



**AIDS RESOURCE CENTRE**  
OKANAGAN & REGION

# Hepatitis C

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# Hepatitis C 101

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# INTRODUCTION

## **THE IMPACT OF HIV/AIDS AND HEPATITIS C**

HIV/AIDS and Hepatitis C can affect us all. They do not discriminate by gender, race, age, colour, marital status or sexual orientation.

HIV/AIDS has had a devastating impact in Canada and around the world. The World Health Organization estimates that every day, 16,000 additional people contract the virus.

**According to Health Canada 300,000 Canadians are infected with Hepatitis C. UNAIDS estimates that 170 million people worldwide are infected with Hepatitis C. Twenty-two percent of Canadians living with HIV are co-infected with Hepatitis C.**

### **BENEFITS OF HIV/AIDS AND HEPATITIS C EDUCATION**

There are people around you right now who are living with HIV/AIDS and/or Hepatitis C. Maybe a friend, someone you work with or a member of your family.

HIV/AIDS and Hepatitis C education is important to help prevent the spread of infection and to help prevent fear and panic, and discrimination toward people that are infected or affected by HIV/AIDS and Hepatitis C. Education can help people learn how the viruses are contracted, how to protect oneself against them, teach people to develop compassion and understanding for individuals who are infected/affected by these illnesses.

### **THE OBJECTIVES OF THE TRAINING:**

1. To increase the participant's knowledge about Hepatitis C and how it impacts the workplace and society.
2. To help participants learn how Barriers to Care influences the teaching and learning of Hepatitis C information.
3. To help participants increase their awareness of educational resources (both human and material).

# STEPS FOR GETTING STARTED

**The best defense against HIV/AIDS and Hepatitis C related problems are a result of factual information. The following steps may help:**

## **YOUR ROLE:**

A well developed and used HIV/AIDS and Hepatitis C education programs have found that preventive education goes a long way toward:

- reducing public's fears
- improving participant's responses to friends, family and co-workers who are dealing with issues regarding HIV/AIDS and Hepatitis C.
- heightening awareness of infection control practices
- opening communication in larger groups

## **It is important to remember that:**

1. **FEARS OF THE UNKNOWN ARE COMMON.** Some people won't be able to even hear your information until their fears and anxieties are addressed.
2. **THE CHANCE TO ASK QUESTIONS IS IMPORTANT.** Techniques that may work:
  - Participants may write questions anonymously on cards and hand them to you or place them in a question box.
  - Have small groups brainstorm their questions.
  - Ask participants for their questions at the beginning of the program.
3. **Freely repeat factual information. Education research demonstrates that people need to hear information several times in different ways to internalise it.**
4. **DO NOT CONDONE DISCRIMINATION.** Be aware that the group is composed of individuals from diverse backgrounds. Stress a non-judgmental approach that does not impose your cultural biases and personal views on others. Display sensitivity towards people, remembering that language can often be judgmental. Terms such as "abnormal" and "abuser" in relation to sexual orientation or drug use are not helpful in your discussions. Participants should respect individual differences in values among fellow participants.

5. **DEVELOP A POLICY OF CONFIDENTIALITY.** Participants of the workshop need to know that material they disclose is personal will be handled in a confidential manner. However, if someone discloses personal information to the group, you cannot guarantee that the group will maintain confidentiality. Workshop participants need to know this and ask them, at the beginning of the session, to maintain such confidentiality. This can help to protect peoples' rights and dignity.
  
6. **NEVER THEORIZE WHEN YOU DON'T KNOW!** There are lots of inaccurate theories and interpretations about HIV/AIDS and Hepatitis C out there ... who has it, who doesn't, and "how you can always tell" ... Speak from your own experience, not from stories you have heard. **Say, "I don't know" anytime that you are in doubt about an answer.**

# **BARRIERS TO CARE:**

## **INTRODUCTION**

This section explores the influence that participants' own values and attitudes about issues related to HIV/AIDS and Hepatitis C can have on their learning. You will also examine how their own attitudes and values influence learning retention and acceptance of information.

### **Values**

Consider values as navigators in life. They allow us to create and maintain a sense of who we are and where we belong in the world. Our values are our belief system. Values also help us to maintain a sense of what's right and wrong as well as what is important to us. We establish this belief system both consciously and subconsciously throughout our lives.

### **Attitudes**

We form attitudes and behaviours based on our values system.

### **Feelings**

HIV/AIDS and Hepatitis C are more than medical problems because of associations with sexuality, drug use, disease, and grief. They often arouse strong feelings and challenge deeply held values.

What we say to others, and how we say it will reflect our own feelings and values. It is therefore important to offer participants in an education session an opportunity to clarify their feelings and values in a safe environment, and to consider their effect upon the work they do with others. As a participant, it is important to include processing and debriefing time in your plans. Participants are not forced to engage in activities, as there is a need to feel safe and trusting.

## SEXUALITY

Discussing sexuality is a very important aspect of HIV/AIDS and Hepatitis C education. How we feel about our own sexuality, about other's sexuality, and how we communicate information about sexuality is very important when we talk and teach about HIV/AIDS and Hepatitis C.

There have been changes in the messages about sexuality, as sexuality is no longer spoken of only in the context of religion, illness, social class, culture and gender. Discussions now may include issues related to pleasure, freedom and experimentation. Since one possible mode of transmission of HCV infection is sexual, participants need to continually re-examining the messages given about sex, sexuality and sexual activities in all these realms.

## HOMOPHOBIA

Homophobia is defined as the irrational fear of lesbians, gays, and bisexuals resulting in prejudice against them. HIV/AIDS was first noted to affect the gay male population in North America (GRID). People's perceptions of homosexuality have an impact on HIV/AIDS education in many ways. Attitudes affect the way one teaches about HIV/AIDS, and interfere with people's ability to acquire knowledge about HIV/AIDS. This also applies when dealing with sexual, social, and economical issues around HCV.

