

Learning About **HEPATITIS C AND CHRONIC KIDNEY DISEASE**



National
Kidney
Foundation®

[kidney.org](https://www.kidney.org)

National Kidney Foundation's Kidney Disease Outcomes Quality Initiative

Did you know that the National Kidney Foundation's Kidney Disease Outcomes Quality Initiative (KDOQI®) offers guidelines and commentaries that help your healthcare team make important decisions about your medical treatment? The information in this booklet is based on those recommended guidelines.

Stages of kidney disease

There are 5 stages of kidney disease. They are shown in the table below. Your healthcare professional determines your stage of kidney disease, based on the presence of kidney damage and your glomerular filtration rate (GFR), which is a measure of your level of kidney function. Your treatment is based on your stage of kidney disease. Speak to your healthcare professional if you have any questions about your stage of kidney disease or your treatment.

| STAGES OF KIDNEY DISEASE | | |
|--------------------------|--|-----------------------------------|
| Stage | Description | Glomerular Filtration Rate (GFR)* |
| 1 | Kidney damage (e.g., protein in the urine) with normal GFR | 90 or above |
| 2 | Kidney damage with mild decrease in GFR | 60 to 89 |
| 3a | Moderate decrease in GFR | 45 to 59 |
| 3b | Moderate decrease in GFR | 30 to 44 |
| 4 | Severe reduction in GFR | 15 to 29 |
| 5 | Kidney failure | Less than 15 |

*Your GFR number tells your healthcare professional how much kidney function you have. As chronic kidney disease progresses, your GFR number decreases.

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Hepatitis C and chronic kidney disease

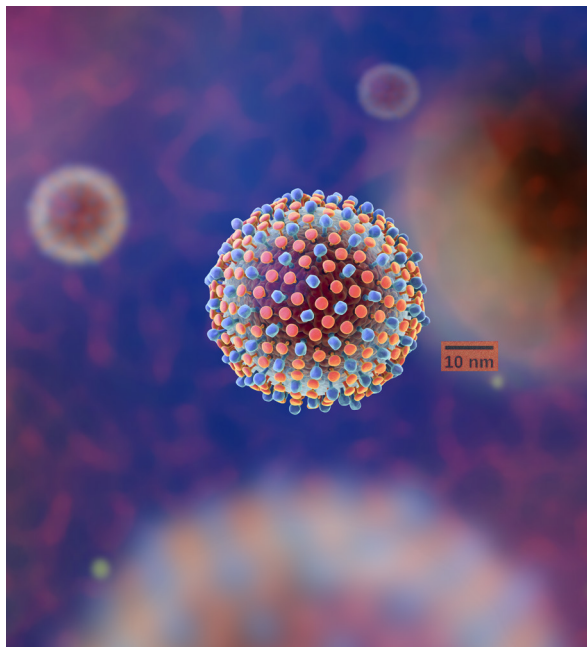
If you have chronic kidney disease (CKD), you want to learn all you can about your disease and what you can do to stay healthy. Having CKD puts you at a higher risk for high blood pressure, heart disease and anemia. CKD may also raise your risk of getting hepatitis C, a liver disease caused by the hepatitis C virus. If your CKD is getting worse and you are going on dialysis or plan to have a kidney transplant, having a test for hepatitis C virus is strongly advised.

This brochure explains important information about hepatitis C for people with chronic kidney disease.

What is hepatitis C?

Hepatitis C is a viral (caused by a virus) infection that affects your liver. The virus is called hepatitis C virus, or HCV. Hepatitis C is spread by contact with the blood of an infected person.

