



# HCV and HCV/HIV Co-Infection

## *Fact Sheets*



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## Overview

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Established in 1997, CAAN:

- is a National and not-for-profit organization.
- represents over 160 member organizations and individuals.
- provides a National forum for members to express needs and concerns.
- provides relevant, accurate and up-to-date information on issues facing Aboriginal people living with and affected by HIV/AIDS in Canada.
- is governed by a twelve member National Board of Directors and operated by a four member Executive.

## The Canadian Aboriginal AIDS Network (CAAN)



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## Mission Statement

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The mission of the Canadian Aboriginal AIDS Network is to provide leadership, support and advocacy for Aboriginal people living with and affected by HIV/AIDS regardless of where they reside.

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## Disclaimer

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## Hepatitis C (HCV) – What is it?

Called “non-A/non-B” until 1989, the hepatitis C virus (HCV) is highly infectious. There is no vaccination against it. There are six varieties or ‘genotypes’ of HCV. Genotype 1 is the most common and the hardest to treat.<sup>1</sup> HCV travels through the blood to the liver — infecting, damaging and killing cells; and causing scarring and inflammation (swelling) that prevent the liver from doing its work (helping to digest food; storing vitamins and minerals; assisting with the manufacture of blood and proteins; filtering chemicals and toxins from the blood). Over time, hepatitis C can result in cirrhosis and potentially liver cancer, liver failure or death. HCV is of particular concern to the Aboriginal community because the rate and the spread of infection are highest within the Aboriginal population.

## Hepatitis C (HCV) – How is it spread?

The number of HCV infected people in Canada (and throughout the world) is growing at an alarming rate. Health Canada estimates that 210,000-275,000 Canadians are infected with HCV; and the number grows by more than 5,000 ‘mostly’ young people annually.<sup>2</sup> In the year 2000, the incidence of acute hepatitis C in the aboriginal population was estimated to be 8 times higher than in the ‘Canadian-born’ general population.<sup>3</sup> The rate of HCV infection is four times higher than that of HIV; it spreads more easily through contact with infected blood than HIV; and this virus can live longer outside the body than HIV. Only 5-25% of newly HCV infected people are sick enough with the ‘flu-like’ symptoms to seek medical attention.<sup>4</sup>

As the problem quietly smolders, it can take 10 years or longer to recognize that infection has taken place. Because 70% of HCV infected people are unaware of their condition<sup>5</sup> and the majority of infections become chronic and sometimes life long, sufferers may carry the virus in their bloodstream and be infectious for years as they unknowingly spread the virus to others.

Although the source of infection is simply unknown for 15-40% of sufferers,<sup>6</sup> it is recognized that the sharing of needles and drug paraphernalia is the most common risk factor in Canada today. Attempts to clean shared needles with bleach do not always kill the virus. In large Canadian cities, the prevalence of HCV among active injection drug users exceeds 90% – in fact, the prevalence is also surprisingly high among rural and non-urban injection drug users (i.e. on North Vancouver Island and among native populations in the Yukon).<sup>7</sup> The spread of infected blood from one person to another may also result from body piercing, tattoos, or acupuncture performed under unhygienic circumstances. The risk of “sexual transmission” of HCV is small but real. It is estimated that up to 4% of individuals involved in long term sexual relationships with infected people become infected themselves.<sup>8</sup> The actual risk of “household transmission” is unknown; though rare, HCV may be spread by sharing personal sharp instruments or personal hygiene equipment (nail clippers, cuticle trimmers, razors, toothbrushes) with an infected person. Also at risk are healthcare workers who may be exposed to accidental needle sticks; infants born to HCV infected mothers; hemodialysis patients; prison inmates; and recipients of blood products or transplanted organs prior to 1990.<sup>9</sup>

<sup>1</sup> “Hepatitis C and HIV” - Fact Sheet Number 507– Revised August 21, 2003 - New Mexico AIDS InfoNet - [www.aidsinonet.org](http://www.aidsinonet.org)

<sup>2</sup> “Hepatitis C Frequently asked Questions” - Health Canada – [www.hc-sc.gc.ca/hppb/hepatitis\\_c/drhepc.html](http://www.hc-sc.gc.ca/hppb/hepatitis_c/drhepc.html)

<sup>3</sup> “Incidence of Acute Hepatitis B and Hepatitis C in the Canadian Aboriginal Population, 1999-2000” – Health Canada – Centre for Infectious Disease Prevention & Control – Division of Health Care Acquired Infections – [www.hc-sc.gc.ca/pphb-dgspsp](http://www.hc-sc.gc.ca/pphb-dgspsp)

<sup>4</sup> “Hepatitis C Basics” - Hepatitis C Society of Canada – [www.hepatitiscsociety.com/english/HepCBasics.htm](http://www.hepatitiscsociety.com/english/HepCBasics.htm)