## HETEROSEXISM

Institutional and cultural homophobias are in fact what we refer to as heterosexism. Heterosexism is the institutionalisation of power in a way that affords economic, social and legal advantage to heterosexuals. It stems from the belief that the only normal, healthy way for people to express themselves sexually is with members of the opposite sex. Heterosexism also assumes that everyone is heterosexual.

**Many people who have same sex experiences do not identify as gay/lesbian/ or bisexual and as a result, many do not see themselves at risk for HIV/AIDS or HCV. That is why it is important in sessions to refer to sexual behaviours, not sexual groups when discussing HIV or HCV transmission.** It is better to talk about "Men who have sex with men" and "Women who have sex with women" rather than referring to risks for gays/lesbians/bisexuals.

## **INJECTION DRUG USERS**

There should be increased emphasis on the development of comprehensive education and counselling **within both** HIV/AIDS and Hepatitis C prevention **and** addiction treatment services. Service providers should be equipped to address safer sex and safer injecting practices, and also deal with sexuality, drug use and the health and medical complications of injecting.

**Regardless of your group, participants must be aware of issues surrounding injection drug use.** This is a topic that has often been neglected because participants are uncomfortable with injection drug use, and have made false assumptions about people who use drugs. Just like sexuality, homophobia and racism, it is important to examine and challenge your attitudes towards addiction and drug use.

**NOTE TO PARTICIPANTS:** In this course manual, any reference to drugs includes legal and illegal drugs including performance enhancing drugs (steroids) narcotics (heroin, crack) as well as insulin. Ideally, HIV/AIDS and Hepatitis C education should include a section on Injection Drug Use, harm reduction strategies and safer needle use.

## **INFLUENCE OF ALCOHOL and NON INJECTION DRUGS**

Drugs (marijuana, club drugs) and alcohol affect a person's judgment. The lack of judgment could potentially put the person at a greater risk of participating in behaviors they might not otherwise partake in.





## Hepatitis C: History

- 1940's – Occurrence of hepatitis after transfusion of prison-sourced blood noted.
- 1950's – Named “**non-A non-B**” hepatitis.
- 1989 – Hep C virus identified. Specific antibody tests for Hep C developed.
- 1990 – Screening of blood supply in Canada introduced.
- 1995 – Hep C virus is first seen using electron microscope.

*Current risk of transmission via blood transfusion is 1 in 500,000 units donated.*

Hep C has been around a long time but was not identified until 1989. There was something called non-A non-B hepatitis from 1950 to 1989, which turned out to consist of 90% Hep C and 10% other Hepatitis viruses. Tests of blood supply using levels of liver hormones were available from the 1960's.

Possible that people suffering from unknown disorders with fatigue as a major symptom (“yuppie flu”, Chronic fatigue syndrome) could now have Hep C diagnosis.

### **More details**

1940's – report of hepatitis transmission after transfusion of prison-sourced blood

1950's – Named non-A non-B hepatitis

1965-80 – European countries start screening blood supplies

1986 – USA starts screening for non-A non-B Hepatitis

1989 – Hep C virus identified. Specific antibody tests for Hep C developed.

1990 – Screening of blood supply in Canada introduced.

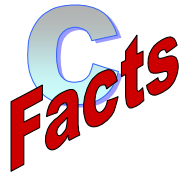
1995 – the Hep C virus is first seen using electron microscope.

1987 – Krever report recommends compensation for those infected through the blood supply.

1998 – Canadian Blood Services takes over from the Red Cross. Class action suit started.

### **Tainted Blood compensation**

If you received blood anywhere in Canada prior to January 1, 1986 and between July 1, 1990 and September 28, 1998 inclusively, and this blood was contaminated with the Hepatitis C Virus, you may be eligible to receive compensation under the Canadian Red Cross Settlement. Affected families may also be eligible. The Hep C Society of BC's website (click to “compensation”) contains details of how to claim.



## Hepatitis C

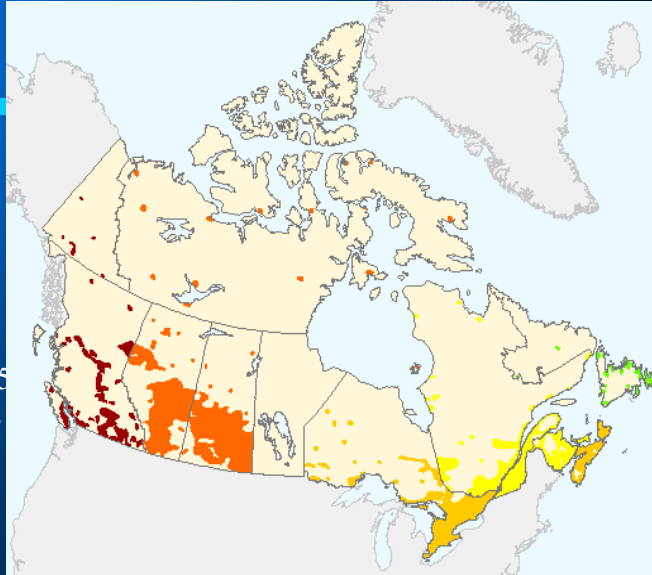
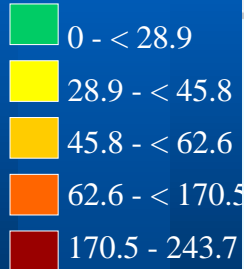
- About 20% of infected people will clear the virus, 80% will have a long term (chronic) infection.
- Some infected people will die from liver failure or liver cancer.
- There are at least six strains of Hep C, and more than 90 subtypes of Hep C.
- There is treatment for Hep C, but only about 40% of people who go through treatment appear to clear the virus.
- It is possible to become re-infected with Hep C.