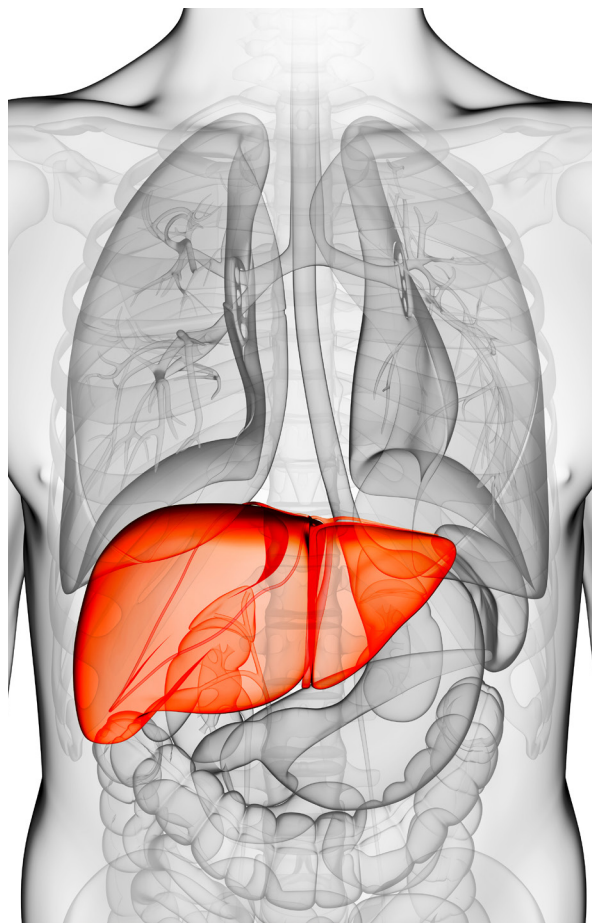
People with CKD may get hepatitis C infection more often than those who do not have CKD. This is mainly because people with CKD have a high rate of exposure to blood products and dialysis procedures. In a small number of people with CKD, hepatitis C is the cause of kidney disease, and it may make CKD worse. Talk to your healthcare professional about your risk.



The Hepatitis C Virus.

About your liver

Your liver does many things to keep you healthy. It removes drugs and poisons from your blood and changes the food you eat into important nutrients to keep your body strong. The liver also stores energy for your body to use. However, like other organs in the human body, the liver can be damaged by infection, disease and long-term use of alcohol or other substances.



About your kidneys

Your kidneys keep you healthy by removing wastes and fluids from your body through the urine. They also do other important jobs:

- Control substances in your blood, such as sodium, potassium, phosphorus and calcium.
- Release hormones into your blood, which help control blood pressure, make red blood cells and build strong bones.

CKD damages your kidneys and lowers their ability to do their job and keep you healthy. CKD may be caused by diabetes, high blood pressure and other disorders. In some people, it may be caused by HCV.

Finding and treating CKD early can often keep it from getting worse. When kidney disease worsens, it may lead to kidney failure, and you will need dialysis or a kidney transplant to keep you alive. Early treatment can slow progression of CKD complications.

What are the symptoms of hepatitis C?

Many people who have hepatitis C have no symptoms. Others may feel like they have the flu. You might:

- Feel tired
- Have an upset stomach or stomach pain
- Have a fever
- Not feel hungry
- Have diarrhea.

Other possible symptoms include itchy skin, yellowish eyes and skin, and dark yellow color of your urine.

Who is at increased risk for getting hepatitis C?

You may have an increased risk of getting hepatitis C if you:

- Were born between 1945–1965, given the higher rates of hepatitis C in this age group.
- Use intravenous (IV) drugs.
- Received blood transfusions or a solid organ transplant earlier than 1992, before improved testing of blood donors became available. Solid organs include the heart, lungs, kidneys, pancreas, intestines and liver.
- Have been on hemodialysis

- Work in the fields of healthcare, emergency services and public safety and are exposed to needles and other sources of possible HCV-positive blood.

Less commonly, hepatitis C may be spread by:

- An infected mother passing the virus to her baby during childbirth.
- Having unprotected sex with an infected person.
- Living with an infected person and sharing items such as razors, toothbrushes or other items that may contain infected blood.
- Having contact with sharp instruments contaminated with infected blood, such as needles used for tattooing, body piercing and acupuncture. (These needles should be carefully cleaned and disinfected before use, or disposable needles should be used.)

Is hepatitis C a serious illness?

Hepatitis C may cause serious complications for some people, but not for others. Most people infected with HCV who are not treated carry the virus in their blood for the rest of their lives. They have some liver damage, but many do not feel sick. Others with liver damage due to HCV may, over the course of many years, develop scarring of the liver and liver failure. Some may develop liver cancer.

How do you know if you have hepatitis C?

Testing is needed to tell if you have the virus. Blood tests will show if you have the infection and how serious it is. A group of tests may be done to make the diagnosis.

A liver biopsy might be performed to check for hepatitis C. A liver biopsy involves removing one or more tiny pieces of your liver through a needle. The liver tissue is examined under a microscope for any unusual cells or signs of the disease.

