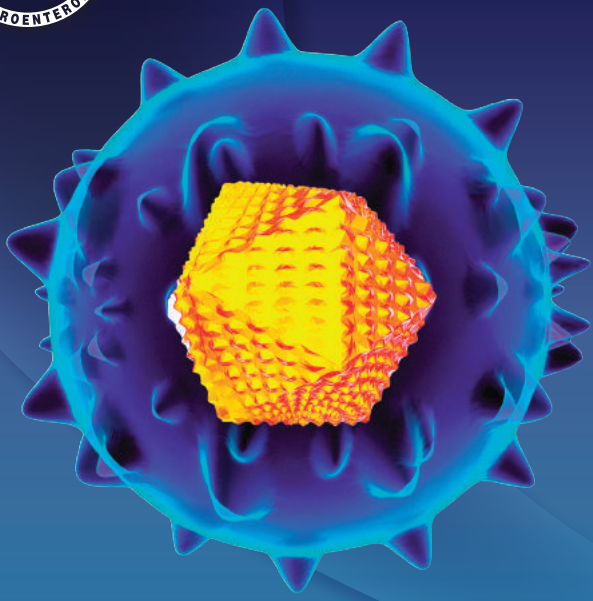


Commonly Asked Questions About Chronic Hepatitis C

From the American College of Gastroenterology

1. How common is the hepatitis C virus?

The hepatitis C virus is the most common cause of chronic viral liver disease in the United States. It is estimated that 1.8% of the U.S. population or about 4 million Americans are infected with hepatitis C. Infection is most prevalent among those born between 1945–1965, the majority of whom were likely infected during the 1970s and 1980s when rates were highest. The CDC estimates that there are 30,000 new acute cases of hepatitis C each year.

2. How many patients with hepatitis C develop cirrhosis?

It is estimated that nearly 20% of patients with chronic hepatitis C will develop cirrhosis over a period of decades. Factors which influence progression to cirrhosis include co-infection with hepatitis B or the human immunodeficiency virus (HIV), alcohol use and obesity.

3. Who gets hepatitis C infection?

Hepatitis C is spread primarily by contact with blood and blood products. The use of injection illicit drugs is the most common mode of disease transmission including those people who injected illicit drugs only one time many years ago. People who received blood transfusions, transfusion of blood products or organ donations prior to 1992, when sensitive tests for HCV were introduced for blood screening, are at risk for hepatitis C infection, as are persons who received clotting factors prior to 1987.

Other persons at risk for hepatitis C include long-term kidney dialysis patients, people with tattoos and body piercing other than pierced ears, health care workers after exposures (i.e., needle stick or splashes to the eye) from the blood of an infected person while on the job, infants born to HCV-infected mothers, people with high-risk sexual behavior, multiple partners and sexually transmitted diseases, people who snort cocaine using shared equipment, and people who have shared toothbrushes, razors and other personal items with a family member who is HCV-infected.

4. What precautions can I take in order to avoid transmitting HCV?

People who have hepatitis C should remain aware that their blood is potentially infectious. People with hepatitis C should avoid the use of intravenous drugs. Household items such as razors or toothbrushes should not be shared. The hepatitis C virus can be infectious for up to 16 hours outside the body. If you are a health care or public safety worker, always follow routine barrier precautions and safely handle needles and other sharps; get vaccinated against hepatitis B. Consider the risks if you are thinking about getting a tattoo or body piercing. You might infect others if you share the needles or piercing equipment.

5. Is hepatitis C sexually transmitted?

HCV can be spread by sex, but this is rare, accounting for less than 1% of overall cases. Sexual transmission is more common in men having sex with men. If you are having sex with more than one steady sex partner, use latex condoms correctly and every time to prevent the spread of sexually transmitted diseases.

6. What are the signs and symptoms of hepatitis C?

Approximately 20%–30% of those newly infected with HCV experience fatigue, abdominal pain, poor appetite, or jaundice. In those persons who do develop symptoms, the average time period from exposure to symptom onset is 4–12 weeks (range: 2–24 weeks).

The majority of people with chronic hepatitis C have no symptoms of liver disease. People with chronic hepatitis C may complain of abdominal pain, fatigue, itching or nausea. Once the patient develops cirrhosis, signs and symptoms may be more prominent. These symptoms might include jaundice, muscle weakness, nausea, weight loss, abdominal swelling, vomiting blood, blood in stool, and confusion.

