



## The Surprising Link Between Chronic Kidney Disease, Diabetes, and Heart Disease

Getting active is one of the best ways to help you prevent or manage chronic kidney disease (CKD), diabetes, and heart disease. Find out how these chronic conditions are connected and how to prevent or manage all three.

The body is complicated! While organs in your body each have a specific job to do to keep you healthy, they still rely on each other to function well. When one organ isn't working the way it should, it can put stress on other organs, causing them to stop working properly as well.

The relationship between chronic kidney disease (CKD), diabetes, and heart disease is one example of the ways our organs are connected.

- The body uses a hormone called insulin to get blood sugar into the body's cells to be used as energy. If someone has diabetes, their pancreas either doesn't make enough insulin or can't use the insulin it makes as well as it should.
- If someone has CKD, their kidneys are not able to filter out toxins and waste from their blood as well as they should.
- Heart disease refers to several types of heart conditions. The most common condition, coronary artery disease, leads to changes in blood flow to the heart, which can cause a heart attack.

### Make the Connection

So how are these three conditions connected? Risk factors for each condition are similar and include high blood sugar, high blood pressure, family history, obesity, unhealthy diet, and physical inactivity.

High blood sugar can slowly damage the kidneys, and, over time, they can stop filtering blood as well as they should, leading to CKD. Approximately 1 in 3 adults with diabetes has CKD.

When the kidneys don't work well, more stress is put on the heart. When someone has CKD, their heart needs to pump harder to get blood to the kidneys. This can lead to heart disease, the leading cause of death in the United States. Change in blood pressure is also a CKD complication that can lead to heart disease.

Luckily, preventing or managing one condition can help you prevent and manage the others and lower the risk for more complications.

### Show Your Body Some Love

What's the good news in all of this? You can manage or prevent CKD, diabetes, and heart disease all at once!

Look at these five tips to get started:

1. Getting active is one of the best ways to help you prevent or manage CKD, diabetes, and heart disease. Find an activity you like, start small, and get moving!

2. Choosing healthy foods and drinks is an important way to give your body the fuel it needs to function properly. Adding more fruits and veggies to your plate can also help you keep a healthy weight, another great way to prevent or manage these conditions.

3. Quitting smoking is one of the best things you can do for your health. Quitting will help you prevent CKD, type 2 diabetes, and heart disease and improve these conditions if you have them. You don't have to do it alone! For support, visit [I'm Ready To Quit](#).

4. Find out where you stand by taking a one-minute prediabetes risk test. If your risk score is high, talk to your doctor about taking action to prevent or delay type 2 diabetes. Participating in the lifestyle change program through CDC's National Diabetes Prevention Program can help you build the healthy habits you need to succeed.

5. Get your annual flu shot. People with chronic diseases are more likely to have health complications if they catch the flu. These complications can worsen an existing condition and can even be fatal. Learn more about the benefits of flu vaccination.

### CKD: Protect Your Heart

Over time, CKD often gets worse and can lead to kidney failure. A person with kidney failure will need regular dialysis (a treatment that filters the blood) or a kidney transplant to survive.

Although dialysis is needed because of CKD, heart disease is the most common cause of death for someone on dialysis. This is because when kidneys don't function properly, the heart has to work harder to circulate blood, leading to high blood pressure and possibly heart disease.

If you or a loved one needs dialysis, look at these tips to help protect your heart:

- Choose foods that are healthiest for your heart and your kidneys. Ask your doctor for a referral to a dietitian who's trained in CKD nutrition to understand which foods and beverages are best for you.
- Regular physical activity helps to lower your blood pressure and improve your heart health. Moving more doesn't have to be strenuous! Some great ways to get active are gardening, yoga, or a brisk walk around the block. Ask your doctor about which activities are best for you and if there are any you should avoid.
- Manage your weight and blood sugar—this can be done with diet and exercise! Meet with a dietitian to create an eating plan that works for you and your kidneys or check out these resources to help you manage your blood sugar.

### Get Support

Living with a chronic condition can be stressful. Remember to call on your healthcare team for help and guidance in taking care of your health. Joining a support group is also a great way to connect with others who share your experience.

Content Source: <https://www.cdc.gov/> | Short Link: <https://bit.ly/3OfYxSQ>

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