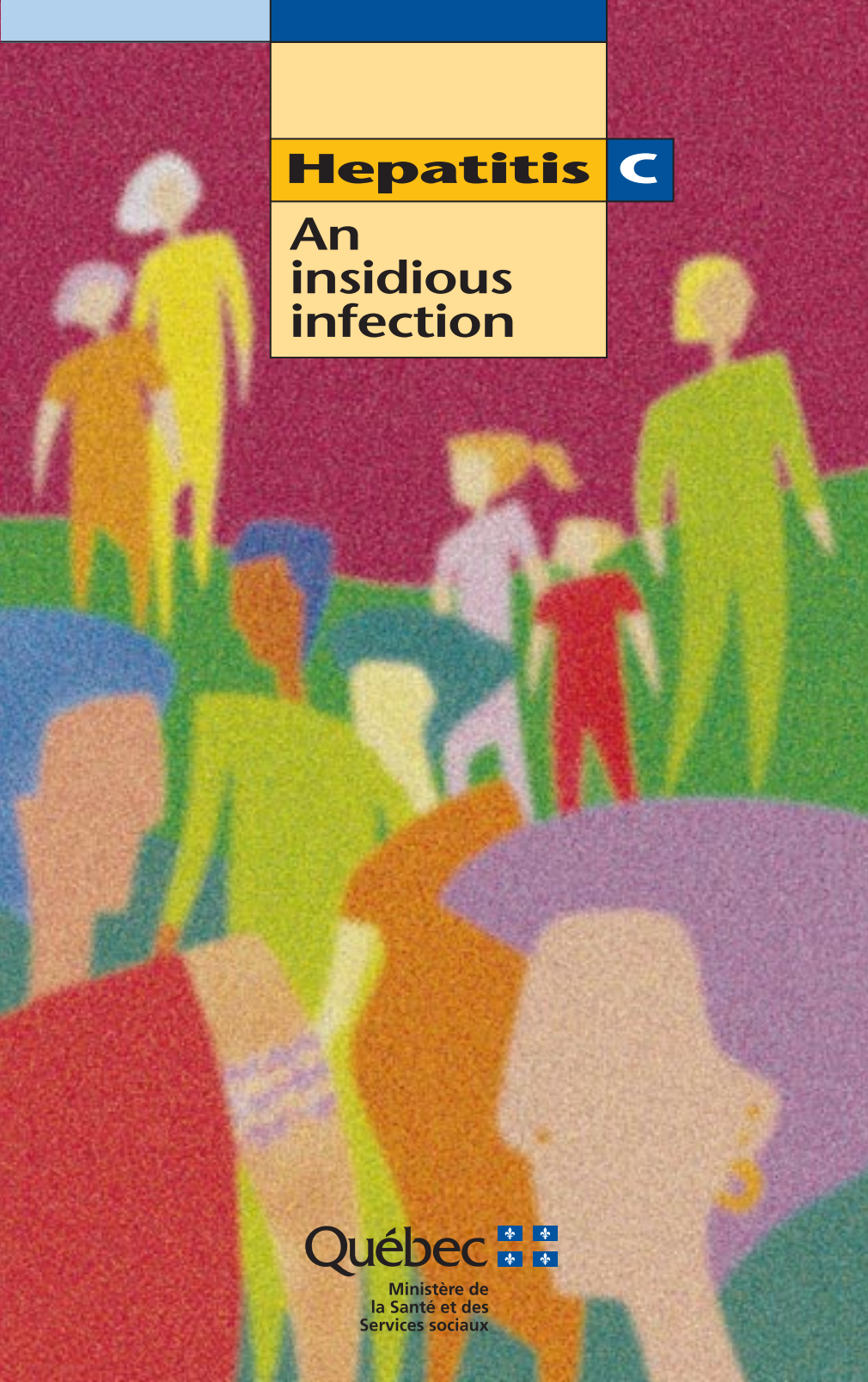
Hepatitis C

An insidious infection



Québec

Ministère de
la Santé et des
Services sociaux

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Written by

Hélène Gilbert

With the collaboration of

Roxanne Beauchemin, Cactus-Montréal, Montréal

Manon Laflamme, Spectre de rue, Montréal

Dany Paradis, Centre d'aide aux sans-emploi, Roberval

Louise and Laurent Pontbriand, Fondation L.-Pontbriand Hépatite C, Sainte-Marthe-du-Cap