-In Vancouver it is estimated that 88% of Injection Drug users are infected with HCV

-There is NO VACCINE for HCV

## Hepatitis C, Both Sexes, All Ages, 1998

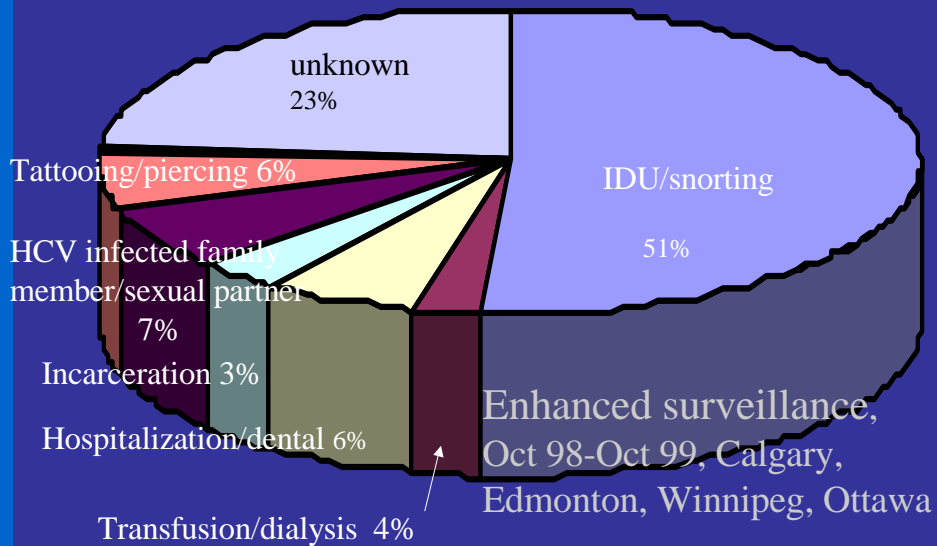
Rate per 100,000



Cdn prevalence  
~300,000

Health Canada, Notifiable Diseases on Line <http://cythera.ic.gc.ca/dsol/ndis/> Presentation by Dr. Mark Bigham

## Acute Hepatitis C in Canada



Presentation by Dr. Mark Bigham-BCCDC 2001

## C Figures

### Hepatitis C Statistics

- Estimated 6,400 people in the Okanagan Valley are infected with HCV.
- Approximately 250,000 Canadians (1% of population) including 40,000 people in BC are infected with HCV; around 70% of them are unaware of the infection.
- 88% of injection drug users in Vancouver have HCV.
- In some countries up to 40% of the population is infected.

*There is no vaccine  
and no reliable cure for Hepatitis C*



Notification of HCV in Canada began in 1992, and has been mandatory in all provinces since January 1999. Notification/Reporting means that if you are diagnosed, you must tell the health professional the names and contact information of needle-sharing, sexual contacts and other possible sources of infection. The number of reported cases has increased dramatically since then:

Injection Drug Users – 70%,

Aboriginal population- 15 - 20%,

Recipients of blood products, tissue, organ from 1960-92.

Prisoners in correctional facilities: Men 70-80% HCV +; Women in Kingston: 86.9% tested – 39.8% HCV+

## The Liver: a Vital Organ

- acts as power plant and filter system

*Everything you eat, drink, breathe and inject is filtered by your liver.*



### Your liver:

- converts food into substances for repair and growth
- stores energy from sugar and regulates how fat is stored
- processes and removes drugs and other toxins
- makes proteins for blood clotting and fighting infections
- manufactures bile, for absorption of fats and some vitamins.

Your body depends on a healthy liver

**Our liver is vital in maintaining our good health. Our liver is virtually our power plant. It is our body's filter system. The liver has over 500 functions;**

Your Liver:

- Cleans Alcohol, drugs, harmful by-products and other toxins from your blood.
- Converts most medicines, like allergy medications, into forms your body can use.
- Removes old blood cells
- Makes essential Proteins:
  - That transports Nutrients and other substances through the blood to other organs and tissues
  - To clot your blood
  - That provides resistance to infections and bacteria

Your liver maintains a healthy balance in your body of:

- Hormones
- Cholesterol- your liver produces it, excretes it, and converts it.
- Essential Vitamins and minerals
- Glucose (simple sugars), by producing, storing and supplying it to the rest of the body.
- Fat, by producing and supplying it to the rest of the body.

If our liver is not functioning properly this affects many other organs and their functions within our body. When these are affected they will eventually suffer as well.

# ABC

## Hepatitis Definitions

**H**      **HEPAT** = Liver;    **ITIS** = inflammation

**A-G+**    Different forms of hepatitis  
Hepatitis A, Hepatitis B, Hepatitis C, D, E, F, G + +

**V**      **Virus:**

- Tiny infectious organisms.
- Made up of genetic material (DNA) and proteins.
- Need host cells to reproduce themselves.
- HCV is 1 billion times smaller than a human cell.

Hepatitis simply means **inflammation of the liver**, which can lead to liver damage.

-Many harmful agents can cause hepatitis.

The Hepatitis C Virus (HCV) is a virus that infects the liver and causes hepatitis:

-HCV comes from a family of viruses known as **flaviviruses**, that include viruses that produce yellow fever, dengue fever, and Japanese encephalitis.

There are also other hepatitis viruses that attack the liver in a similar fashion, principally Hepatitis A and Hepatitis B. HCV was identified in 1989, and since then D, E, F, G have been identified.

A **virus** is a set of genetic instructions surrounded by a protein coat. It requires a living host in which to infect and replicate it self to make more copies of itself. This is done by infecting and killing the living host's cells.

**1 billion times smaller than human cell: compare HIV 1 million times smaller** (hence uncertainty as to whether condoms work for HCV)

## **A** Hepatitis A

- Jaundice, Fatigue, Abdominal pain, Loss of Appetite, Diarrhea Intermittent nausea.

### **TRANSMISSION**

- Fecal-oral, Food, Waterborne

### **PREVENTION**

- Hepatitis A vaccination
- Good hygiene and sanitation

## **B** Hepatitis B

- Jaundice, Fatigue, Abdominal pain, Loss of Appetite, Vomiting, Intermittent nausea.

### **TRANSMISSION**

- Blood borne, Sexual, Perinatal

### **PREVENTION**

- Hepatitis B vaccination
- Screening of blood /organ/ and tissue donors

## **C** Hepatitis C

### **SYMPTOMS**

Fatigue, Muscle Pain, Mental confusion & memory loss, Depression, Jaundice, Sleep disturbances, Abdominal Pain, Flu-like symptoms, Eyesight Problems, Appetite Problems, Dark urine and light urine, and Bruising easily.

