



What is Hepatitis C Virus?

Hepatitis C is a virus that causes chronic inflammation of the liver and liver disease. About four to five million Americans have hepatitis C and more than 15,000 new cases develop each year.

Does Hepatitis C Affect My Whole Body?

Hepatitis C affects the whole body and may cause symptoms or diseases including:

- Dry mouth
- Rashes on the skin, skin blemish or discoloration
- Kidney disease or failure
- Thyroid disease
- Muscle and joint aches
- Fatigue
- Depression
- Increased bleeding or bruising (cirrhosis)
- Corneal ulcers
- Sleep disorders
- Confusion, difficulty concentrating, forgetfulness (encephalopathy)

How Do I Get Hepatitis C?

Hepatitis C virus is transmitted through contact with an infected person's blood. The following list describes possible sources of hepatitis C transmission:

- Sharing needles and syringes (intravenous drug abuse).
- Reused needles in a medical or health care setting.
- Living and receiving medical care/surgery in a foreign country.
- Extensive surgical procedures.
- Sexual transmission (rare). Note: The risk of sexual transmission to an individual is probably less than 3-6% when a person is in a stable, single partner relationship.
- Transmission from mother to baby at birth.
- Blood and blood product transfusions (very rare in 2004).
- Other possible risk behaviors include tattoos, body piercing, folk medicine or using intranasal cocaine.
- Unknown – up to 5% of patients have no clear risk factors.

Is Hepatitis C Transmitted Sexually?

It is recommended that all patients having sex with multiple partners use a condom or spermicide. Patients in a single partner relationship need to use a barrier method only if they have genital sores, active bleeding, or are anxious and concerned about transmission. However, it is strongly recommended that men or women with hepatitis C who have sores in the genital area should avoid sexual contact.

For patients with hepatitis C, testing of spouses, babies and significant others is recommended by the Centers for Disease Control (CDC). Please discuss these issues with your doctor.

Is Hepatitis C Transmitted by Breast Milk to Infants?

There is no strong evidence that hepatitis C is transmitted through breast milk. A few studies have been done that tested breast milk, and *very* rarely is hepatitis C found. Recently, the CDC issued a statement explaining that mothers who have hepatitis C may breastfeed, but should avoid breastfeeding if their nipples are cracked or bleeding.

Can Hepatitis C be Transmitted to Other Members of My Family (Household Contacts)?

There is a slight risk of hepatitis C transmission among household contacts, so family members should not share items such as razors or toothbrushes that may transmit blood or body fluids. Women who have hepatitis C and are menstruating should avoid sexual contact. The CDC recommends that spouses or partners of hepatitis C patients be tested for hepatitis C.

Can a Pregnant Woman Give Hepatitis C to Her Baby?

The possibility of transmission must be considered when a woman with hepatitis C is deciding whether to have children. For infants who have received the hepatitis C virus from their mother, brief elevations of liver enzymes may occur, but no chronic liver disease has been reported. There have been no reports of cirrhosis in newborns, infants or child due to mother-to-child hepatitis C infection. It is recommended that all babies born to mothers with hepatitis C virus be tested annually until age three with antibody blood tests.

Women with both AIDS and hepatitis C are at high risk for transmitting the virus to their babies, and research has shown that these women consistently transmit the virus to their babies at birth.

What are the Tests for Hepatitis C?

There are 3 blood tests done to test for Hepatitis C:

- Hepatitis C antibody (basic test)
- Hepatitis C RNA TMA Qualitative assay (more advanced test, more sensitive)
- Hepatitis C RNA Quantitative assay by PCR

Is There a Vaccine for Hepatitis C?

No, there is no vaccine for hepatitis C. Research is many years away from such a development or treatment. However, vaccines exist for hepatitis A and B. All patients with hepatitis C should have these vaccines.

What is the Current Treatment for Hepatitis C?

Pegylated interferon and Ribavirin are the medications used to treat chronic hepatitis C infection. Treatment of hepatitis C using these medications requires careful monitoring, frequent lab tests and doctor visits. It is very important that you **NEVER STOP TREATMENT** without first consulting with your primary doctor, Gastroenterologist, or Hepatologist.