Paolo Scrosati, Point de repère, Québec

Éric Viens, Coalition sherbrookoise pour le travail de rue, Sherbrooke

Richard Cloutier, Centre québécois de coordination sur le sida, MSSS

Dr. Pierre Côté, Clinique du Quartier latin and Centre hospitalier universitaire de Montréal

Dr. Michèle Dupont, Direction de la santé publique de la région de Montréal-Centre and Centre québécois de coordination sur le sida, MSSS

Dr. Pierre Paré, Centre hospitalier universitaire de Québec

Dr. Sylvie Venne, Direction de la santé publique de la région des Laurentides and Centre québécois de coordination sur le sida, MSSS

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The masculine form is used in this publication to designate either sex.

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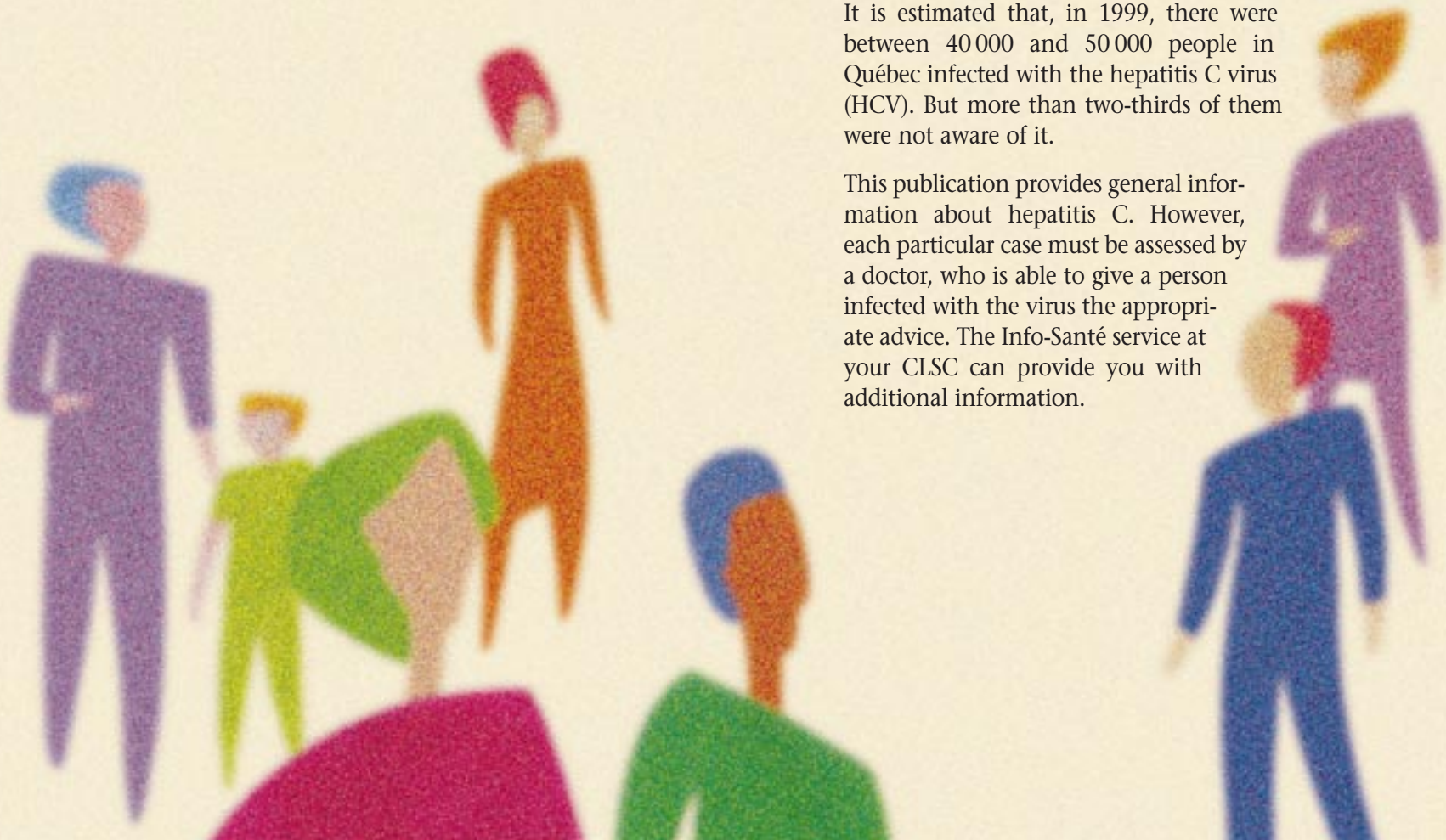
HEPATITIS C

Hepatitis C is a liver infection caused by a virus discovered in 1989. Before that, the disease was known as hepatitis non-A, non-B.