### **TRANSMISSION**

- Blood borne and Perinatal
- Any activity that puts infected blood in contact with your blood stream

### **PREVENTION**

- Always use new needles for medicine, tattoos, piercings and recreational drugs.
- Safer Sex
- Screening of donated Blood and organs

## **Hepatitis A**

Mostly through poor sanitation. Household/sexual contacts of infected persons; international travelers; persons living in First Nations reservations, and other regions with endemic hepatitis A; during outbreaks day care centre employees or attendees, men who have sex with men, injection drug users. The sexual practice known as “rimming” places people in a very high risk of contracting hepatitis A. There are many good reasons not to eat feces. Hep C is just one.

Remember the outbreak at food store in Vancouver, spring 2002 (Capers)

**PREVENTION:** Vaccine is highly effective in preventing HAV. Immune globulin administered pre- and post exposure; good hygiene and sanitation. 2 shots over 6 months, \$40.00 per shot.

**Free Hep A shots** available to MSM, IV drug users, chronic liver disease inc. Hep C, Hemophiliacs.

## **Hepatitis B**

Hepatitis B is spread mostly through unprotected sex.

Risk Groups: Injection Drug Users; sexually active heterosexuals; men who have sex with men; infants/children of immigrants from disease–endemic areas; sexual /household contacts of infected persons; infants born to infected mothers; health care workers; kidney dialysis patients.

**PREVENTION:** Vaccine available since 1982. Three shots over 6 months; screen pregnant women and treatment of infants born to infected women; routine vaccination of infants and 11 – 12 year olds; catch up vaccination for high-risk groups of all ages; screening of blood/organ/tissue donors.

**Eligibility for free Hep B shots (Outreach Health, Public Health Units, Family Doctor).**

Health care workers; Emergency service workers; Children 9 – 13; Men who have sex with men; IV drug users and their sex partners; Multiple sex partners (3+ per year); Infected with liver diseases, including Hep C, or HIV; Recently had an STD; Hemophiliacs

## **Vaccinations**

There are Vaccinations for Hepatitis A, Hepatitis B and there is a combination Vaccination for both A & B

## **TESTING**

When a person suspects that they have been infected with Hepatitis, they can be tested for Hepatitis A, Hepatitis B, and Hepatitis C. these test can be tested for individually, or in one test called a Hepatitis Screening



## **Hepatitis D**

Hepatitis D, or delta Hepatitis, is an incomplete virus that requires the presence of Hepatitis B in order to complete its life cycle.

## **Hepatitis E**

Symptoms are the same as Hepatitis A, but cases in the US and Canada appears to be imports from Central America, Mexico and the Indian subcontinent of Asia.

## **Hepatitis? F, X, TTV?**

Some patients with Viral Hepatitis lack evidence for infection with Hepatitis A through E. Studies of these patients have uncovered potential new Hepatitis viruses.

## **Hepatitis G**

We're learning more about this newly discovered virus, which is transmitted the same way as Hepatitis C. Hepatitis C and Hepatitis G are in the same family of viruses and Hepatitis G is comprised of at least four main subtypes. But we don't know whether Hepatitis G causes clinically significant liver disease.



## Acute HCV Infection

- 30% to 40% of those infected notice initial (acute) symptoms
- May appear 6 to 9 weeks after infection
- Flu-like symptoms lasting 2-12 weeks. Fatigue, fever, muscle pain, nausea, vomiting
- Only 10% get jaundice (yellow skin and eyes)

## Chronic HCV Infection

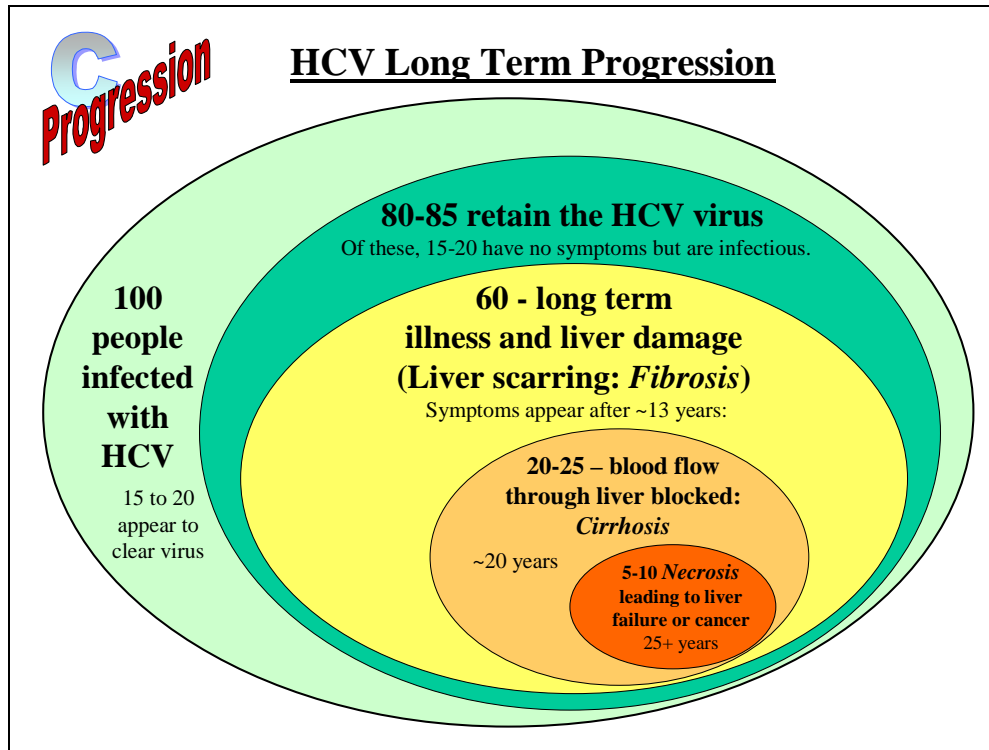
Varies from no symptoms, to lack of energy, to complete debility. Symptoms come and go.

