help them on that journey, not by judging, offering space and time to discuss their diabetes if they need to, and recognizing the many daily challenges that they are facing, often invisibly. Thank you again to Dr Marius Wasserfall for joining us today, and thank you for joining me, Dr Darren Green, on this episode of The Health Wrap Podcast. Powered by Mediclinic. Don't forget to subscribe to our podcast channel and sign up for the Mediclinic Prime newsletter, full of helpful health information. You'll find the link in the show notes. We'll see you next time.