Over the long term, the infection may have very serious consequences, such as cirrhosis and, in some cases, liver cancer. It is an insidious infection that often remains in the body for dozens of years without producing any symptoms. During that time, the infected person can transmit the virus to others without knowing it.

It is estimated that, in 1999, there were between 40 000 and 50 000 people in Québec infected with the hepatitis C virus (HCV). But more than two-thirds of them were not aware of it.

This publication provides general information about hepatitis C. However, each particular case must be assessed by a doctor, who is able to give a person infected with the virus the appropriate advice. The Info-Santé service at your CLSC can provide you with additional information.



AN INSIDIOUS VIRUS

Have you been in contact with HCV? If so, it doesn't necessarily mean that the virus is present in your body or that it is active. Hepatitis C develops slowly and in different ways depending on the person.

The beginning of the infection most often goes unnoticed. During the incubation period (from two weeks to six months), there are no symptoms. Then comes the acute phase. Most people still have no symptoms, but others may have mild symptoms such as fatigue, loss of appetite, nausea and abdominal pain. Some people develop jaundice.

The lucky ones, i.e. 15% of those infected, clear the virus from their blood on their own. But these people will still not be protected from hepatitis C if they are again in contact with the virus. Since there are several sub-types of hepatitis C virus, a person can be infected again by different sub-types.

The other 85% remain infected for months, years, decades… The infection is then said to be chronic. Its course differs depending on the person. Many people have no symptoms for long periods, even throughout their lives, and can go about their activities without taking any medication. Others may have a variety of general symptoms, such as fatigue, especially if the liver is seriously affected.

About 20% of those infected will develop cirrhosis in 20 years. At that stage, liver cells are damaged and can adversely affect liver function.

From then on, the risk of developing liver cancer is 1% to 4% a year.

In general, the infection develops more rapidly into cirrhosis among men, people who contract the virus after 40 years of age and people who are also infected with HIV. Alcohol consumption also affects the evolution of the infection. In addition, hepatitis A and hepatitis B can worsen damage to the liver of a person infected with HCV.[1]

1 See, at the end of this publication, the table summarizing the characteristics of hepatitis A, B and C.

HOW DO YOU KNOW IF YOU HAVE HEPATITIS C?

Only a lab test done on a blood sample will determine whether you have been infected with HCV.

A doctor must prescribe the HCV screening test.[2] It is in your interest to undergo the test if you are in one of the following situations:

- you inject drugs or did so, even once, a long time ago;
- you received blood, blood products or a organ transplant from an HCV-infected donor;
- you received blood, blood products or an organ transplant before 1992;
- you received coagulation factors[3] before 1987;
- you underwent hemodialysis[4] for an extended period of time;
- you have been in contact—accidentally, for example, by

2 This test detects the antibodies that the immune system produces when it is attacked by the virus. It generally takes about two months before the antibodies can be detected. It may take much longer–up to 13 weeks–if the person has HIV (the human immunodeficiency virus). The antibodies do not protect against hepatitis C; they merely indicate that the person has been infected by the virus.

3 A blood product administered primarily to hemophiliacs to promote clotting of the blood.

4 A blood filtering technique for some people with a liver disease.

pricking yourself with a needle–with blood or instruments that may have been contaminated;

- you were tattooed or underwent body piercing under unsatisfactory sterilization conditions.

It takes just a few minutes for the blood sample and you will receive the result in a few weeks. If the result is negative, you can set your mind at rest, unless you have been infected in the weeks preceding the test and your body has not had enough time to develop the antibodies that can be detected in the screening test. In such a case, the test must be repeated later on. If the result is positive, that means you have been infected with the virus, and you can undergo a medical assessment and receive advice and treatment appropriate to your state of health.