<sup>5</sup> “A National Hepatitis C Strategy in Canada” A Discussion Paper – 2004 February – Canadian Aids Society – [www.cdnaids.ca](http://www.cdnaids.ca)

<sup>6</sup> “Hepatitis C Basics” - Hepatitis C Society of Canada – [www.hepatitiscsociety.com/english/HepCBasics.htm](http://www.hepatitiscsociety.com/english/HepCBasics.htm)

<sup>7</sup> “A National Hepatitis C Strategy in Canada” A Discussion Paper – 2004 February – Canadian Aids Society – [www.cdnaids.ca](http://www.cdnaids.ca)

<sup>8</sup> “Hepatitis C Basics” - Hepatitis C Society of Canada – [www.hepatitiscsociety.com/english/HepCBasics.htm](http://www.hepatitiscsociety.com/english/HepCBasics.htm)

<sup>9</sup> “Preventing Hepatitis C: Protecting Yourself” - National Association of Friendship Centres

## Hepatitis C (HCV) – How is it detected?

As stated earlier, most cases of HCV are not diagnosed until years after infection. Because treatment is most effective before severe liver damage has occurred, early diagnosis is important. A physician may recommend one, two, or all of three simple blood tests.

- The first blood test checks for elevated levels of ALT and ALP enzymes because these enzymes increase when the liver is being attacked and cells are being destroyed. If elevated enzyme levels are found, the next step is to determine the cause.
- The ELISA or RIBA blood test checks for HCV antibodies that are produced by the body as a defense against the invading virus. If HCV antibodies are found, the next step is to determine if the actual virus is present.
- The third test (Viral Load) checks whether HCV is still present in the blood and, if so, at what level.

Some individuals may be referred to a specialist for further investigation. Because it is the best way to determine the extent of any liver damage, a biopsy may be required. During a biopsy, liver cells are collected for study under a microscope by means of a thin needle.

## Hepatitis C (HCV) – How is it treated?

In some cases, vaccination against hepatitis A and hepatitis B may be suggested. It is essential that the ailing liver's workload be lightened: Alcohol should not be consumed; exposure to toxins should be avoided as much as possible (e.g. nicotine, artificial

preservatives, fumes, chemicals); and over the counter medications should only be taken as advised by a doctor or pharmacist.

Following careful assessment, advanced hepatitis C may require drug treatment lasting anywhere from 6-12 months or longer.<sup>10</sup> Although new drugs are being developed, the best treatment currently available is a combination of two antiviral drugs which do not eliminate the virus in everyone but which can still be of help to the liver by suppressing the virus. The first drug, a new and superior form of interferon known as pegylated interferon, must be injected under the skin once a week. The second drug, ribavirin, is a pill that must be taken twice a day. If HCV is still detectable after treatment, it is sometimes necessary to continue interferon at lower "maintenance therapy" doses. The treatment of HCV is expensive, aggressive and it has many serious side effects including irritability, depression, anemia, decreased white blood cells, muscle and bone pain, skin rashes, and flu-like symptoms such as fever, fatigue, headaches, weight loss, and nausea.

Due to the risk of severe birth defects, treatment should not be taken during pregnancy; and a period of at least 6 months should lapse following treatment before women consider becoming pregnant. Men should also wait a minimum of 6 months before fathering children.

HCV is the leading cause of liver transplants in Canada; unfortunately, survival rates are relatively shorter for HCV patients than for patients with other liver disease. Not everyone who requires a transplant is considered a good candidate for the procedure. Currently, annual liver transplants number in the low hundreds (approximately 250) while the waiting list is considerably longer; and the need is expected to triple between 1998 and 2008,<sup>11</sup>

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<sup>10</sup> "Hepatitis C and HIV" - Fact Sheet Number 507– Revised August 21, 2003 - New Mexico AIDS InfoNet - [www.aidsinonet.org](http://www.aidsinonet.org)

<sup>11</sup> "A National Hepatitis C Strategy in Canada" A Discussion Paper – 2004 February - Canadian Aids Society –[www.cdnaids.ca](http://www.cdnaids.ca)

In up to 15-30% of infected people, HCV is cleared from the body without treatment;<sup>12</sup> however, even if spontaneous clearance or a cure through treatment is achieved, there is no immunity to the virus, and re-infection (serial infection) is possible.

## Hepatitis C (HCV) – What about HIV co-infection?

It is estimated that more than 1,500 HIV infected Aboriginals are co-infected with HCV (nationally, the incidence of HCV co-infection is 25-40% of HIV patients).<sup>13</sup> Due to the fact that they have a higher viral load, people with HIV are more likely to transmit HCV to others. The detection of hepatitis C can be more difficult in people with HIV because they may falsely test negative, even when they have HCV, if they have not developed antibodies.