What is Interferon?

Interferon is a genetically created protein that helps to clear the hepatitis C virus from the blood and liver. Interferon also fights the formation of scar tissue in the liver and reduces liver inflammation.

How is Interferon Given?

Treatment with interferon is a self-administered injection beneath the skin (similar to an insulin shot for diabetes) once per week. The nurse or doctor will teach you how to give yourself an injection. In addition to the injection, you will be taking Ribavirin pills or capsules twice a day.

What Will Happen If I Do Not Receive Interferon Treatment for My Chronic Active Hepatitis C?

Interferon helps slow the hepatitis C disease by reducing the amount of virus in one's body and slowing liver damage. The suppression of liver disease is important because patients with hepatitis C have a 20% chance of developing cirrhosis (scarring of liver tissue), and 6% of patients will develop liver cancer (usually seen only in patients with cirrhosis). Those with cirrhosis eventually need a liver transplant to survive.

How Long Will I Be on Treatment?

The length of your treatment is based on your hepatitis C genotype:

- Genotype 1 = 48 weeks (at least 12 months, unless viral clearance is seen at 4 weeks of therapy in patients without cirrhosis)
- Genotype 2,3 = 24 weeks (6 months)
- Genotype 4,5,6 = 48 weeks (12 months)

What is a Hepatitis C Genotype?

There are 6 Genotypes of hepatitis C found in different populations around the world. Genotypes result from viral mutations of the Hepatitis C virus.

Genotypes include:

- Genotype 1: Subtype 1a is found most often in the United States, United Kingdom, and Europe. Subtype 1b is found mostly in Japan and Europe.
- Genotype 2: Subtypes 2a, 2b, 2c, and 2d are found mostly in Japan and China.
- Genotype 3: Subtypes 3a, 3b, 3c, 3d, 3e, 3f, are found mostly in Scotland and some parts of the United Kingdom.
- Genotype 4: Subtypes 4a, 4b, 4c, 4d, 4e, 4f, 4g, 4h, 4i, 4j, are found mostly in the Middle East and Africa.
- Genotype 5: Subtype 5a is found mostly in Canada and South Africa.
- Genotype 6: Subtype 6a is found mostly in Hong Kong and Macau.

Should I Have a Liver Biopsy?

A liver biopsy is the best way to know the amount of hepatitis and liver damage (including cirrhosis and fibrosis) as well as a patient's prognosis. Ask your doctor for more information on the liver biopsy process.

What Are the Side Effects of Taking Interferon?

Almost any patient taking interferon notices some side effects which are usually the worst during the first few weeks of treatment. NOTE: If the side effects become severe, further treatment options will be recommended to support your therapy. These side effects may include:

- Reduction in:
 - white blood count
 - red blood cell count
 - platelet count
- Increase in blood sugar
- Flu-like symptoms
- Nausea or loss of appetite
- Drowsiness or mental confusion
- Fatigue
- Hair loss (not permanent)
- Skin rash
- Eye and vision problems – immediately consult an eye doctor
- Muscle aches and pains
- Depression (if a patient has a psychiatric history or mental illness/suicide attempts have been reported)
- Thyroid disease
- Headaches
- Weight loss
- Mood swings
- Worsening of skin conditions or rashes

How Much Will the Treatment Cost?

The average cost of interferon is about \$40.00 per 5 million-unit injection. Most insurance plans pay for treatment. Some insurance plans may require a "co-payment." A co-payment is a share of cost that the patient is responsible for paying. Patients must contact their insurance company **before** treatment to understand the amount of their share of cost.

How Can I Learn More About Hepatitis C?

- To attend a support group or to learn more about hepatitis C, go to www.cpmc.org/learning.
- Visit www.cpmc.org/liver.

Notes & Questions to Ask My Doctor

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Note: This information is not meant to replace any information or personal medical advice which you get directly from your doctor(s). If you have any questions about this information, such as the risks or benefits of the treatment listed, please ask your doctor(s).