Hepatitis C is a reportable disease. That means that a doctor who diagnoses hepatitis C must inform the public health department in the region. This information, which remains confidential, makes it possible to conduct studies on the evolution of the infection in the population. It also helps in planning care for people with the disease and measures to prevent the spread of the disease.

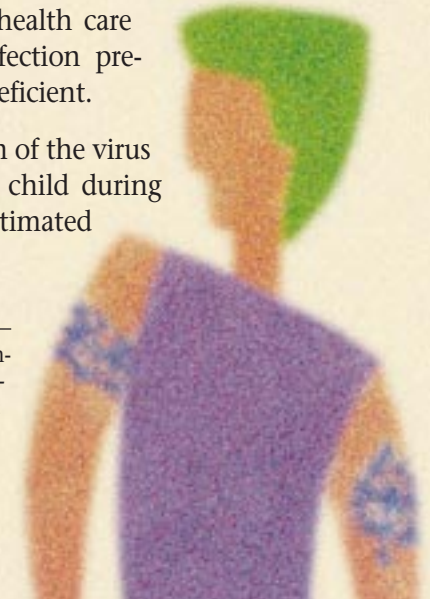
HOW IS THE HEPATITIS C VIRUS TRANSMITTED?

HCV is transmitted by the direct contact of the blood of an infected person with the blood of another person. A minute quantity of blood, on a dirty needle for example, may be enough to transmit the virus.

At present, hepatitis C is mainly transmitted through shared needles, syringes or preparation items (spoons, filters, water, alcohol wipes and so on) between people who inject drugs. According to some studies, after a year of drug injection, 60% of users are infected. After five years, the rate rises to 90%. Snorting drugs sometimes causes bleeding of the nasal membranes, and the disease can also be transmitted when straws are shared.

Tattooing, body piercing,[5] electrolysis and acupuncture also present risks if they are practised with unsterilized instruments. Among the other possible ways that the virus can be transmitted are occupational exposure (for example, a nurse being stuck with a dirty needle, in which case the risk is estimated at 3%) and health care in countries where infection prevention measures are deficient.

The risk of transmission of the virus from a mother to her child during pregnancy or birth is estimated



5 See on this subject the pamphlet *Tattoos and Body Piercing…Protecting yourself from AIDS, hepatitis B and hepatitis C*, published by the ministère de la Santé et des Services sociaux in 1999.

to be 5%.[6] Sexual relations with a person infected with HCV pose a low risk. Living under the same roof as a person with HCV involves no risk, except in rare cases where there may be blood-to-blood contact (for example, if a toothbrush or a razor is shared).

Before the virus was discovered and screening tests were developed and were used systematically, some people contracted the virus from a blood transfusion or when using blood products (for example, coagulation factors for hemophiliacs). Now, highly effective tests are done on all donated blood and the risk of contracting hepatitis C that way is very low (less than 1/100 000). Note that there is no risk of contracting hepatitis C when **giving** blood.

Transmission of the virus in other procedures, especially in hemodialysis or in an organ transplant, has also been seen but more rarely. The screening tests for the virus among organ donors have virtually eliminated the risk of transmission of hepatitis C during transplants. In hemodialysis, precautions are taken to reduce the risk of infection as much as possible.

6 The risk is higher–between 14% and 17%–if the mother is also HIV-positive.

PREVENTING HEPATITIS C OR ITS COMPLICATIONS

There is no HCV vaccine. But by taking certain precautions, you can avoid contracting, transmitting or aggravating the infection.

To prevent being infected by HCV

To avoid contracting the infection:

- do not share personal grooming items (toothbrushes, razors, nail clippers, etc.);
- do not share jewelry, rings, earrings or any other object that goes through the skin;
- be sure that the instruments used in tattooing, body piercing, electrolysis and acupuncture are sterilized;
- if you find used syringes, pick them up by the body of the syringe, preferably with tweezers, hold the needle far away from you and do not try to put the cap back on;
- if you snort drugs, never share straws or any other equipment used.

It is much safer not to inject drugs.

But to reduce the risks of infection as much as possible, it is essential that you always use:

- a new syringe and a new needle;[7] never share;
- equipment (spoons, filters, alcohol wipes, etc.) that is never shared;
- water that has not been in contact with used injection equipment.

