



MODULE 1

DECODING DIABETES



BEYOND TYPE 1 | BEYOND DIAGNOSIS

WHAT YOU'LL LEARN HERE

- 💧 Diabetes: Type 1 and Type 2
- 💧 What Are the Symptoms of Diabetes?
- 💧 Treatments & Lifestyle to Help Manage Diabetes
- 💧 Medication Options
- 💧 What Are the Different Types of Insulin? & Injection Know-How
- 💧 What We Really Want You to Know About Diabetes

BEYOND DIAGNOSIS

AMBASSADORS



LIVING WITH
TYPE 1



**ERIKA
SZUMEL**

“Focus on the basics”



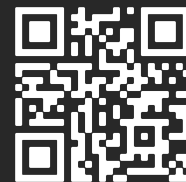
[VIEW ERIKA'S VIDEO](#)

LIVING WITH
TYPE 2



**CARLOS
GONZÁLEZ**

*“Find people who understand
what you are going through”*



[VIEW CARLOS' VIDEO](#)



WHAT IS DIABETES?

TYPE 1 DIABETES (T1D)

- ◆ Symptoms of undiagnosed T1D are often mistaken for the flu, symptoms of overworking or hard athletic training, an eating disorder, the result of purposeful weight loss efforts, a growth spurt, etc.
- ◆ By the time the symptoms show up, the body is already in the last state of autoimmune shutdown. Without diagnosis of type 1 diabetes and treatment with insulin, lives are at stake!
- ◆ **In the United States (U.S.), 1.8 million people live with type 1 diabetes, but tragically not all cases are caught. It is estimated that an additional 340,000 people with type 1 diabetes should still be alive today in the U.S. (T1D Index)**

TYPE 2 DIABETES (T2D)

- ◆ While the symptoms of undiagnosed diabetes are similar between T1D and T2D, they do not get as severe as quickly. The progression of T2D onset is different + the signs often go unnoticed because blood glucose changes are more subtle in T2D.
- ◆ A significant amount of stigma and misinformation about T2D can also impede diagnosis and self-care.
- ◆ Worldwide, about half of those living with T2D are not diagnosed—untreated T2D can lead to health issues.
- ◆ **In the U.S., at least 8.6 million people live with type 2 diabetes but do not know it. (CDC)**

TYPE 1 DIABETES

- ◆ **Type 1 diabetes (T1D)** was once called juvenile diabetes, but half of people are diagnosed as adults, half as children.
- ◆ **T1D is a chronic, autoimmune condition** that makes the body unable to produce insulin, the hormone that regulates blood sugar.
- ◆ **Without insulin, our bodies cannot convert the sugar in our bloodstream into energy**, causing the body to shut down.
- ◆ Without insulin in the body, **a life-threatening condition called diabetic ketoacidosis (DKA)** develops.
- ◆ Those with T1D need to take insulin from the moment they are diagnosed and continue taking insulin for the rest of their life.



STAGES OF T1D

This may be years before a clinical diagnosis

T1D develops in three stages, but most people are not diagnosed until the final stage (Stage 3), which is characterized by dangerously high blood sugar, insulin dependency, and an increased risk of complications.

A T1D DIAGNOSIS DOESN'T HAVE TO BE A CRISIS

Autoantibody screening can identify T1D risk during Stages 1 and 2 before:

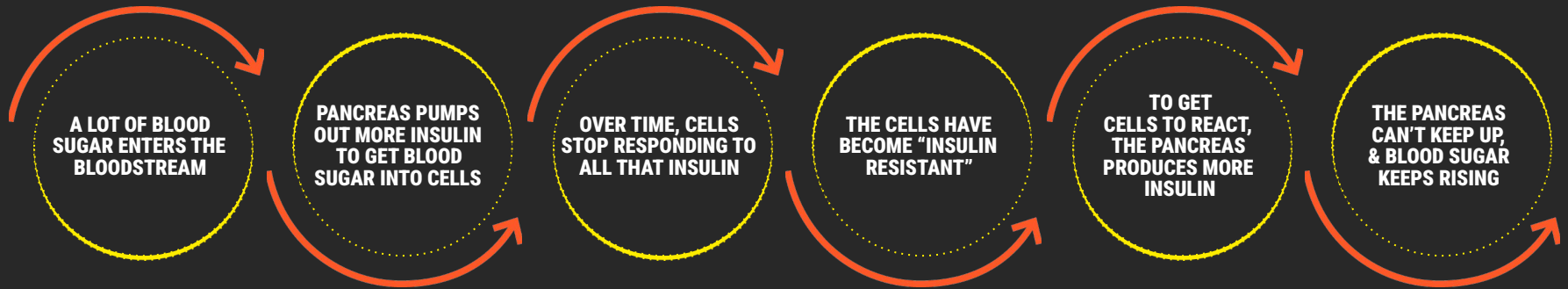
- ◆ Symptoms occur
- ◆ Insulin is needed
- ◆ Complications possibly arise

