



Hepatitis C is a viral infection of the liver caused by the hepatitis C virus (HCV), which is found in the blood of persons who have this disease. HCV was discovered in 1987 and was previously called “non A, non B hepatitis. In 1992, a highly sensitive antibody blood test was implemented nationwide to identify people exposed to the hepatitis C virus and to screen blood donors. By 1992, an even more sensitive test was used to screen donated blood.

There are six major types or strains of hepatitis C referred to as genotypes. The most common genotype in the United States is genotype 1. Other major genotypes are 2, 3, 4, 5, and 6. Most patients have only one strain of the virus. Patients diagnosed with hepatitis C can have a blood test to determine the genotype of the virus causing their infection.

HCV is a major cause of chronic liver disease, including cirrhosis and liver cancer. In the United States, it is estimated that 4-5 million individuals have been infected with HCV. About 25,000-30,000 new infections occur each year. An estimated 2.7-3.4 million Americans are chronically infected, with many showing no signs or symptoms and are not aware of their infection. Worldwide, approximately 170 million persons are believed to have been chronically infected.

Hepatitis C is a slowly progressing liver disease, usually without symptoms, that may take 20 to 30 years to cause serious liver damage. Between 15% and 45% of infected individuals will clear the virus within six months and liver injury in these individuals resolves completely. Between 55% and 85% of those who are infected have some liver damage but many do not feel sick from the disease. Cirrhosis (scarring of the liver) develops in about 10%-20% of people with chronic infection and liver cancer can develop in 1% to 5% of chronically infected patients over a period of 20 to 30 years. Cirrhosis is almost always present before the onset of liver cancer. The liver disease due to hepatitis C will progress to advanced disease more rapidly when drinking alcohol on a regular basis and when the individual is coinfecting with hepatitis B virus (HBV) or HIV.

Liver disease is the tenth leading cause of death among adults in the United States. HCV-associated chronic liver disease is the most frequent indication for liver transplantation among adults.

TRANSMISSION OF HEPATITIS C

HCV is spread primarily by direct contact with human blood of an HCV infected person. HCV is not spread by sneezing, hugging or kissing, coughing, breast feeding, food or water, sharing utensils or drinking glasses, or casual contact. There is also no vaccine to prevent infection or spread of HCV.

- Injection drug use is the primary risk factor for HCV infection. Individuals who injected drugs, even if they did only once many years ago, are at risk and should be tested. HCV is rapidly acquired following the initiation of injection drug use and occurs from sharing needles, syringes, or other equipment associated with drug use. Of persons injecting drugs for at least 2 years, 60%-80% are infected with HCV.
- Recipients of clotting factors or solid organ transplants prior to 1992 are at increased risk of hepatitis C. In the U.S. donated blood has been routinely screened for HCV since 1992 reducing the risk for transmission through donated blood to 1 in 2 million units of blood.
- It appears that HCV is not readily transmitted sexually. In relationships where there is one steady partner, sexual transmission is exceedingly unusual, less than 1.5% over decades in sexually active couples. Sexual transmission may be more likely to happen among those with multiple sex partners, where there is a history of sexually transmitted disease, when condoms are not used, or during sex with trauma.



- There is no evidence indicating that HCV is transmitted through breast milk.
- Consider the risks if you are thinking about getting a tattoo or body piercing. You might get infected, or have been infected, if the needles and other equipment have someone else's infected blood on them or if the artist or piercer does not follow good health-safety practices.
- HCV can be spread by sharing razors or toothbrushes with HCV contaminated blood on them.
- Hemodialysis patients have about an 8% risk of infection.
- The risk of hepatitis C transmission to infants born to an HCV-infected mother is about 3 - 4%. If the mother is coinfecting with HCV and HIV the risk of transmission of HCV to her infant is about 17%.

SYMPTOMS

- Most people who are newly infected or chronically infected with HCV do not have symptoms of liver disease. If present, they may be very mild, non specific, and intermittent. They may be flu-like including fatigue, poor appetite, nausea, muscle and joint pains, or a mild discomfort in the area of the liver.

DIAGNOSIS

Early diagnosis is important so you can be checked for liver disease, get treatment if indicated, learn how to protect your liver from further harm, and to learn how you can prevent spreading HCV to others.