Exceptionally, if there are no new syringes, bleach can be used to disinfect old syringes and injection equipment in order to reduce (but not completely eliminate) the risk of transmission of hepatitis and HIV.[8]

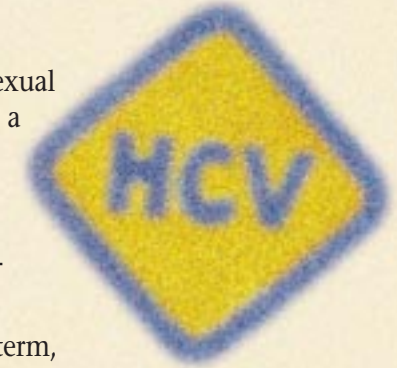
To avoid transmitting HCV

If you are infected with HCV, **in addition to** following all the recommendations given above:

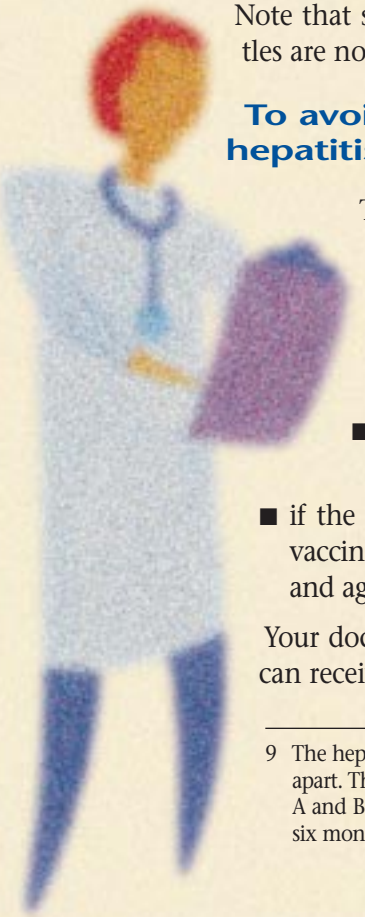
- cover any injury that is bleeding;
- do not donate blood, organs, tissue or sperm;
- notify your doctor if you have donated or received blood or organs;

7 For the addresses of needle exchange centres in your area, call the Info-Santé service at your CLSC or the drug assistance and referral centre (Montréal: (514) 527-2626; elsewhere in Québec: 1 800 265-2626).

8 With a view to reducing the ill-effects of drug consumption, Concertation en toxicomanie Hochelaga-Maisonneuve produced a video in 1999 entitled *Faire sa veine*, which comes with a guide and gives ways to improve the quality of life of people who inject drugs. It can be obtained at a cost of $20 + taxes by calling (514) 251-8872. See also the pamphlet *One Fit, One Hit*, 2000 edition, published by the ministère de la Santé et des Services sociaux.



- if you have several sexual partners, always use a condom during sexual intercourse; this will also prevent all sexually transmitted diseases;
- if you have a long-term, monogamous relationship, use a condom for sexual intercourse during menstruation or when one partner has genital sores;
- if you inject drugs, always discard your syringes in a safe manner. Place them in a rigid container that cannot be perforated, close the container and take it to a needle exchange location (see footnote 7). Note that soda, bleach and fabric softener bottles are not safe containers.



To avoid aggravating hepatitis C

To maintain the best quality of life possible if you have hepatitis C:

- avoid alcohol;
- take no drugs without first talking it over with your doctor;
- be vaccinated against hepatitis A and B[9] (the vaccines are free);
- if the infection is at the cirrhosis stage, be vaccinated against pneumococcal infections and against the flu (the vaccines are free).

Your doctor or CLSC can tell you where you can receive these vaccines free of charge.

9 The hepatitis A vaccine is given in two doses, six months apart. The hepatitis B vaccine, like the combined hepatitis A and B vaccine, is given in three doses, over a period of six months.

For a person infected with HCV, no special diet is required. However, like anyone who wants to stay healthy, you will feel better if you eat right.

MEDICAL FOLLOW-UP AND TREATMENT

If the screening test shows that you are infected with HCV, your general practitioner will examine you to assess your state of health, to check whether you have signs of liver disease and, if so, to determine how serious it is. If you have not been vaccinated against hepatitis A and B, your doctor will recommend that you receive vaccines against these other liver diseases. Feel free to ask for these services.