- |                                  |                              |
|----------------------------------|------------------------------|
| •Fatigue, can be extreme,        | •Flu-like symptoms,          |
| •Muscle pain,                    | •Eyesight problems,          |
| •Mental confusion & memory loss, | •Appetite problems,          |
| •Depression,                     | •Abdominal swelling,         |
| •Jaundice,                       | •Dark urine and light stool, |
| •Sleep disturbances,             | •Itching,                    |
| •Abdominal pain                  | •Bruising easily.            |

Acute infection is equivalent to sero-conversion illness in HIV.

**HEPATITIS C MAY BE PRESENT FOR MANY YEARS WITHOUT ANY SYMPTOMS WHILE DESTROYING LIVER CELLS AT A SLOW RATE. (The liver has a large reserve and can function normally even when much of it is destroyed)**

Some SIGNS of CIRRHOSIS or LIVER FAILURE: Swelling of abdomen, leg or ankles bleeding caused by varicose veins breaking open in the esophagus or stomach, mental confusion due to toxins in the blood, jaundice (skin, eyes turn yellow), extreme fatigue, psychological disturbances.



It currently seems that **if 100 people catch hepatitis C:**

15-20 people will get rid of it within 2-6 months (much like we get rid of a flu virus)

60 people will have a long-term infection that may cause no problems or may cause levels of liver damage ranging from mild to serious.

20-25 people will have a long-term infection that leads to serious liver damage after 20 years. Of these people (i.e., those with serious damage after 20 years):

10 will remain stable and the other 15 will progress to necrosis (death of liver cells) to liver failure or liver cancer after another 5 years. Either may be fatal. These are potential liver transplant receivers.

Hepatitis C infection doesn't always make people sick. When someone does get sick, usually the symptoms take a long time to develop (approximately 13 years).

Symptoms often stay at a certain level and don't always get worse. They can come and go with no real pattern.

Some people with chronic infection (bright green oval) don't have any noticeable liver damage or symptoms. These people remain well, but **THEY ARE INFECTIOUS AND SHOULD TAKE CARE TO REDUCE ANY RISK OF TRANSMITTING THE VIRUS TO OTHERS.**

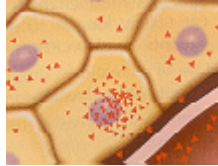
**Note: the disease progression varies widely from person to person. Lifestyle issues can greatly change the rate of progression (e.g. cocaine, alcohol use).**

(Thanks to HEP C BC for this write-up)

## **Phases of Hepatitis C**

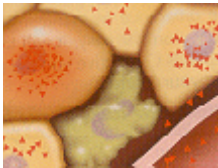
### **Phase I: Infection**

- \* HCV virus enters the blood stream, attaches to liver cells, and begins to reproduce
- \* New virus, made in infected liver cells, invades more liver cells and infects them



### **Phase II: Inflammation**

- \* Infected liver cells become inflamed
- \* The inflammation causes liver cells to die



### **Phase III: Fibrosis**

- \* Over time, hepatitis C commonly progresses to fibrosis
- \* Among the healthy and inflamed liver cells strands of scar tissue develop
- \* If your liver biopsy shows significant fibrosis, it usually means you've been infected with HCV for 10 years or more

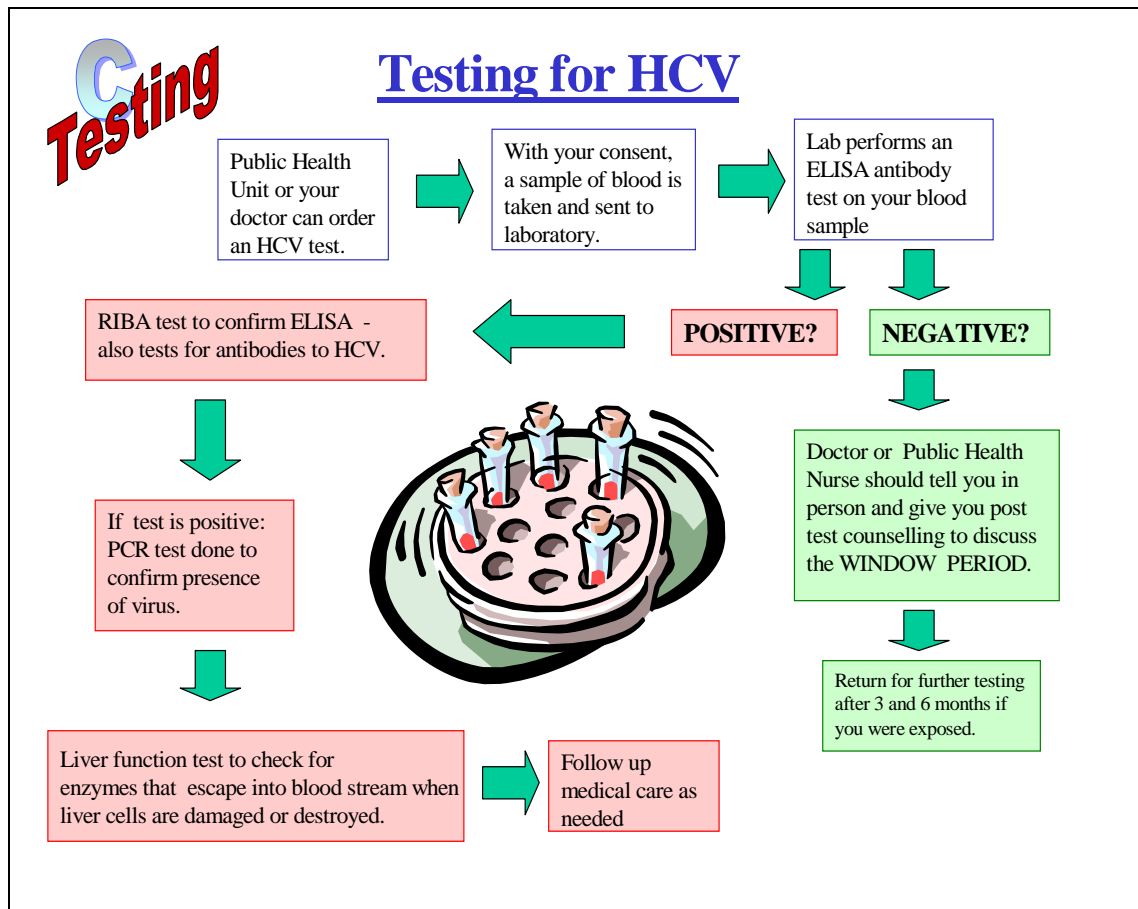


### **Phase IV: Cirrhosis**

- \* When fibrosis increases, cirrhosis begins to appear
- \* Cirrhosis affects how blood flows in and out of the liver. This impairs normal liver functions