7. Can hepatitis C affect other organs?

A small percentage of persons with chronic HCV infection develop medical conditions due to hepatitis C that are not limited to the liver. These conditions are thought to be attributable to the body's immune response to HCV infection. Such conditions can include diabetes mellitus, which occurs three times more frequently in HCV-infected persons; glomerulonephritis, a type of kidney disease caused by inflammation of the kidney; essential mixed cryoglobulinemia, a condition involving the presence of abnormal proteins in the blood; porphyria cutanea tarda, an abnormality in heme production that causes skin fragility and blistering and; non-Hodgkins lymphoma, which might occur somewhat more frequently in HCV-infected persons.

8. What are the initial tests used to detect hepatitis C infection?

Several blood tests are performed to test for HCV infection. Screening tests include hepatitis C antibody (anti-HCV) by enzyme immunoassay (EIA) and recombinant immunoblot assay (RIBA).

9. How soon after exposure can the virus be detected?

HCV infection can be detected by anti-HCV screening tests (enzyme immunoassay) 4–10 weeks after infection. Anti-HCV can be detected in >97% of persons by 6 months after exposure.

10. How is the diagnosis of chronic hepatitis C confirmed?

Following a positive hepatitis C antibody test, the presence of hepatitis C infection is confirmed by hepatitis C viral load testing. Qualitative or quantitative viral load testing (HCV-RNA by PCR) may be used to detect the presence of hepatitis C in the blood.

11. How soon after exposure can the virus be detected?

The virus appears in blood and can be detected as early as 2–3 weeks after infection.

12. Under what circumstances is a false-positive anti-HCV test result likely?

False-positive anti-HCV tests appear more often when persons at low risk for HCV infection (e.g., blood donors) are tested. Therefore, it is important to confirm a positive anti-HCV test with a supplemental test, such as RIBA (recombinant immunoblot assay), as most false positive anti-HCV tests are reported as negative on supplemental testing.

13. Under what circumstance is a false-negative anti-HCV test result likely?

Persons with early HCV infection might not yet have developed antibody levels high enough that the test can measure. In addition, some persons might lack the immune response necessary for the test to work well. In these persons, further testing to detect the presence of the virus in blood may be considered.

14. What is the significance of the level of virus in the serum (viral load)?

Hepatitis C viral load does not correlate with disease progression or with degree of inflammation or fibrosis seen on liver biopsy. Patients with high viral loads are less likely to respond to currently approved antiviral treatment regimens.

15. What is the significance of genotype testing?

There are six known genotypes and more than 90 subtypes of hepatitis C. Knowing the genotype can help predict the likelihood of treatment response and, in many cases, determine the duration of treatment. The most common genotype seen in the United States is genotype 1. Genotype is not associated with disease progression but is associated with varying response to current antiviral therapies. Patients with genotype 2 or 3 have higher sustained viral response rates to pegylated interferon and ribavirin therapy than those with genotypes 1 or 4. There is little published information on the treatment of genotypes 5 or 6. Once the genotype is identified, it need not be tested again; genotypes do not change during the course of infection.

16. Can infection with more than one genotype of HCV occur?

Infection is possible if risk behaviors for HCV infection continue, but it is believed to be very uncommon.

17. What do the liver enzymes indicate?

The liver enzymes (ALT and AST) may be elevated in chronic hepatitis C infection. ALT in HCV is not correlated with disease progression or underlying histology. Many patients with chronic hepatitis C have normal ALT levels. It is common for patients with chronic Hepatitis C to have liver enzyme levels that go up and down, with periodic returns to normal or near normal levels. Liver enzyme levels can remain normal for over a year despite chronic liver disease.

18. Why do I need to have a liver biopsy?

A liver biopsy is not necessary for diagnosis. Liver biopsy is helpful for grading the severity of inflammation, staging the amount of fibrosis and determining the presence of cirrhosis and determining the degree of fatty infiltration of the liver. Liver biopsy is the best test to determine how damaged the liver is.