TYPE 2 DIABETES

- ◆ **90%+** of all diabetes cases, type 2 diabetes is a metabolic disease (remember: type 1 diabetes is autoimmune).
- ◆ **Builds over time due to insulin resistance.** Even though the body is able to produce insulin, it can't use it properly.
 - ◇ Multiple factors that contribute to a diagnosis: Genetics, age, history of prediabetes or gestational diabetes, living with body weight above the healthy range.
 - ◇ Socio-economic issues like not having access to safe places to exercise or fresh and nutritious food can make someone more likely to develop diabetes than others.
- ◆ **There are more options than ever to safely treat type 2 diabetes.** Insulin may be ideal, but there are 12 classes of medications like GLP-1s, Metformin, SGLT2s, etc. that can help people with T2D stay healthy and feeling good.



WHAT HAPPENS WHEN YOU HAVE INSULIN RESISTANCE?



This is why people with type 2 diabetes often have higher insulin levels.

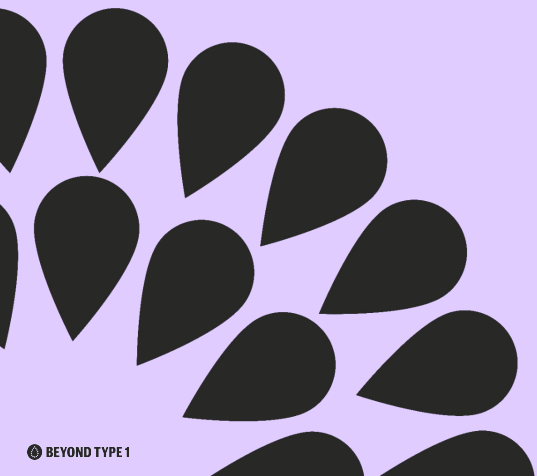
At first, there might be no symptoms because the pancreas can make enough insulin.

However, over time, insulin resistance gets worse and the pancreas can't keep up.

DIABETES TRIVIA

1. T1D is more common than T2D.
2. T2D can be prevented or put into remission with lifestyle changes.
3. T1D and T2D can impact people of all ages.
4. T1D requires insulin therapy but T2D may take other medications that aren't insulin to manage their blood glucose
5. Risk factors that increase your chances of T2D are lifestyle, race, and genetics
6. It is still possible to live a long and healthy life with diabetes.

DIABETES TRIVIA



1. T1D is more common than T2D.

FALSE: T2D represents 90-95% of cases in USA. T1D is less common (5-10% of diabetes cases in USA).

2. T2D can be prevented or put into remission with lifestyle changes.

TRUE: Lifestyle approaches are effective at managing T2D. T1D can primarily only be treated by lifelong insulin therapy at this time.

3. T1D and T2D can impact people of all ages.

TRUE: Previously, it was thought that T1D could only be diagnosed in children, but we know this is no longer true. T2D was thought to only impact adults, but it is now being diagnosed in children and adolescence, too.

4. T1D requires insulin therapy but T2D may take other medications that aren't insulin to manage their blood glucose

TRUE: The best treatment for T1D is insulin. There are different medication options for managing T2D which can include insulin at some point.

5. Risk factors that increase your chances of T2D are lifestyle, race, and genetics

TRUE: Most risk factors for T2D are genetic (race, sex, family medical history of T2D) but can also include lifestyle behaviors like inactivity or poor diet.

6. It is still possible to live a long and healthy life with diabetes.

TRUE: Many treatments are available for diabetes. Living a healthy lifestyle and managing your glucose is possible!