Thanks to HepNet: Hepatitis C patient Booklet- Knowledge is power for above information



### HCV Testing:

An HCV **ELISA (enzyme linked immuno-sorbent assay)** test is required to determine if a person is HCV Positive.

Testing can be done **6 weeks after potential infection** to test for **antibodies**, but the antibodies may not be detectable for up to 9 months (at which point 99% of infected persons will have sero-converted.)

#### (Sero-conversion means change of test from negative to positive)

You must give a name and contact number; however you can give an alias if you prefer. No results are given over the phone.

Hepatitis C is a reportable disease in British Columbia. This means a copy of all positive lab results are sent to the local health authority and you must supply names and contact information of potential infection sources. This information is highly confidential.

Testing may be recorded on patient records and could affect further insurance eligibility.

### **Further Testing:**

**RIBA** test can also be done to get more detailed information on the level of HCV in the blood

**PCR** (polymerase chain reaction) (**qualitative**) determines the presence of the actual virus in the blood stream. This is an extremely sensitive test for viral RNA. **The reason for the test is to determine whether you have cleared the virus automatically.**

**PCR (quantitative)** measures the number of viral particles in the blood stream – not commonly done, as the viral load does not determine your eligibility for or course of treatment.

**Liver Enzyme Testing:** for enzymes that escape into the blood stream when liver cells are damaged or destroyed. A high level of escaped enzymes is a bad sign.

#### **ALT/AST:**

- General indicator of inflammation. Measures liver enzyme levels. Does not indicate degree of damage to liver.

- Normal range varies from 35 to 45, but should go to the same lab at the same time of day for consistent results.

- Does not determine whether or not someone still has the virus, or how long they've been infected

**Genotyping:** There are different genetic strains of hepatitis C. It is extremely helpful to know the genotype of your virus because different types take different lengths of treatment.

#### **Liver Biopsy:**

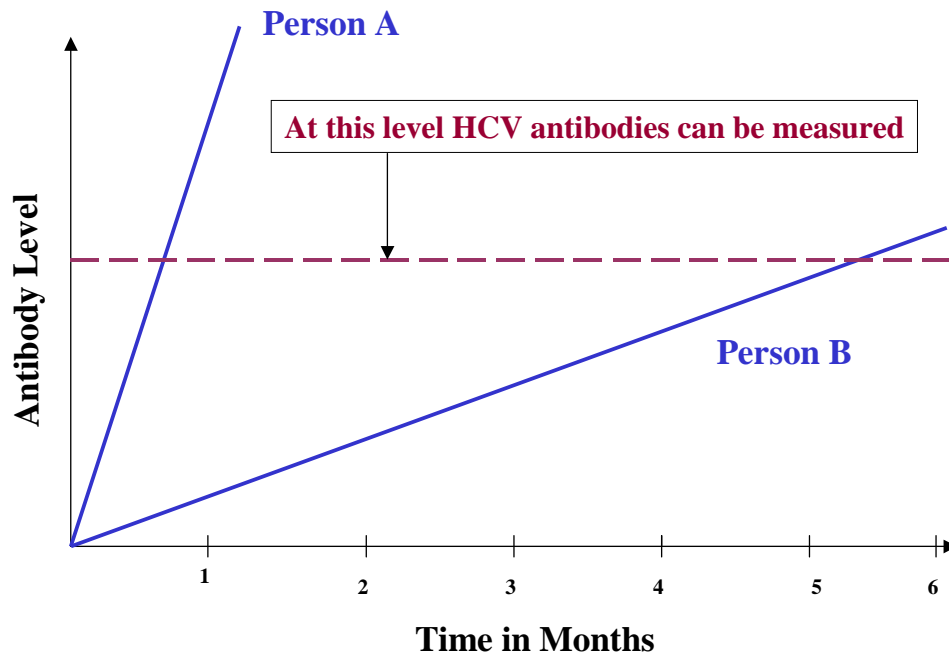
- Done to detect the cause and stage of liver disease. Possibly degree of cellular necrosis, inflammation, and scarring

- Most commonly done by inserting a needle into the liver for a fraction of a second. Done at the hospital with a local anesthetic and the patient may be sent home within 1-2 hours if there are no complications.

**Ultrasound:** An ultrasound uses sound waves to create a picture of the liver. It reveals the size and texture of your liver, and the size of the bile ducts and blood vessels. It is a safe and painless way to investigate your liver and supplies of blood to it

: Reproduction Care of Women Living with Hepatitis C Infection, by SOGC, Oct 2000

## The Window Period



**Person A:** Antibodies have reached measurable level after less than 1 month;

**Person B:** Antibodies reach measurable level after 5 months. This is slower than average but not unusual.

Average is 2 to 6 months.

99% of HCV + people have antibodies by 9 months after the exposure.

# **NOMINAL, NON-NOMINAL, ANONYMOUS TESTING**

## **NOMINAL TESTING, (Physician):**

- Real name of client is known by physician and is used on the blood sample taken.
- The fact that the person took a test (regardless of the results) is documented in their medical record.
- The person's name will be revealed to the laboratory staff doing the testing.
- If the results indicated that the person is HIV or HCV positive, the Department of Public Health is made aware of the results and the individual's name. The individual will be notified and their contacts can be traced.
- Once the HIV or HCV status is documented in the physician's file, this confidential information can be obtained by others (i.e. when applying for insurance, the company obtains permission to access your medical records).