- The incubation period for HCV infection varies from 2 to 26 weeks (an average of 45 days). This means that very early infection (less than 2 weeks) may be present but unable to be detected by a blood test.
- HCV infection can be determined by a specific blood test that detects antibodies or an exposure to the virus. A positive antibody test does not differentiate between a current infection and the presence of the actual hepatitis C virus. Tests should be done to confirm HCV infection status and exclude laboratory error.
- Blood tests checking for hepatitis C exposure or for hepatitis C virus are not a part of a routine physical exam. Ask your doctor for a hepatitis C test.

HEPATITIS C TESTING RECOMMENDED FOR PERSON WHO

- Ever injected illegal drugs.
- Received clotting factors made before 1987.
- Received blood or organs before July 1992.
- Ever were treated with hemodialysis.
- Have undiagnosed liver disease.
- Have a needlestick/sharps or mucosal exposure to HCV-positive blood.
- Are 12 to 18 months of age, and are born to HCV-positive women.

MEDICAL EVALUATION AND MANAGEMENT FOR CHRONIC HCV INFECTION

Persons testing positive for the hepatitis C virus should be assessed for evidence of chronic liver disease and for possible treatment. Antiviral drugs are available for the treatment of chronic hepatitis C, but they are not suitable or effective for everyone. Persons with chronic liver disease should always be vaccinated against hepatitis A and hepatitis B.

Recent findings indicate that obesity can cause fatty liver and therefore could cause hepatitis C-related liver disease to progress faster. They should also be counseled to abstain from alcohol use. It may be helpful to locate a support group to meet with others who are infected or affected by hepatitis C. Learn all that you can about the disease and how it is affecting you. Protect your family.



TREATMENT

- Combination therapy with pegylated interferon and ribavirin is the treatment of choice resulting in sustained response rates of 35- 50% for patients infected with the most common genotype found in the U.S. [genotype 1] and up to 85% for patients infected with genotypes 2 or 3. Pegylated interferon alone may be a treatment option for those who cannot take ribavirin. Blood tests and liver biopsy findings might determine the need for treatment but liver biopsy is not essential before beginning treatment.
- Interferon must be given by injection and may cause a number of side effects, including flu-like symptoms of headache, fever, fatigue, loss of appetite, nausea, vomiting, depression and thinning of the hair. Interferon can interfere with the production of white blood cells and platelets.
- Ribavirin, given by mouth, can cause birth defects. Women who are pregnant or planning a pregnancy should not take ribavirin. Pregnancy should not be attempted until 6 months after treatment has ended. Ribavirin also causes early destruction of red blood cells and severe anemia requiring frequent monitoring.
- Treatment of children with HCV is under investigation.
- Almost half of all liver transplants in the US are performed for end-stage hepatitis C. However, the virus usually infects the transplanted liver and may require a second transplant.
- Maintain as normal a life as possible, eat a well-balanced diet, exercise, and keep a positive attitude. Learn how to pace yourself. Plan physically exhausting tasks for the morning when your energy level is at its peak. Rest when you feel tired.
- There is no specific evidence proving that herbal supplements relieve hepatitis symptoms or fight the virus. Many herbs are toxic to the liver. The National Institutes of Health (NIH) has established a Complementary Alternative Medicine Committee to evaluate alternative treatments.
- There are many drugs in clinical research that may one day be promising and provide more effective treatments to manage or eradicate the hepatitis C virus.

PREVENTION

- There is NO vaccine to prevent HCV infection. The development of one is the subject of current research. Vaccines for hepatitis A and B do not provide immunity against hepatitis C but are essential to avoid coinfection.
- Don't touch anything that might have the blood of an infected person on it, such as razors, scissors, toothbrushes, nail clippers, tampons, or sanitary napkins. If you are infected with hepatitis C, do not share razors, scissors, nail clippers, or toothbrushes with others. Wipe up blood spills with disposable towels soaked in 1:100 dilution of household bleach and use rubber or latex gloves to protect your hands. All soiled materials should be put in a plastic, leak-proof bag for disposal.
- Don't share anything that might have blood on it; don't share drugs, needles, syringes, or any drug "works."
- Use latex condoms correctly and every time including during foreplay to reduce possible exposure to AIDS, hepatitis B, gonorrhea, Chlamydia or other sexually transmitted diseases.
- Notify your physician and dentist that you are infected with HCV.
- Get vaccinated against hepatitis A and B.
- If you are infected with HCV do not drink alcohol because it accelerates the liver damage.

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