Transient elastography is a type of ultrasound test that is noninvasive. It can also be used to check for signs of liver disease.

Who should be tested?

People who are about to start dialysis and those who are scheduled for a kidney transplant should be tested for HCV. Others at increased risk of getting HCV should be tested or retested if necessary. These include hemodialysis patients who transfer to another dialysis facility and those who have already had a kidney transplant. Be sure to speak with your healthcare professional about if and when you should be tested for HCV.

What about hepatitis C and dialysis treatments?

Before you start dialysis treatments, it is strongly advised that you be tested for HCV. If you are infected with HCV, your healthcare professional will watch for signs or symptoms of HCV infection so it can be treated early.

Care is also taken to prevent spreading the virus to other dialysis patients. All dialysis units in the U.S. are required by law to follow strict infection control practices. These practices help prevent the spread of viruses through contact with blood. By following strict infection control, the chance of getting or spreading HCV through your dialysis treatment is very small. However, there have been some reports that hepatitis C has been spread between patients in hemodialysis units

where supplies or equipment may have been reused or shared between patients without being sterilized.

When dialyzers are reused, they are cleaned and disinfected after each treatment. There is almost no risk of spreading HCV through dialyzer reuse. The practice of reuse has been done safely in the U.S. for decades.

The Centers for Disease Control and Prevention (CDC) has developed infection control guidelines (www.cdc.gov), which should be followed by the dialysis care team in all units. You should be aware of these safety measures and speak to the members of your care team if you have any questions.

What about hepatitis C and kidney transplantation?

Having hepatitis C does not prevent you from having a kidney transplant, but you should be tested for HCV before undergoing the transplant. You should be tested again after the transplant. It is important to know if you develop HCV so that you can receive treatment for it. Talk to your healthcare professional about testing for HCV if you are scheduled to have a kidney transplant.

Are treatments available for hepatitis C?

Drugs are available to treat hepatitis C. The medicines used to help treat a hepatitis C infection are called antiviral drugs. Your healthcare professional will look at your symptoms and find the best treatment plan for you. Your healthcare professional may give you a combination of drugs to help treat your hepatitis C infection. The goal of your treatment is to rid your body of the hepatitis C virus and slow damage to your liver. Newer antivirals appear to be more effective and have fewer side effects than previous treatments. If damage has been done to your liver from the hepatitis C virus or liver cancer has developed, your healthcare professional may recommend a liver transplant.

How can you keep from spreading or getting hepatitis C?

Right now there is no vaccine available for hepatitis C. The only way to keep from spreading or getting the disease is to avoid contact with infected blood. Infection can be prevented by following these steps:

- Avoid using IV drugs.
- Avoid sharing toothbrushes, razors or other personal care items that could have traces of blood on them.

- Follow safe sex guidelines, including using a latex condom to prevent the exchange of bodily fluids and having only one sexual partner.
- If you are planning to get a tattoo or body piercing, make sure the people performing these services follow strict infection control measures, such as washing hands and using disposable gloves and sterilized instruments.
- People with hepatitis C should not donate blood or blood plasma.



Important things to remember about hepatitis C and CKD

- Having CKD puts you at higher risk of getting hepatitis C.
- If you have kidney failure and plan to start dialysis or have a kidney transplant, it is important to be tested for hepatitis C.

- The only way to know for sure if you have hepatitis C is through blood tests. You might not have any symptoms.
- Strict infection control in dialysis units will help prevent the spread of HCV between dialysis patients.
- You should be retested for HCV if you have had a kidney transplant or if you move from one dialysis facility to another.
- Avoid contact with HCV-infected blood.
- Treatment is available for hepatitis C, but the best treatment is prevention.

Additional Information

- To learn more about hepatitis C and kidney disease, call the National Kidney Foundation's NKF Cares Patient Help Line toll-free at 855.NKF.CARES (855.653.2273) or email nkfcare@kidney.org or visit kidney.org
- More information on hepatitis C can also be found at the CDC's website: cdc.gov

Fueled by passion and urgency, NKF is a lifeline for all people affected by kidney disease. As pioneers of scientific research and innovation, NKF focuses on the whole patient through the lens of kidney health. Relentless in our work, we enhance lives through action, education, and accelerating change.



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This education resource
was supported by