Depending on your state of health, the doctor may periodically prescribe certain blood tests to check your liver function. He will give you advice about how to keep as healthy as possible. If necessary, he will refer you to a specialist to complete the assessment of the damage to your liver and to determine whether you need treatment. The specialist may order a liver biopsy.[10]

Treatment, which has a number of side effects, is advised only for people with chronic hepatitis C, for whom the risk of cirrhosis is high. The treatment is usually prescribed by a general practitioner after assessment of the person's general state of health and when there are no contraindications.

The most common treatment recommended for hepatitis C is a combination of two drugs, interferon and ribavirin. If ribavirin is contraindicated, interferon can be prescribed alone.

The combination treatment is given for 24 or 48 weeks, according to the type of virus and the amount of virus in the blood. The treatment with interferon alone is given for 48 weeks. The treatment

10 Removal of a fragment of the organ for examination under a microscope.

does not eliminate the virus in all cases, but it can reduce the severity of the disease.

It is generally recommended that the patient abstain from all alcohol and drug consumption for six months before beginning the treatment. In addition, it is important not to take any other drugs during the treatment without discussing this with your doctor first.

The side effects of interferon include:

- flu-like symptoms (especially when treatment begins);
- irritability (a tendency to show anger);
- fatigue;
- insomnia;
- loss of appetite;
- depression.

The side effects of ribavirin include:

- anemia;
- shortness of breath;
- rashes;
- itching.

Ribavirin may cause congenital malformations.

It must never be administered to pregnant women.

Furthermore, during treatment and for six months after treatment ends, both the man and the woman in a couple must use very safe methods of contraception, regardless of whether the man or the woman is/was treated.

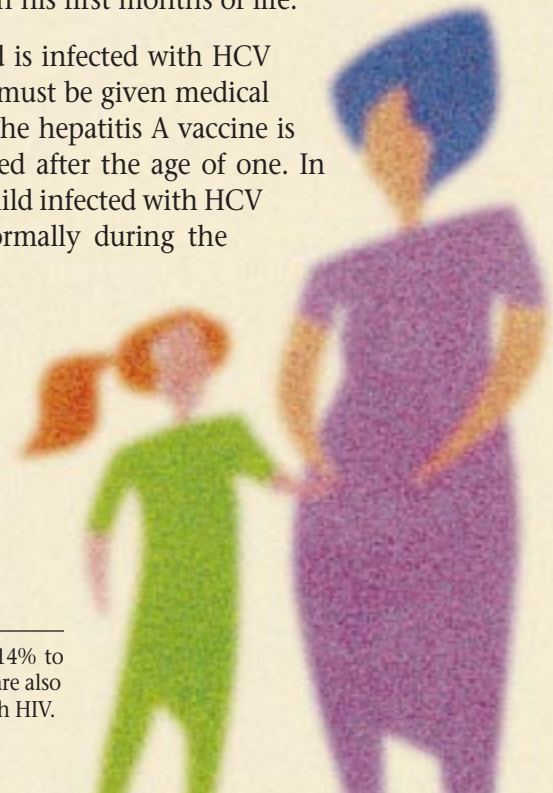
MOTHERS WITH HCV

If you have been infected with HCV, the risk of transmitting the virus to your baby during pregnancy or birth is about 5%.[11] The risk of transmitting the virus does not appear to be any higher during a normal delivery than during a caesarian section.

Research has not shown that the virus can be transmitted through mother's milk. However, it would be safer not to breastfeed when the nipples are cracked or have sores on them.

Your baby does not require any special precautions in the nursery. The usual infection prevention measures are sufficient. He should undergo tests to determine whether he is infected with HCV. Whether infected or not, he should be vaccinated against hepatitis B in his first months of life.

If your child is infected with HCV at birth, he must be given medical follow-up. The hepatitis A vaccine is recommended after the age of one. In general, a child infected with HCV develops normally during the



11 The risk is 14% to 17% if you are also infected with HIV.

early years of life. Subsequently, as with any person who has the virus, the course of the infection varies with the individual.

LIVING WITH HIV AND HCV

Being infected with both HIV and HCV–called co-infection–poses several problems. It has also raised a number of questions, for which answers have not been found yet.

The risk of a mother transmitting HCV to her child is three times higher in the case of co-infection. The risk of sexual transmission of HCV may also be higher for a person with HIV.

In the case of co-infection, the HCV screening test is less reliable. It may be necessary to undergo another test in order to detect the hepatitis C virus in the blood.

