[6 Frequently Asked Questions When Researching Diabetes](http://www.conversantbio.com/blog/6-frequently-asked-questions-when-researching-diabetes)

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Diabetes is a group of diseases marked by high levels of blood glucose resulting from defects in insulin production, insulin action, or both. Diabetes can lead to serious complications and premature death, but people with diabetes can take steps to control the disease and lower the risk of complications. Below are the most frequently asked questions about the disease:

## Question 1.What treatments/lines of treatments are standard for diabetes?

Type I diabetes patients will receive insulin injections from a pump or needle throughout the day. Many Type II patients will receive insulin in this manner as well. All type II diabetes patients will be on some form of oral anti-diabetic medication throughout their lives. The most common are: biguanides (Metformin), sulfonylureas (Glucotrol, Amaryl, Diamicron). Metformin is the first line medication given for Type II diabetes in America.

## Question 2: What is the difference between type I and type II diabetes?

Type I diabetes, also known as juvenile diabetes, is an autoimmune disorder in which the bodies own immune system attacks the insulin-producing cells of the pancreas. As insulin is the key player in reducing blood glucose levels, these patients are guaranteed high blood glucose for life. They will take synthetic insulin and other drugs (often aspirin) daily for their lives and carefully watch their diet and exercise regimens. Outcomes for Type I diabetes are often better as it is typically diagnosed before adulthood when sedentary lifestyle and unhealthy diet have not set in.

Type II diabetes, also known as adult-onset diabetes and noninsulin-dependent diabetes, can develop at any age (even in childhood) and is due to a combination of genetics and environmental factors (diet and exercise). Type II diabetes patients will take oral medications, sometimes insulin injections and make lifestyle changes. However, most patients will reach an end stage of the disease in which they have one or more of the typical diabetic complications: heart attack, stroke, kidney disease, blindness, limb loss, nerve pain.

## Question 3: What is the normal blood glucose level? What is it for a diabetic patient?

Individuals without diabetes have a normalized blood glucose level between 70 and 120 (mmol/liter). Diabetic patients can have blood glucose levels that consistently stay above 180. 6

## Question 4: What is prediabetes?

Prediabetes is characterized by high blood glucose levels that are not yet high enough to validate a diagnosis of diabetes. Some patients will alter their diet and exercise for the rest of their lives and achieve a “remission” of their prediabetes; they will never develop Type II diabetes. However, the majority of individuals with prediabetes will eventually develop full-blown Type II diabetes.

## Question 5: What about diabetic kidney disease (DKD)?

Current estimates state that there are 180,000 Americans living with diabetic kidney disease. Most DKD patients will not progress to kidney failure, but the ones who do require dialysis and/or kidney transplant to survive. DKD takes many years to develop, it rarely develops within the first 10 years of diabetes. It usually takes 15 to 25 years for patients with DKD to develop kidney failure.

DKD is diagnosed by presence of the blood protein albumin in the urine combined with the amount of creatinine in the blood (which gives you the kidney filtration rate or “eGFR”). Kidney disease = eGFR < 60mL per minute; kidney disease = urine albumin level > 30mg per g creatinine.

Patients with DKD will take oral medications that lower blood pressure: ACE inhibitors (Prenivil, Zestril) and ARBs (Cozaar). Intensive blood glucose management (frequent checking, insulin-controlling drugs, injected insulin, constant contact with a diabetes care team) is also a way to improve outcomes in early stage DKD. End stage renal failure patients will receive dialysis and/or kidney transplant.

## Question 6: What about Gestational Diabetes?

Gestational Diabetes generally occurs in the late stages of a pregnancy. Treatment for gestational diabetes is generally performed through diet and exercise. A patient would work with their doctor, monitor their blood sugar, and follow a special diet throughout the pregnancy. This form of diabetes usually goes away after pregnancy, but the likelihood that it will reoccur during future pregnancies is much greater. In a few cases, this form of diabetes may require the mother to take insulin and indicate that the mother has Type I or II diabetes.