## **NON-NOMINAL TESTING, (Health Unit process):**

- **Clinics assign a code number to lab slips, instead of real names.**
- The identity of the client is confidential because only the health unit nurse and the client know it.
- The laboratory staff and the Department of Public Health are only provided with the client's code number.

## **ANONYMOUS TESTING:**

- Name or personal information is never asked
- The person is given a code for identification purposes
- Client returns to the clinic with code number to receive the results of the test.
- Anonymous testing has been very successful because of its complete anonymity. Although there is no tracing of the partners' contacts, a greater number of people, who otherwise may not have been, are finally made aware of their HIV or HCV status.





## HOW DO I GET HCV?

**1. INFECTED BLOOD**

+

**2. AN ENTRY POINT INTO YOUR  
BLOODSTREAM**

+

**3. AN ACTIVITY**

that brings the blood and the entry point together

---

**= RISK OF TRANSMISSION**

**HCV is 10 to 15 times more infectious than HIV**

### **1. Blood**

**Other body fluids** may contain blood and may be infectious – **saliva** (recent flossing or dental diseases) – **vaginal fluid** (during menstruation). Some studies suggest HCV may be found in semen. Breast milk? No documented cases.

HCV can live outside the body for a long time, possibly up to three weeks.

### **2. Entry Point: Must be directly into blood stream. Not receptor cells.**

**Needle sticks; cuts/open sores/chapped, blistered skin (note: open cuts tend to bleed outward; others scab over usually in a matter of hours so lower risk;**

Tearing of tissues during sexual activity (vaginal/anal);

Mother to child - 6% either during birth process, before birth due to tears in placenta, or possible breast feeding because of cracked & bleeding nipples. Entry point for the child can be the mouth/digestive system because newborns' digestive enzymes are not developed yet.

### **3. Activity (see next slide for activities listed in order of risk)**

**Blood transfusions** (prior to 1990 (now less than 0.5% risk));

**Sharing needles**, including for body piercing, tattooing, where standard precautions not followed;

**Sharing blood-contaminated toothbrushes, razors, scissors, and nail clippers;**

**Sharing cocaine snorting equipment;** - it can cause damage to delicate tissues in the nostrils which then bleed. This can then lead to a source of contaminated blood or an entry point into the blood stream.

**Narcotic mixing.** Because HCV can live outside the body sharing of equipment including water, spoons, filtering, straws, cookers, & tourniquets; is not recommended. Further more HCV is not quickly destroyed with heat.

**Sexual intercourse** Sexual transmission of HCV is considered minimal in long term, monogamous relationships (up to 6% risk) There is considered higher risk with multiple partners and with anal intercourse. **Oral sex** (low theoretical risk);

**Perinatal transmission** (6% or less risk of transmission before or during birth)

**Possibly Insects** (varying & inconclusive theories.)

**Note: HCV is 10 to 15 times more infectious than HIV after exposure to infected blood**



## Risky activities for HCV

### HIGH RISK

- Sharing needles
- Sharing drug snorting equipment, crack pipes and other paraphernalia
- Needle stick injuries
- Contact with contaminated blood/ blood products
- Fighting

### LOWER RISK

- Sexual intercourse
- Oral sex
- Mother to child transmission
- Tattooing and body piercing, acupuncture, electrolysis, manicures, .....NO risk if standard precautions followed.
- Sharing personal items e.g. razors, toothbrushes, nail clippers, tweezers.



### **Drug snorting equipment and other paraphernalia**

Crack pipes are hot and cause lip blistering; HCV not killed by temperatures of pipe (unlike HIV)

Sharing water, filters, spoons used for injection drugs is almost as risky as sharing the needles.

### **Needle stick injuries**

Force blood back out of the wound

Wash with warm soapy water for 15 seconds or more

Go to Emergency or Health Unit at once for instructions

### **Contaminated blood products**

Transfusion of blood or blood products or kidney dialysis (before 1992) – get tested.

Since 1992, risk is extremely low.

Sexual intercourse

Anal sex higher risk than vaginal; increase risk with more sex partners. Condoms may not be effective against the HCV virus since it's so small.



## Prevention

- ✓ Always use Standard Precautions
- ✓ Don't share needles
- ✓ Don't share toothbrushes, razors, or anything that may have blood on it
- ✓ Safer blood supply – screened since 1990
- ✓ Increased public awareness
- ✓ Safer sex – always use condoms
- ✓ Don't share sex toys
- ✓ Avoid tattoos and body piercing
- ✓ Persons with Hep C should not donate blood, semen or body organs

### **If you think you have been exposed:**

Immediately wash all areas of contact with soap and water. Flush your eyes with water. Do not eat, drink, smoke, put on make-up, or handle contact lenses after suspected contact. Report exposure to Dr. or First Aid attendant at work.

Remain aware that everyone's blood and possibly other body fluids are potentially infectious.

Safer sex. Fewer sexual partners will decrease your risk of HCV and HIV

Avoid blood exposure to others by not sharing toothbrushes, razors, needles etc.

It is unknown if latex condoms are 100% effective against transmission.

(However better than no protection)

Clean needles / more intensive needle exchange programs. Avoid sharing needles & other drug paraphernalia. Reminder: needles may be used for performance enhancing drugs at the gym, etc.

Safer blood supply. (.05% chance)

Standard precautions (especially in care settings.)

Increased public awareness and regulated personal services industry.

Infected people must **NOT** donate blood, plasma or semen, and should inform their dental or medical health providers, so that precautions can be followed.

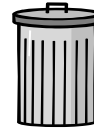
**(Note: There is currently no vaccine for HCV, and NO CURE!)**



## Standard / Universal Precautions

### MINIMIZE YOUR RISK OF EXPOSURE TO INFECTED BLOOD

- All body fluids must be treated as infectious.
- Hand washing: wash hands with warm soapy water, before and after contact with blood or body fluids.
- Always use latex gloves.
- Use disposable products to clean body fluid spills.
- Remove all soiling by scrubbing.
- Clean surfaces and equipment with bleach solution (1 part bleach : 9 parts water). Soak at least 30 minutes.
- Double-bag contaminated items, tie securely and throw out with regular garbage.
- Handle and dispose of sharps/needles with extreme caution.



