

From *Hepatitis C: An In-Depth Guide*

## Intro to Hep C

The word *hepatitis* refers to an inflammation (-itis) of the liver (*hepa*-). (See [The Liver](#).) Hepatitis C is a specific liver disease caused by the hepatitis C virus (HCV).

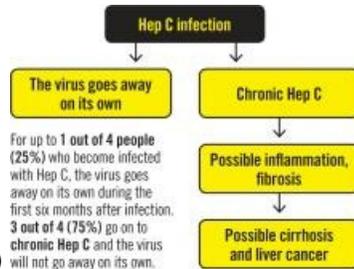
Worldwide, about 170 million people are living with HCV. In Canada, it is estimated that 250,000 people are infected, and 110,000 of them live in Ontario. Roughly, 20% of people with the virus do not know that they are infected.

### The hepatitis C virus

The virus is an RNA virus and uses liver cells to create copies of itself, killing those cells in the process. The infection was first labeled “non-A, non-B” hepatitis prior to the hepatitis C virus being identified in 1989.

### Acute Infection (*Phase 1*)

Acute hepatitis C refers to the first phase of the disease, when a person is newly infected. At this stage, up to 25% of people infected with HCV clear the virus from their body on their own within a few months. These people still test positive for HCV antibodies but do not have active virus in their bodies. (For more information, see [Diagnostic tests](#).)

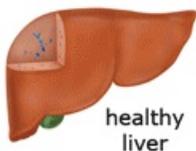


### Chronic Infection (*Phase 2*)

Around 75% of people with acute infection do not clear the virus and the disease progresses to chronic infection.

### Inflammation and Fibrosis

Over time, the virus destroys liver cells and leads to inflammation in the liver. This damage results in the formation of scar tissue called fibrosis. Progression of the disease is slow, often over the course of 20–30 years, during which time a person may not show any symptoms.



### Cirrhosis

During the decades of chronic infection, one out of five people can develop heavier scarring on the liver, called cirrhosis. There are two kinds of cirrhosis. In compensated cirrhosis, the liver is still performing many of its functions. Many people with compensated cirrhosis experience few or no symptoms. In decompensated cirrhosis, there is a significant risk of life-threatening complications, such as liver failure. It is in this stage that a transplant might be considered. Five to 10% of people with cirrhosis can also develop a form of liver cancer called hepatocellular carcinoma (HCC). (For more information, see [Understanding Cirrhosis of the Liver: First steps for the](#)

[newly diagnosed.](#))

## **Hepatitis C outside the liver**

The hepatitis C virus can also affect organs in the body aside from the liver. It has, for example, been linked to kidney failure and insulin resistance. Healthcare providers usually recommend tests to monitor a person's general health, not just their liver.

## **Preventing disease progression: Promoting a healthy liver and more**

Disease progression is a result of genetics, environment and behaviour. People cannot change their genetics, but learning strategies to promote a healthy liver and having the autonomy to make decisions around these strategies can make a big difference on how the virus affects someone. Many of these strategies—such as proper nutrition, regular exercise and avoiding or cutting back on drinking alcohol—promote good general health, not just a healthy liver. (For more information, see [Living with Hep C.](#))

## **Genotypes: 6 strains of hepatitis C**

There are at least six major genotypes of HCV. A genotype is a genetic variation of the hepatitis C virus; different genotypes are prevalent in different parts of the world. In North America, HCV infections usually involve genotype 1 virus, with genotypes 2 and 3 responsible for a smaller percentage of cases. Knowing the genotype is important when making decisions about [treatment](#). The genotype does not have a significant influence on disease progression.

## **Viral load: Measuring the amount of virus in the body**

A person's hepatitis C viral load refers to the amount of the virus in a given sample of his or her blood. It is measured by a quantitative RNA test and explained as a number of international units per milliliter (IU/ml). (For more information, see [Diagnostic tests.](#))

It is generally accepted that one's viral load does not determine how much liver damage a person will have—a higher viral load does not guarantee more liver damage and a lower viral load does not guarantee less liver damage.

## **No vaccine and no immunity: People can be infected more than once**

There is no vaccination or other immunity available against hepatitis C. People who get hepatitis C and clear the virus can be re-infected if they participate in risky activities. Hepatitis C antibodies do not protect against the virus. People can also be infected with multiple strains, making the infection more difficult to manage.

## **Transmission: Blood-to-blood contact**

Transmission of HCV is through blood-to-blood contact. This means that HCV spreads when blood carrying the virus comes into direct contact with the bloodstream of another person. Using previously used equipment to prepare and inject drugs is responsible for the majority of new hepatitis C infections in Canada today. Hepatitis C is not spread through casual contact such as kissing, hugging or sharing utensils. (For more information, see [How Hep C transmission happens](#))

## **Prevention**

The impact and social costs of this disease are expected to escalate in coming years. An important part of the public health response to hepatitis C in Canada is to prevent new HCV infections by:

- identifying [risks](#) and ways to prevent the spread of the virus
- encouraging people at risk for HCV to be [tested](#)
- educating people about [living well and safely with Hep C](#)
- providing [treatment](#) where appropriate

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