The treatment of HCV is more complicated in people with HIV – with a success rate of only 25% for those with genotype 1 and 50% for those with genotype 2 or 3 – leaving many susceptible to accelerated liver damage (cirrhosis may develop 3 times faster) and failure<sup>14</sup>. Liver toxicity is a serious concern. HIV infected women have an increased transmission rate of HCV to their unborn babies. Hep C slows down the rate of increase in T-cell counts during HIV treatment. It does not appear to interfere with HIV medications; however, a damaged liver makes it harder to take HIV medications, which may require adjustments in dosages (people on methadone must talk to their doctor to be sure they are getting the right dose). Ribavirin increases the amount of ddl (an anti-HIV drug similar to AZT that acts by blocking a step in the reproduction of HIV) in the blood and can increase ddl's side effects. If someone has a mild case of Hep C,

their HIV infection should be treated first because leaving advanced HIV untreated for 6 to 12 months could have serious consequences. However, if HIV doesn't need immediate treatment (if T-cell counts are high enough and HIV viral load is low enough) Hep C should be treated so that the liver can be in better condition to deal with HIV drugs. Because ribavirin and zidovudine (AZT) should not be used at the same time,<sup>15</sup> whether to treat HIV or HCV first can only be determined on an individual basis preferably by a doctor who is familiar with both diseases.

Recently, HCV/HIV co-infected people have become eligible for liver transplantation because the one-year survival rate among HIV-positive liver recipients is comparable to HIV-negative liver recipients. While co-infected people appear to have poorer survival while on the transplantation waiting list, strategies to shorten the wait for HIV-positive candidates needs exploration.

## HCV/HIV Co-Infection – What is the Next Step

Within the next fiscal year, Health Canada is expected to recommend a national HCV strategy in an attempt to stem the growing tide of HCV infection in this country. The three possible approaches to implementing this strategy are: 1) Full integration of a new HCV strategy with the current Canadian Strategy on HIV/AIDS (CSHA); 2) Complete segregation of the two strategies; or 3) Partial integration of the new HCV strategy and the CSHA.<sup>16</sup> The Canadian HCV Strategy will require not only adequate funding but also input from all levels of government and community – current service providers as well as service users.

<sup>12</sup> "Hepatitis C and HIV" - Fact Sheet Number 507– Revised August 21, 2003 - New Mexico AIDS InfoNet - [www.aidsinonet.org](http://www.aidsinonet.org)

<sup>13</sup> "Epidemiology of Hepatitis B and Hepatitis C in Canada, 1999-2001" – Gregory Zaniewski, Epidemiologist - Health Canada – Population and Public Health Branch - Centre for Infectious Disease Prevention and Control – Health Care Acquired Infections Division – Blood Borne Pathogens Section

<sup>14</sup> "Hepatitis C and HIV" - Fact Sheet Number 507– Revised August 21, 2003 - New Mexico AIDS InfoNet - [www.aidsinonet.org](http://www.aidsinonet.org)

<sup>15</sup> "Hepatitis C and HIV" - Fact Sheet Number 507– Revised August 21, 2003 - New Mexico AIDS InfoNet - [www.aidsinonet.org](http://www.aidsinonet.org)

<sup>16</sup> "A National Hepatitis C Strategy in Canada" A Discussion Paper – 2004 February - Canadian Aids Society – [www.cdn aids.ca](http://www.cdn aids.ca)

## REFERENCES

1. “A National Hepatitis C Strategy in Canada” A Discussion Paper – 2004 February – Canadian Aids Society – [www.cdnaids.ca](http://www.cdnaids.ca)
2. “Hepatitis C Basics” - Hepatitis C Society of Canada – [www.hepatitiscsociety.com/english/HepCBasics.htm](http://www.hepatitiscsociety.com/english/HepCBasics.htm)
3. “Hepatitis C Frequently asked Questions” - Health Canada -- [www.hc-sc.gc.ca/hppb/hepatitis\\_c/drhepc.html](http://www.hc-sc.gc.ca/hppb/hepatitis_c/drhepc.html)
4. “Incidence of Acute Hepatitis B and Hepatitis C in the Canadian Aboriginal Population, 1999-2000” – Health Canada – Centre for Infectious Disease Prevention & Control – Division of Health Care Acquired Infections – [www.hc-sc.gc.ca/pphb-dgspsp](http://www.hc-sc.gc.ca/pphb-dgspsp)
5. “Preventing Hepatitis C: Protecting Yourself” - National Association of Friendship Centres
6. “Epidemiology of Hepatitis B and Hepatitis C in Canada, 1999-2001” – Gregory Zaniewski, Epidemiologist - Health Canada – Population and Public Health Branch - Centre for Infectious Disease Prevention and Control – Health Care Acquired Infections Division – Blood Borne Pathogens Section
7. “Hepatitis C and HIV” - Fact Sheet Number 507– Revised August 21, 2003 - New Mexico AIDS InfoNet - [www.aidsinfonet.org](http://www.aidsinfonet.org)