TREATMENTS & LIFESTYLE APPROACHES



Developing a *balanced food plan* in collaboration with a healthcare team



Routinely monitoring *blood sugar levels*



Taking *prescribed drugs* as directed



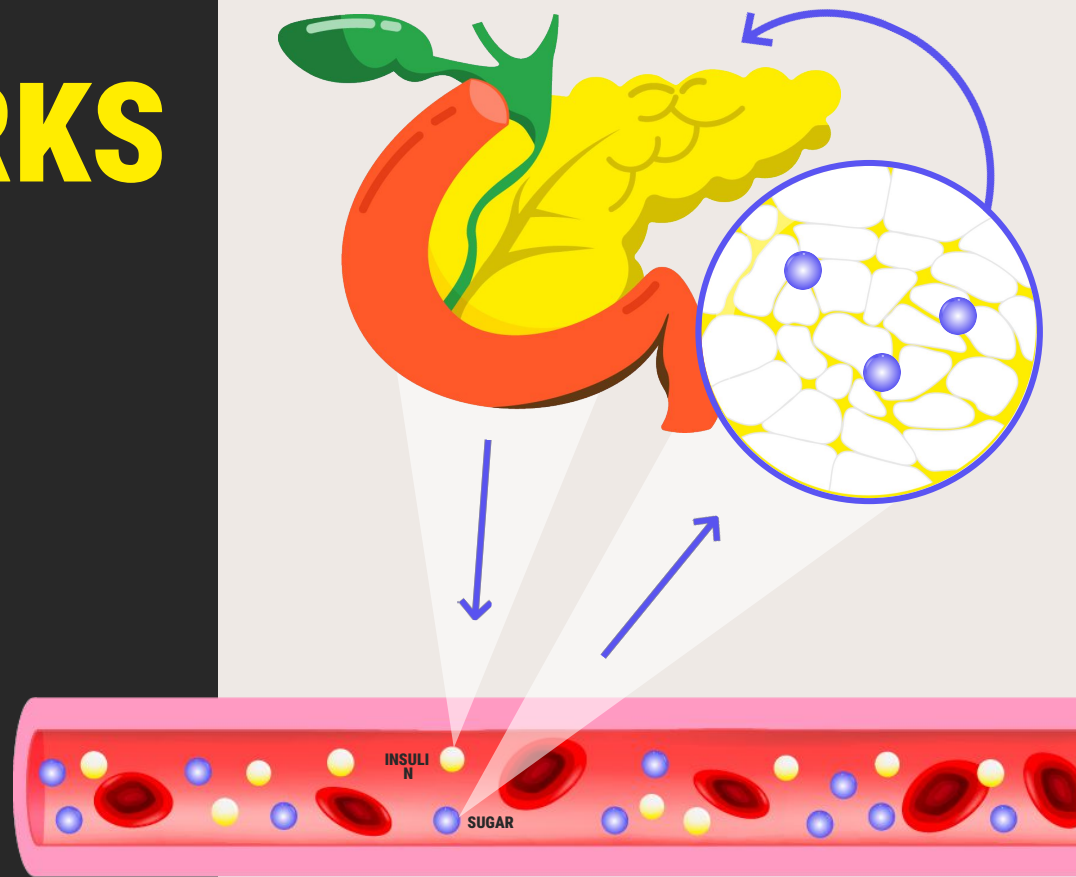
Maintaining an *active lifestyle*

NON INSULIN MEDICATIONS

CATEGORY	NAMES	ACTION	DELIVERY METHOD
Biguanide	Metformin	Limit glucose produced by liver	Pill
Sulfonylureas	Glipizide Glimepiride Glyburide	Encourage pancreas to produce more insulin	Pill
Dipeptidyl Peptidase-4 (DPP-4) Inhibitors	Sitagliptin Saxagliptin	Increase insulin production when glucose is elevated, reduce glucagon production when glucose is stable, and slows digestion	Pill
Glucagon-like peptide-1 (GLP-1) Receptor Agonists AND Dual Action Gastric Inhibitory Polypeptide (GIP) and GLP-1 Receptor Co-Agonists	Liraglutide Semaglutide	Stimulate intestinal hormones that increase insulin production	Pill Non-insulin injection
Sodium-Glucose Cotransporter-2 (SGLT2) Inhibitors	Canagliflozin Dapagliflozin Empagliflozin	Help kidneys excrete more urine to reduce blood glucose	Pill
Thiazolidinediones (TZDs)	Pioglitazone Rosiglitazone	Improve insulin sensitivity in the muscle and fat tissue	Pill
Meglitinides	Repaglinide Nateglinide	Increase insulin production	Pill

THIS IS HOW INSULIN WORKS IN THE BODY

- ◆ The food you eat is broken down into sugar.
- ◆ Sugar enters your bloodstream, which signals the pancreas to release insulin.
- ◆ Insulin helps sugar enter the body's cells so it can be used for energy.
- ◆ Insulin also signals the liver to store sugar for later use.
- ◆ Sugar enters cells, and levels in the bloodstream decrease, signaling insulin to decrease too.
- ◆ Lower insulin levels alert the liver to release stored sugar so energy is always available, even if you haven't eaten for a while.



