



Diabetic Kidney Disease

Keeping Kidneys Healthy, Longer

Type 1 diabetes (T1D) has wide-reaching effects on the body, impacting various organs and systems—including your kidneys. In fact, almost half of kidney failure cases are caused by diabetes. At JDRF, we are working toward developing treatments that can delay, prevent, or reverse diabetic kidney disease. Currently, there is no therapy approved for people with T1D who also have kidney disease.

How it Works

The kidneys filter waste and extra water out of your blood to make urine. Your kidneys also help control blood pressure and make hormones that your body needs to stay healthy. When your kidneys are damaged, they can't filter blood like they should, which can cause wastes to build up in your body. Kidney damage caused by diabetes usually occurs slowly, over many years.

“As I get older, I think about kidney loss as much as I think about diabetes, which is all the time. To find a cure for this complication would make living with diabetes a little less challenging.”

— Ayana M., 42 years old, diagnosed at age 12

Preventing Kidney Disease



Get your kidneys checked by a health care professional, who uses blood and urine tests to check for diabetic kidney disease, once a year



Protect your kidneys by keeping your blood sugar and blood pressure under control



Medicines that lower the blood pressure—typically ending in -pril or -sartan, for example, lisinopril or losartan—have been shown to slow kidney damage in people with T1D who have high blood pressure and diabetic kidney disease



Interested in taking part in a clinical trial? After answering a few questions, you'll be matched with clinical trials that may be right for you at jdrf.org/clinical-trials.

Diabetic Kidney Disease by the Numbers

1 out of 3
people with T1D develop
kidney disease

In advanced kidney disease,
your kidneys are operating at
less than 15% capacity

Almost half of kidney
failure cases are caused
by diabetes

Our Latest Advances

JDRF has funded kidney disease research since we were established 50 years ago. Here are some of our recent advances:



- 2017** ● A JDRF trial showed that metformin—the most widely used oral medication for type 2 diabetes, on the U.S. market for more than 30 years—improved markers of kidney function in adults with long-standing T1D. The trial is the largest clinical trial of metformin therapy in T1D to date.
- 2018** ● The gene PKM2 protects from diabetic kidney disease in a JDRF-funded study, potentially being a potent therapeutic target to prevent the progression of kidney disease in people with T1D.
- 2019** ● A JDRF-funded team found 17 biomarkers that were robustly associated with progression to end-stage kidney disease, and further testing may offer hope that people living with T1D may thwart the potentially life-threatening complication altogether.
- 2022** ● There are several JDRF-funded clinical trials of repurposed, generic drugs—approved for the treatment of asthma, glaucoma, and gout—to test if they work in treating kidney and cardiovascular complications in T1D. A great advantage to repurposed drugs, which have already been used for other indications, is that there is a large body of information about their effectiveness and safety. Because of this, they could fulfill an unmet clinical need for low-cost T1D treatments that can rapidly be translated to the clinic worldwide, accelerating the path forward for the T1D community.

2023

Every gift takes us one step closer to curing T1D. Find out how you can support JDRF and make a difference in the lives of people with T1D by visiting jdrf.org/donate.

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