



HEPATITIS C and HIV

WHAT IS HEPATITIS C?

Hepatitis C is a liver disease caused by a virus. The hepatitis C virus (HCV) is transmitted through infected blood. Hep C spreads easily when drug users share equipment. Over 80% of injection drug users have hepatitis C. Hep C can also spread through sexual activity.

Hep C spreads more easily than HIV through contact with infected blood. In the US, about 4 times as many people have Hep C as have HIV. You could be infected with HCV and not know it. About 15% to 30% of people clear the Hep C virus from their bodies without treatment. The other 70% to 85% develop chronic infection, and the virus stays in their body unless it is successfully treated. Hep C might not cause any problems for about 10 years or even much longer, but it can cause serious liver damage leading to liver failure and death.

HOW IS IT DIAGNOSED?

When Hep C damages the liver, blood tests for "liver enzymes" usually show abnormal results. See Fact Sheet 122 for more information on these tests. High levels of alanine transaminase (ALT) and alkaline phosphatase (ALP) can be signs of liver disease or damage.

Hep C can cause liver damage even if your enzyme tests are normal. If you have HIV, it's a good idea to get tested for Hep C, especially if you ever shared equipment for using drugs.

Blood tests for Hep C include Hep C antibody and viral load tests. These are similar to the HIV antibody (see Fact Sheet 102) and viral load (see Fact Sheet 125) tests. Hep C viral loads can often be in the millions. They don't predict disease progression the way HIV viral loads do. The Hep C antibody test may not detect Hep C infection in about 20% of people with HIV and Hep C. People with HIV and elevated liver enzymes should consider getting a Hep C viral load test.

Some health care providers do a test called a biopsy to check for liver damage. Liver cells are collected using a thin needle. They are studied using a microscope. A biopsy is the best way to know if your liver has been damaged.

HOW IS HEP C TREATED?

Almost all cases of hepatitis C could be cured if treatment with interferon was started very soon after infection. Unfortunately, early signs of hepatitis can seem like the flu. Most cases are not diagnosed until years after infection.

The first step in treating Hep C is to find out which type of Hep C you have. There are six known varieties of Hep C, called "genotypes." Most people with Hep C in the US have

genotype 1. Some have genotype 2 or 3. Genotype 1 is harder to treat than genotypes 2 or 3.

The usual treatment for Hep C has been a combination of the drugs interferon and ribavirin. Interferon has to be injected under the skin three times a week. Ribavirin is a pill taken twice a day. These drugs have some serious side effects, including flu-like symptoms, irritability, depression, and low counts of red blood cells (anemia) or white blood cells.

Ribavirin increases the amount of ddl in your blood and can increase ddl's side effects. Do not use ribavirin and zidovudine (AZT) at the same time. **Ribavirin can cause severe birth defects.** Women should not use it for at least six months before they become pregnant, or during pregnancy. Men should not use ribavirin for at least six months before they get a woman pregnant.

In 2001, a new form of interferon called "pegylated interferon" was approved for treating Hep C. Pegylated interferon stays in the blood longer. Only one injection is needed each week. Pegylated interferon seems to be stronger than the original form. It is also used in combination with ribavirin.

HCV treatment usually lasts 6 or 12 months, depending on which Hep C genotype you have. After treatment, about 40% of patients with Hep C genotype 1 and 80% of patients with genotype 2 or 3 have an undetectable Hep C viral load. This means that the amount of HCV in their blood is too low for the test to detect. **These rates are for people with hepatitis C alone, not coinfecting with HIV. Rates for people who also have HIV are lower.** People who still have detectable HCV after treatment may need to continue using interferon at lower doses. This is called "maintenance therapy."

Several factors affect how well Hep C treatments work. People do better if they:

- Have type 2 or 3 Hep C
- Start with a lower Hep C viral load
- Start before Hep C damages the liver
- Are women
- Are younger than age 40
- Do not drink alcohol

CAN HEP C BE PREVENTED?

Although there are vaccines to protect you from getting infected with Hep A or Hep B, there is no vaccine yet for Hep C. The best way to prevent Hep C infection is to avoid being exposed to blood that is infected with Hep C. If you don't share equipment to use drugs and avoid other contact with the blood of people infected with Hep C, your risk of Hep C infection will be lower.

HEP C AND HIV TOGETHER

Because HIV and Hep C are both spread by contact with infected blood, many people are "coinfecting" with both viruses. Coinfection has some special problems. Hep C makes HIV disease worse. This is probably due to liver damage. However, Hep C doesn't seem to interfere with antiretrovirals (ARVs).

• **People with both infections are more likely to be depressed.** This can lead to missed doses of medications (poor adherence, see Fact Sheet 405). These people are more likely to have problems thinking (see Fact Sheet 505)

• **For people with HIV, Hep C can be more serious and can cause serious liver damage and liver failure more quickly.** Hep C treatment for coinfecting people is successful for about 25% with genotype 1 and 50% with genotypes 2 or 3.

• **People with HIV are more likely to transmit Hep C to others** because their Hep C viral loads are higher.

• **The drugs used to treat HIV are hard on the liver.** However, we don't know if ARVs make Hep C worse.

• **Sometimes HIV should be treated first.** If someone meets the guidelines for HIV treatment, and they have a mild case of Hep C, their HIV should be treated first. Leaving advanced HIV untreated for 6 to 12 months could have serious consequences.

• **Sometimes Hep C should be treated first.** However, if HIV doesn't need to be treated yet (if CD4 cell counts are high enough, and HIV viral load is low enough), it's a good idea to treat Hep C first. Then the liver can be in better condition to deal with HIV drugs.

• **Hep C coinfection slows down the rate of increase in CD4 cell counts during HIV treatment.**

It's complicated to deal with both HIV and HCV infections at the same time. Be sure your health care provider knows about both diseases.

THE BOTTOM LINE

Hep C is a serious health problem in the US. Many more people have Hep C than HIV, but they may not know it. Hep C infection can go on for years and damage the liver before causing obvious problems.

HIV infection makes Hep C worse. Hep C damages the liver, which can make it harder to take ARVs. People with HIV should get tested for HCV. Early treatment works better.

Treatment of people who have both HCV and HIV is complicated. These people should find a health care provider who is familiar with both diseases.

Reviewed April 28, 2008