INSULINS

NEED HELP LOWERING YOUR INSULIN COSTS? Visit [GetInsulin.org](https://www.getinsulin.org)

CATEGORY	NAMES	ACTION	DELIVERY METHOD
Ultra-rapid acting	Fiasp, Apidra	Designed to be taken shortly before meals to help manage blood sugar spikes that occur after eating	Syringe, Insulin pen, Disposable insulin pen cartridge, Insulin pump
Inhaled	Afrezza	Designed to be taken shortly before meals to help manage blood sugar spikes that occur after eating	Disposable inhaled insulin cartridges
Rapid-acting	Novolog, Humalog, Apidra, Aspart (generic), Lispro (generic)	Designed to be taken shortly before meals to help manage blood sugar spikes that occur after eating	Syringe, Insulin pen, Disposable insulin pen cartridge, Insulin pump
Short-acting	Humulin R, Novolin R	Designed to be taken 30-60 minutes before meals to help manage blood sugar spikes that occur after eating	Syringe, Insulin pen
Intermediate-acting	NPH, Humulin N, Novolin N	They are often used in combination with rapid- or short-acting insulins to manage blood glucose levels throughout the day and night. Has an onset of 1-2 hours, a peak effect at 4-12 hours, and a duration of 12-18 hours	Syringe, Insulin pen
Long-acting	Lantus, Basalgar, Semglee, Levemir, Glargine (generic), Detemir (generic)	They are designed to provide a steady level of insulin throughout the day and night. Long-acting insulins typically have an onset of 1-2 hours, no distinct peak, and a duration of up to 24 hours	Syringe, Insulin pen
Ultra-long acting	Tresiba, Toujeo	They are designed to provide a steady level of insulin throughout the day and night. They have the longest duration lasting more than 24 and up to 42 hours.	Syringe, Insulin pen
Premixed	Humulin 70/30, Novolin 70/30, Humalog Mix 50/50, Humalog Mix 75/25, Novolog Mix 70/30	Premixed insulins combine rapid-acting or short-acting insulin with intermediate-acting insulins reducing the number of injections needed per day. These formulations contain meal time and long-acting insulin within one injection.	Syringe, Insulin pen

