

Hepatitis C is an infection of the liver caused by the hepatitis C virus (HCV). Hepatitis C is one of five (A, B, C, D and E) viruses that are able to infect the liver. A virus is a very small organism, invisible to all but the strongest microscopes. Unlike other living organisms, a virus cannot reproduce itself. It needs to take over the reproductive mechanism of other cells within the body, like liver cells. Once a virus has invaded a cell, it reproduces quickly, eventually bursting the cell and scattering new virus particles into the bloodstream. These new viruses can then search out and invade more liver cells, repeating the process over and over. Hepatitis C viral particles are circulated throughout the body via the blood, but primarily do damage within the liver.

Fortunately, your body's immune system has a very efficient type of "radar tracking" mechanism which allows identification and destruction of virus particles before they can spread. Every time you get a virus, like a cold or flu, there is a fierce battle being waged between the rapid formation of new virus particles and your immune system's ability to destroy them. Your immune system usually wins the battle and the infection is cured. In most cases, however, hepatitis C is a stealth infection that eludes the body's immune defense. It does this by constantly changing its appearance and the immune response cannot keep up with it. The infection is not cleared and becomes chronic, or permanent, in three cases out of four. Most people with this chronic infection are completely asymptomatic. Over time, as the immune response repeatedly attempts to destroy the virus in the liver, inflammation of the liver occurs. This liver inflammation is called hepatitis. Once it has become chronic, the condition is called chronic hepatitis C. A byproduct of this inflammation in some cases is elevation of the liver enzymes (AST & ALT) detectable on blood tests.

Chronic hepatitis C has become a serious public health problem in the United States. If your doctor has told you that you have this illness, you are not alone. The U.S. Center for Disease Control (CDC) estimates that at least 4.5 million Americans are now infected with this virus and over 170,000 new cases are added each year. More than 4 times as many people are infected with Hepatitis C than HIV-AIDS. There are approximately 170 million hepatitis C cases worldwide where it is the most prevalent of all the forms of hepatitis.

The Hepatitis C virus (HCV) first surfaced in the 1970's as a mysterious post-transfusion virus dubbed "non-A non-B hepatitis" since research did determine that it was neither the virus that causes hepatitis A nor hepatitis B. The virus was finally isolated and named "hepatitis C" in 1989. Since then scientists have been scrambling to find out how many people have it, how it is transmitted, and how to treat it. An antibody test to screen and protect the blood supply was developed in 1990.

Symptoms of Hepatitis C

Hepatitis C is usually transmitted asymptotically. Acute infection with this virus rarely causes any symptoms at all. In a small percentage of cases, nonspecific flu type symptoms may be present. Most will not have any symptoms at all, and therefore not know anything is wrong until it after discovering abnormal liver tests during a physical exam. It can be present for decades before symptoms such as loss of appetite, fatigue, nausea, vague stomach pain, and jaundice (a yellowing of the skin and whites of the eyes) occur.

Liver Damage Due to Hepatitis C

HCV is a potential time bomb with a fuse of unknown length. Many infected persons remain healthy indefinitely; but 75 percent will develop a chronic infection that they are unable to clear. This can lead to cirrhosis (scarring) of the liver and 20 percent of infected patients develop life-threatening liver failure 15 to 20 years after his or her initial infection. At 30 years the risk of liver cancer increases.

Risk Factors for Hepatitis C

A blood-borne virus is spread primarily by exposure to human blood. HCV is most often transmitted by blood transfusions and IV drug user's contaminated needles, but the source of many infections is unknown. HCV is not spread by food or water and there is no evidence that HCV is spread by sneezing, coughing, hugging, or other casual contact.

You are at risk for HCV if you:

- Ever injected drugs or shared needles
- Ever shared an apparatus to snort cocaine
- Have a job that exposes you to human blood
- Are a hemodialysis patient
- Received a blood transfusion before 1990

You may be at risk if you:

- Have had unprotected sex with multiple partners
- Live with a person who has hepatitis C
- Have had a tattoo or body piercing

Preventing Transmission of Hepatitis C

People who have HCV should remain aware that their blood, and possibly other body fluids, are potentially contagious for the rest of their life. Care should be taken to avoid blood exposure to others by sharing toothbrushes, razors, needles, etc. In addition, infected individuals can never donate blood and should inform medical and dental care providers so that proper precautions can be followed.

HCV has been transmitted between sex partners and among household members; however, the degree of this risk is unknown. Studies of HCV and sexual transmission offer conflicting results. A 1991 study from Stanford University showed no evidence of HCV in the urine, semen, or vaginal secretions of infected individuals with HCV. But similar studies have shown evidence of HCV in five to 27 percent of sexual partners.

Researchers seem to agree that if it is transmitted sexually, it isn't very efficient. The risks of catching HCV from an infected partner are estimated at less than one percent per year of exposure. Each couple will have to decide what is best for them, but currently the CDC does not advise changing sexual habits or using condoms in long-term monogamous relationships. As always, all people with multiple sexual partners should use condoms to reduce the risk of acquiring or transmitting HCV as well as other sexually transmitted diseases.

Vaccine for Hepatitis C

While there are vaccines for other forms of hepatitis such as hepatitis A and hepatitis B, there currently is no effective vaccine for hepatitis C. Billions of healthcare dollars are being spent treating hepatitis C related liver disease complications worldwide and as a result, much research is being done to find treatments and preventative measures. HCV patients should be vaccinated against hepatitis A and B. Infection with either could speed the liver damage done by hepatitis C.

Learn more at liverfoundation.org