19. What are my treatment options at this time?

Combination therapy with pegylated interferon and ribavirin is the treatment of choice, resulting in sustained virologic response (defined as undetectable virus in the patient's blood 24 weeks after the end of treatment) rates of 40%–80% (up to 50% for patients infected with genotype 1, the most common genotype found in the United States, and up to 80% for patients infected with genotypes 2 or 3). Combination therapy using interferon and ribavirin is FDA-approved for use in children ages 3–17 years. A sustained virologic response is the best definition of cure that we have for hepatitis C.

20. What is the duration of treatment?

At the current time, the duration of treatment for patients with genotype 1 or 4 is 48 weeks and 24 weeks in patients with genotype 2 or 3.

21. Who should be treated?

Treatment is currently recommended for patients with detectable hepatitis C virus in the blood that have at least moderate inflammation and/or have any fibrosis (scar tissue) found on liver biopsy and who do not have any contraindications to therapy. Patients with milder changes on liver biopsy, or who have not had a liver biopsy, should be managed on an individual basis.

22. Who should not be treated with interferon?

Patients with advanced liver disease with symptoms such as fluid retention, confusion or history of recent gastrointestinal bleeding should not be treated with interferon. In addition, patients who have severe uncontrolled depression or other significant psychiatric illnesses, patients with autoimmune disease that are not well-controlled, and patients who are actively using illicit substances should not be treated with interferon.

23. What are the options for patients who do not respond to treatment?

At this point, re-treatment of pegylated interferon and ribavirin treatment failures with a similar drug regimen yields disappointing response rates. Newer, experimental therapies are being evaluated for use in this group of patients.

24. What are the side effects of interferon therapy?

Many patients will develop flu-like symptoms in the early stages of therapy. Other common side effects include fatigue, muscle aches, nausea and vomiting, skin irritation at the injection site, rash, headaches, mood changes, i.e. depression, anxiety, mania, and suicidal ideation, and changes in blood cell counts such as low white cell count and low platelet counts.

25. What are the common side effects of ribavirin therapy?

Common side effects secondary to ribavirin include nausea, insomnia, hemolytic anemia, fatigue, and cough. Ribavirin may cause birth defects and/or fetal death when used during pregnancy. Women of childbearing potential and their male partners must use two forms of reliable birth control (contraception) during treatment and for 6 months after ribavirin has been stopped to avoid pregnancy.

26. What happens if I develop any of these side effects?

Patients are monitored very closely during treatment. The side effects are assessed and medications may be prescribed to handle those side effects.

27. What about liver transplantation?

Hepatitis C is a common indication for liver transplantation in the United States. Liver transplantation involves removing the diseased liver from the patients and replacing it with a healthy liver from either a live or cadaveric donor. Liver transplantation is indicated for those patients with hepatitis C who have cirrhosis with life-threatening complications.

28. What are the chances of developing a life-threatening complication related to chronic hepatitis C?

Life threatening complications of hepatitis C are rare unless cirrhosis has developed. Once cirrhosis is present, the chance of developing a life-threatening complication over a period of 5 to 10 years is 50%.

29. Can patients with hepatitis C drink alcohol?

Regular alcohol intake has been shown to lead to increased liver damage in patients who have hepatitis C. HCV-positive persons should be a dvised to avoid alcohol because it can accelerate liver damage and progression to complications from cirrhosis.

30. Should HCV-infected persons be restricted from working in certain occupations or settings?

The CDC's current recommendations for prevention and control of HCV infection specify that persons should not be excluded from work, school, play, child care, or other settings on the basis of their HCV infection status. There is no evidence of HCV transmission from food handlers, teachers, or other service providers in the absence of blood-to-blood contact.

31. What is the risk for HCV infection from a needlestick exposure to HCV-contaminated blood?

After a needlestick or sharps exposure to HCV-positive blood, the risk of HCV infection is approximately 1.8% (range: 0%–10%).

32. Other than needlesticks, do other exposures, such as splashes to the eye, pose a risk to healthcare personnel for HCV transmission?

Although a few cases of HCV transmission via blood splash to the eye have been reported, the risk for such transmission is expected to be very low. Avoiding occupational exposure to blood is the primary way to prevent transmission of bloodborne illnesses among healthcare personnel. All healthcare personnel should adhere to Standard Precautions. Depending on the medical procedure involved, Standard Precautions may include the appropriate use of personal protective equipment (e.g., gloves, masks, and protective eyewear).