METHODS TO DELIVER INSULIN

VIAL AND SYRINGE



INSULIN PEN *Disposable*



INSULIN PEN *Replaceable insulin cartridge*



INHALER



JET INJECTOR



TUBED PUMPS

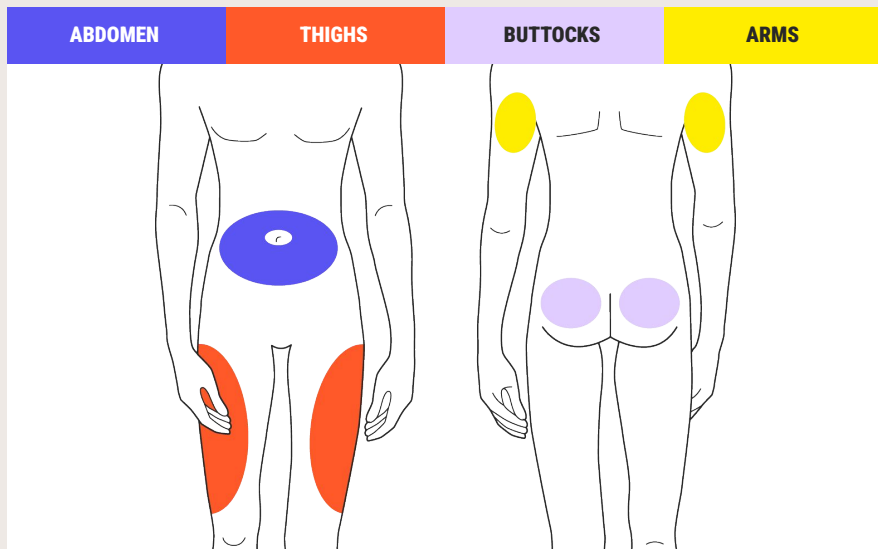


TUBELESS PUMPS

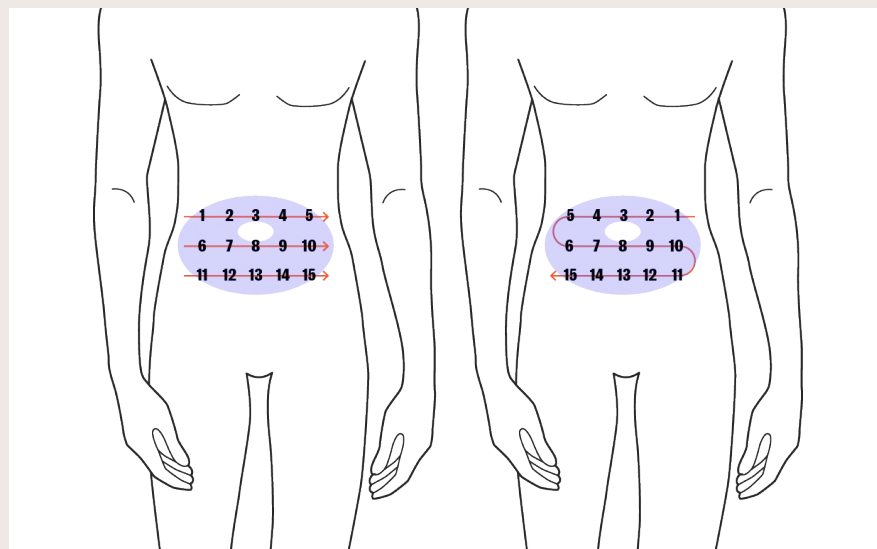


INJECTION KNOW HOW

Recommended injection sites



Recommended way to rotate injection sites

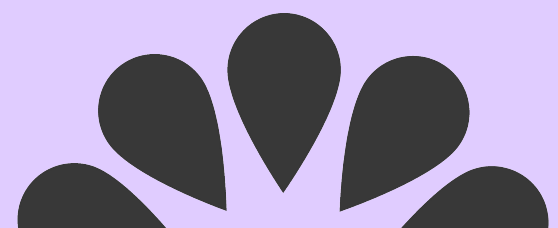




GROUP DISCUSSION

*What are some things you have tried that make it
EASIER to take your diabetes medication?*

*What is something you wish you would have known when
you first started taking medication for your diabetes?*



ADVICE FROM PEERS



No matter what kind of diabetes you have, insulin is just a tool. Having to use—or not use—insulin is not a reflection of your morality. It doesn't make you a good or bad person...Insulin is just another tool available to us, and thank God because it's amazing!”

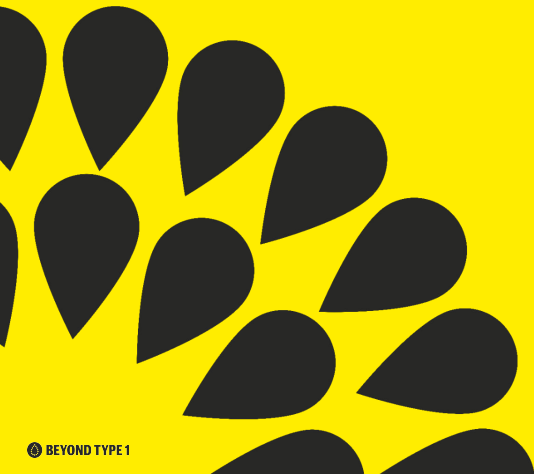
RACHEL LALONDE



If you're newly diagnosed, I would say maybe try injections. I remember there were a few friends that told me that whenever they were first meeting their diabetes educator, they would practice on fruit and things like that. It's like your skin, so you can get a feel for how much to push down or how it feels physically in your hand. And if you absolutely can't do injections, try a pump. Obviously, it's not always the easiest thing with accessibility and affordability, but as long as you're getting your insulin and what you need for your management in some way or another, that's what matters.”

DAMARIUS PALACIOS

4 KEY THINGS TO KNOW



Find your support community

T1D and T2D are different conditions with different treatments

Take your diabetes medication, no matter which kind of diabetes you have

*Managing diabetes takes a lot **AND** you can do it!*



TIME TO REFLECT



[DOWNLOAD & VIEW](#)





TAKE ACTION

- ◆ Confirm your diagnosis with your doctor, and discuss the basics of diabetes care and confirm your diagnosis is accurate.
- ◆ Discuss with your doctor which type of diabetes medication best suits you and your lifestyle.
- ◆ Begin to overcome your fear of taking your diabetes medication(s).
- ◆ Start creating your diabetes support network.
- ◆ Journal and reflect on your feelings about your diagnosis and your outlook on your future with diabetes.



THANK YOU