HIV can aggravate HCV-related disease. Some studies have shown that, with co-infection, there is greater damage to the liver, and progress toward cirrhosis is twice to three times more frequent and twice as rapid. However, HCV does not appear to significantly affect the progress of HIV infection.

Lastly, there is no conclusive study of the effect of HCV treatment on co-infected patients or on the effectiveness of anti-HIV treatment. Nor do we know whether HIV tritherapy is likely to worsen damage to the liver of a person with hepatitis C.

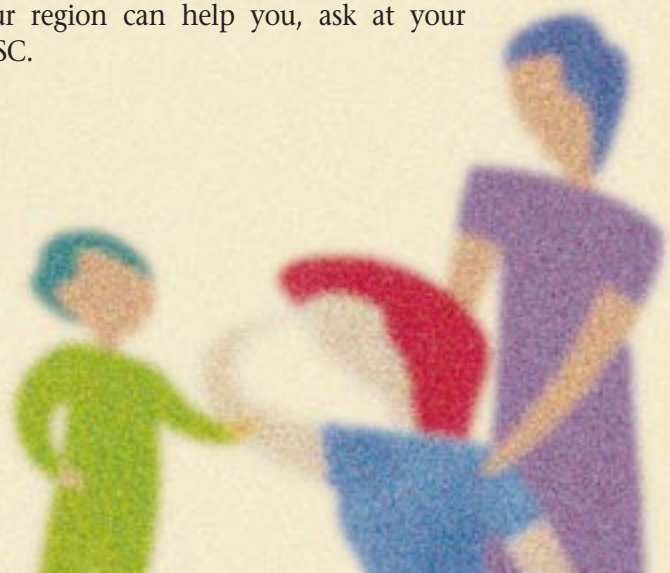
GIVING SUPPORT TO PEOPLE WITH HEPATITIS C

People living with hepatitis C need support and reassurance. Accurate information on the disease can help to dispel the unjustified fears often at the root of various forms of discrimination against them.

We must realize that HCV is not transmitted by sharing utensils or glasses, or by shaking hands, touching, sneezing or coughing. So there is no risk per se in being with a person who has hepatitis C or in living under the same roof as such a person.

There is no reason to exclude people with HCV from day care centres, schools, sports, workplaces or anywhere else. Everyone should simply avoid situations that can lead to blood-to-blood contact. This precaution is valid not only for protecting against hepatitis C, but also against a number of other diseases.

Some community organizations offer support (listening, information, referral, supportive care and so on) to people infected with HCV and their relatives and friends. To find out which organizations in your region can help you, ask at your CLSC.



TYPES OF HEPATITIS

	Hepatitis A		Hepatitis B	Hepatitis C
Mode of transmission	The virus is present in the infected person's feces. It is transmitted primarily by contaminated water and food, especially if a person's hands are not washed properly.		The virus is transmitted primarily by the blood, sperm and vaginal secretions of an infected person.	The virus is transmitted by blood-to-blood contact, especially when syringes and injection equipment are shared.
Evolution	Generally lasts a few weeks. Never chronic.[12]		Lasts several months. Chronic[12] in 5% to 10% of cases. Can evolve into cirrhosis and liver cancer.	Chronic[12] in 85% of cases. Can evolve into cirrhosis and liver cancer.
Spreading of the virus	A person can spread the virus when he has the disease and a few days before.		A person can spread the virus several weeks before he has the disease and several weeks after. A chronic carrier can spread the virus at any time.	A chronic HCV carrier can spread the virus at any time.
Prevention	A. Wash your hands often, especially after you go to the washroom. B. Never share syringes or equipment used in drug consumption. C. Ensure that the instruments used in tattooing and body piercing are sterile.		D. Use a condom. E. The hepatitis A vaccine protects against hepatitis A. F. The hepatitis B vaccine protects against hepatitis B. G. There is no vaccine that protects against hepatitis C. However, the vaccine against hepatitis A and B can prevent complications in chronic HCV carriers.	