33. Should HCV-infected healthcare personnel be restricted in their work?

There are no CDC recommendations to restrict a healthcare worker who is infected with HCV. The risk of transmission from an infected healthcare worker to a patient appears to be very low. All healthcare personnel, including those who are HCV positive, should follow strict aseptic technique and Standard Precautions, including appropriate hand hygiene, use of protective barriers, and safe injection practices.

34. Should pregnant women be routinely tested for hepatitis C?

No. Since pregnant women have no greater risk of being infected with HCV than non-pregnant women and interventions to prevent mother-to-child transmission are lacking, routine testing of pregnant women for hepatitis C is not recommended. Pregnant women should be tested for hepatitis C only if they have risk factors for HCV infection.

35. What is the risk that an HCV-infected mother will spread HCV to her infant during birth?

Approximately 4 of every 100 infants born to HCV infected mothers become infected with the virus. Transmission can occur at the time of birth, and no procedures are available to reduce this risk. The risk is increased by the presence of high levels of hepatitis C virus in the mother at delivery and also is 2–3 times greater if the woman is co-infected with HIV. Most infants infected with HCV at birth have no symptoms and do well during childhood. More research is needed to find out the long-term effects of perinatal HCV infection.

36. Should a woman with HCV infection be advised against breastfeeding?

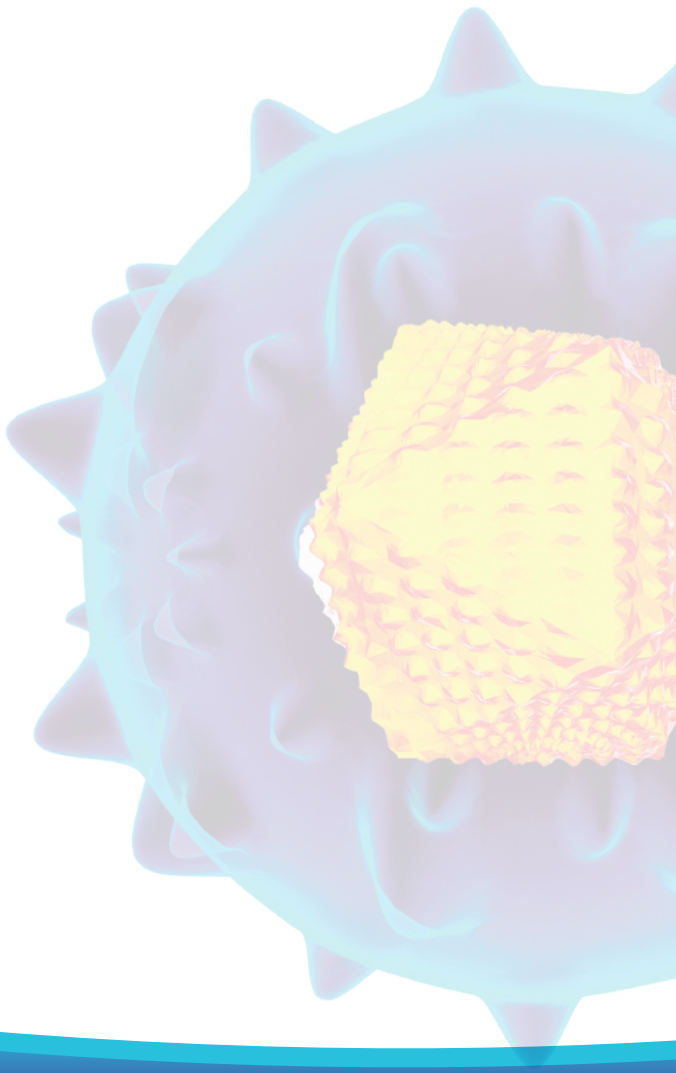
No. There is no evidence that breastfeeding spreads HCV. However, HCV-positive mothers should consider abstaining from breastfeeding if their nipples are cracked or bleeding.

37. When should children born to HCV-infected mothers be tested to see if they were infected at birth?

Children should be tested for hepatitis C no sooner than age 18 months because hepatitis C antibodies from the mother might last until this age. If diagnosis is desired before the child turns 18 months, testing for HCV RNA could be performed at or after the infant's first well-child visit at age 1–2 months. HCV RNA testing should then be repeated at a subsequent visit, independent of the initial HCV RNA test result.

38. Is there a vaccine for hepatitis C?

At present time, a hepatitis C vaccine is not available.



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