

HEPATITIS C

Hepatitis C Virus (HCV) causes inflammation of the liver. HCV was discovered in 1988 to be the main cause of non-A, non-B hepatitis. However, it wasn't until 1992 that an adequate antibody test was implemented nationwide. An estimated 2.7 million Americans are chronically infected with many showing no signs or symptoms. About 38,000 new cases occurred in 1997 with 15-25% recovering spontaneously. Hepatitis C is a very slowly progressing disease that may take 20-30 years to cause serious liver damage in some people.

Transmission

- The virus is found mainly in blood.
- Injection drug use is the primary risk for HCV infection. Among frequent drug users, 50-80% are infected within the first 12 months of beginning injecting.
- In relationships where there is one steady partner, sexual transmission is low (under 5%). Transmission is estimated to be about 15% among those who have multiple sex partners or a history of sexually transmitted diseases (STDs).
- Healthcare workers have a 2% risk of acquiring HCV after a needle stick contaminated with HCV-positive blood.
- There is no evidence indicating that HCV is transmitted through breast milk.
- HCV may be transmitted by using razors, needles, toothbrushes, nail files, a barber's scissors, tattooing equipment, body piercing or acupuncture needles if contaminated by blood of an infected person. Straws shared in snorting drugs are a potential source of infection.
- The current rate of transmission through blood transfusions is estimated at less than 1 per 100,000 units transfused.
- Hepatitis C is not spread through kissing or casual contact.

Symptoms

- Most people who are infected with the HCV do not have symptoms and are leading normal lives.
- If symptoms are present, they may be very mild and flu-like: nausea, fatigue, loss of appetite, fever, headaches, and abdominal pain. Most people do not have jaundice; however, it can sometimes occur along with dark urine.
- The incubation period varies from 2-26 weeks. Liver enzyme tests may range from being elevated to being normal for weeks to as long as a year. The virus is in the blood and may be causing liver cell damage, and the infected person can transmit the disease to others.

Who is at risk?

- Anyone who has had a blood transfusion prior to 1992 or clotting factors produced before 1987;
- Hemodialysis patients;

- Those with tattoos or body piercing done with unsterile instruments;
- Those with multiple sex partners and with partners who have other sexually transmitted diseases;
- IV drug users, even use in the distant past;
- An estimated 10% of those who are infected with HCV have no identifiable history of exposure to HCV;
- The potential for transmission from an infected mother to her newborn appears to be about 5%. After birth, the mother's antibodies may be present in the baby's blood for several months. Therefore, antibody tests should not be done for a year. Most babies will clear the antibodies within 12 months.

Diagnosis

- Infection by the hepatitis C virus can be determined by a simple and specific blood test that detects antibodies against HCV. The antibody is insufficient to provide immunity and the test does not distinguish between acute or chronic infection.
- This test is not a part of a routine physical and people must ask their doctor for a hepatitis C test.
- If the initial test is positive, a second test should be done to confirm the diagnosis and exclude laboratory error.
- The current enzyme immunoassay test (EIA) that detects anti-HCV has a sensitivity of about 95% in chronic HCV.
- A liver biopsy can identify the type and degree of liver damage and determine the severity of the disease. It is believed that 20% of patients with chronic hepatitis C will develop cirrhosis (scarring of the liver resulting from the death of liver cells). Of these patients, 25% (5% overall) may develop liver failure, even though this may take 30-40 years.
- Over 80% of the cases reported each year become chronic, which usually means liver enzyme levels remain elevated for at least 6 months after the initial acute infection.
- The enzymes alanine aminotransferase (ALT) and aspartate aminotransferase (AST) are released when liver cells are injured or die. Elevated ALT and AST levels may appear and disappear throughout the course of the infection.
- Antibodies may not be present in the first 4 weeks of infection in about 30% of patients. HCV infection may be identified by anti-HCV testing in approximately 80% of people as early as five weeks after exposure. There is a window of 14-189 days during the incubation period that the virus may be present yet undetectable.

Chronic Hepatitis

- Chronic HCV refers to infections that do not clear up within 6 months after the acute infection. The disease may gradually progress over a period of 10-40 years. Only 4% of HCV infected people die due to the disease.
- An estimated 8,000-10,000 deaths occur resulting from complications of HCV.

Treatment:

- There are three types of interferon and a combination of interferon and ribavirin used to treat hepatitis C. Blood tests and liver biopsy findings may determine the need for treatment.
- Interferon must be given by injection, and may have a number of side effects, including flu-like symptoms: headaches, fever, fatigue, loss of appetite, nausea, vomiting and thinning of hair.
- Ribavirin, given by mouth, can have additional side effects including depression, severe anemia and especially birth defects. Women or the male partners of women, who are pregnant or who are planning pregnancy, should not take Ribavirin. Pregnancy should not be attempted until six months after treatment is ended. Ribavirin may also interfere with the production of red blood cells and platelets by depressing bone marrow. Patients should be monitored frequently.
- While 50-60% of patients respond to treatment initially, sustained response occurs in up to 40%.
- Treatment of children with HCV is under investigation.
- Researchers are re-examining when treatment should begin, for how long it should continue, and its effectiveness.
- Many pharmaceutical companies and NIH are conducting research to find more effective treatments and cures.
- Currently, almost 1/2 of all liver transplants in the US are performed for end-stage Hepatitis C. However, reinfection of the transplanted liver by the virus usually occurs and may require a second transplant.
- Try to maintain as normal a life as possible, eating a well-balanced diet, exercising and keeping a positive attitude. Avoid depressing or overwhelming tasks and learn how to pace yourself. Rest when you feel tired. Plan physically exhausting tasks in the morning when your energy level is at its peak.

Prevention:

- There is NO vaccine for HCV. Vaccines for Hepatitis A and B do not provide immunity against Hepatitis C. There are various genotypes of HCV and the virus undergoes mutations making it difficult to develop a vaccine.
- Avoid handling anything that may have the blood of an infected person on it, such as razors, scissors, toothbrushes, nail clippers or files, tampons or sanitary napkins, etc. Detergent and a 10% solution of household bleach is believed to kill the virus.
- Don't share drug needles, cocaine straws or any drug paraphernalia.
- Practice safe sex (use latex condoms).
- Notify your physician and dentist that you have Hepatitis C.
- Get vaccinated against Hepatitis A and B.
- Those infected with hepatitis C should not drink alcohol, as it accelerates the liver damage.