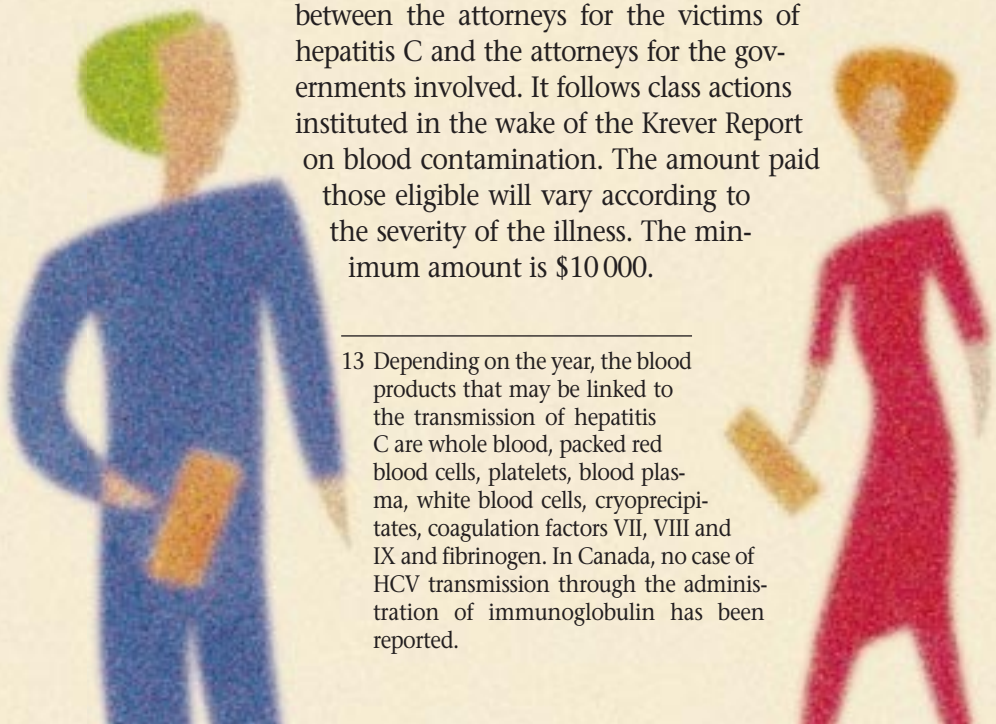
12 The disease is **chronic** when the virus remains in the body. It then progresses slowly and the person tends not to recover.

FINANCIAL ASSISTANCE FOR PEOPLE INFECTED THROUGH A TRANSFUSION

If you contracted hepatitis C through a blood transfusion or the use of blood products,[13] you may be entitled to financial assistance. The ministère de la Santé et des Services sociaux, in collaboration with hospitals, will in fact systematically find those who received transfusions. The assistance provided differs according to the time of infection.

Infection contracted between January 1, 1986 and July 1, 1990

The 1986-1990 Hepatitis C Settlement, to which Québec is contributing, covers people infected by a blood transfusion or the administration of blood products in Canada between January 1, 1986 and July 1, 1990. The Settlement is the result of an agreement between the attorneys for the victims of hepatitis C and the attorneys for the governments involved. It follows class actions instituted in the wake of the Krever Report on blood contamination. The amount paid those eligible will vary according to the severity of the illness. The minimum amount is $10 000.



13 Depending on the year, the blood products that may be linked to the transmission of hepatitis C are whole blood, packed red blood cells, platelets, blood plasma, white blood cells, cryoprecipitates, coagulation factors VII, VIII and IX and fibrinogen. In Canada, no case of HCV transmission through the administration of immunoglobulin has been reported.

Information

Tel. (toll-free): 1 877 434-0944
Website: www.hepc8690.com

Infection contracted before January 1, 1986 or between July 2, 1990 and September 28, 1998

The Québec government asked that all people infected through the blood supply system be dealt with in the same manner. In the absence of an agreement on the subject, the Québec government decided, for humanitarian reasons, to offer financial assistance of $10 000 to people infected with HCV through a blood transfusion or through the use of blood products in Québec before January 1, 1986 or between July 2, 1990 and September 28, 1998, the date on which Héma-Québec was given responsibility for the blood supply system. This program is administered by the Régie de l'assurance maladie du Québec.

Information

Québec City: (418) 646-4636
Montréal: (514) 864-3411
Elsewhere in Québec (toll-free): 1 800 561-9749

TDD (telecommunications devices for the deaf)

Québec City: (418) 682-3939
Elsewhere in Québec (toll-free): 1 800 361-3939
Website of the ministère de la Santé et des Services sociaux: www.msss.gouv.qc.ca ("documentation" section, under the heading "publications gratuites", *Québec Financial Assistance Program for Persons Infected with the Hepatitis C Virus*).

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