**These precautions minimize the risk of exposure to infected blood and body fluids. Will protect against all infectious diseases that are prevalent in Canada (I.e. maybe not Ebola!) All people should be considered potentially infected, even though they may appear well.**

**Hand Washing:** wash hands (min. 30 seconds) with warm soapy water, before and after contact with articles contaminated with blood or body fluids. Pay attention to nails, between fingers and under rings. When clean, leave water running, dry hands on paper towel and use towel to turn off taps. This prevents you from being re-contaminated by the tap you just turned on with dirty hands.

**Gloves:** wear if you have open areas on hand, wear when touching blood or body fluids, mucous membranes or non-intact skin, if touching soiled surfaces, if hands soiled clothes, bed linen or equipment, wash hands immediately after removing gloves. Non-latex gloves are available for those with allergies. To remove soiled gloves, pull one glove off, hold it in other, still gloved, hand, then reach just inside the cuff of the remaining glove and pull it off so it reverses and encloses the first glove (like sock drawer storage.) Discard in the garbage. Wash hands.

**Gowns / Aprons:** wear to protect clothing if contact with body fluids is likely.

**Masks and Eye Protection:** wear if client is coughing/bleeding/vomiting profusely

**Garbage:** dispose of all contaminated items (dressings, tissue, diapers) in plastic bag. Tie bag securely and throw out with regular garbage.

**Soiled Equipment/Surfaces:** mix fresh bleach solution daily, cleanse area with bleach solution, rinse after 30 minutes, remove all soiling by scrubbing (this is as important as the bleach solution)

**Needle/sharp disposal:** Use tongs to handle and dispose of in special marked container. If you find one on the street, call the firefighters or contact the Downtown Patrol if downtown Kelowna. You can also use tongs to put it in an empty drink can and take it to the hospital or Outreach Health (Kelowna), if you feel safe to do so. Keep the point of the needle away from you.

**Other things to think about:** be aware of hidden needles. Never push down garbage in cans or retrieve items with bare hands. If cleaning in group homes or hotels, needles may be hidden in bedding or under furnishings. Look!  
Syringe may have orange cap replaced, but needle can still poke through.



## Harm Reduction for IV Drug Users

- Always use new needles from needle exchanges/pharmacies.
- Don't share any drug paraphernalia – including needles, syringes, swabs, filters, spoons, tourniquets, water, straws and pipes.
- As an absolute last resort, use “2-2-2” cleaning in 100% bleach. (May not kill HCV, but will protect from HIV)
- Try to stop using drugs if possible – there are people who can help.

**“In essence, a policy of harm reduction requires an approach of pragmatism rather than purism—an acceptance that it may sometimes be better to go for a probable silver than a possible gold.” - John Strang**

Harm Reduction- Harm reduction is a set of non-judgmental approaches and strategies aimed at providing and enhancing the knowledge, skills, resources and supports for individuals to be safer and healthier. The goal of harm reduction is to minimize negative outcomes resulting from risky behavior

Harm reduction recognizes that drug use is taking place and “just saying no” is not always possible, realistic or easy. Thus programs such as user education, street nurses, needle exchanges, safe injection sites (controversial) are implemented and seem to have shown positive results in preventing infection.

Risks particularly high for cocaine because of frequent injections. Risk also possible for snorting or smoking because of damage to lips and nasal passages.

~60% of new HCV infections are due to injection drug use.

## **CORRECT NEEDLE CLEANING PROCEDURE:**

Outlined below is a “harm reduction” procedure. Harm reduction is an approach that seeks to minimize the degree of danger involved in risky activities (such as drug injection) as opposed to the abstinence model which attempts to eliminate the activity altogether. Ideally, injection drug users should have a clean, new needle for each injection activity. Often this is not possible, but correct cleaning of the needle can significantly reduce risk of HIV transmission.

To clean a needle you need: a needle, a container of bleach, a container of clean water and the needle.

Take a deep breath because this requires patience.

1. Draw bleach into the needle to fill. Count to 30 (one thousand and one, one thousand and two...). Express the bleach (push plunger).
2. Draw water into the needle to fill. Count to 30 (one thousand and one, one thousand and two...). Express the water (push plunger).

Repeat each of these steps *two more* times. Be very sure to rinse the bleach out well. Traces of bleach in the needle can cause painful ulcers at the injection site.

**NOTE: This process does not provide effective protection against HepC, a hardier virus. For HepC, recommendations range from 2 cycles of bleach and water for either 3 min. or as much as 10 min. per solution.**

*In Kelowna clean needles can be obtained through the Needle Exchange Program of Outreach Health Services, a Boys and Girls Club initiative.*

*CALL 868-2230 for program details.*



## **HARM REDUCTION STRATEGIES**

### **Harm Reduction**

*Harm Reduction is a non-judgemental approach to behaviour that may put individuals at risk. It encompasses the behaviour and the environment, and attempts to **reduce specific risks to an individual**. The goal of harm reduction is not abstinence, although it doesn't preclude abstinence. Harm reduction takes an individual's personal circumstances into account. Determining achievable goals that may or may not lead to abstinence does this. Consider the person who is injecting cocaine 20 times a day. A harm reduction strategy may be to suggest that cocaine be injected 5 times a day, and other methods explored such as snorting and/or smoking the drug. This is a risk reduction strategy for needle use.*

*Most HIV/AIDS and Hepatitis C activists are advocating for harm reduction in lieu of drug enforcement. Harm reduction is aimed at decreasing the negative consequences of drug use rather than eliminating drug use. It establishes a hierarchy of goals, which although perhaps not ideal, are realistic, immediate and achievable.*

- 1. Needle exchanges are a form of harm reduction. Needle exchange acknowledges that the IDUs may be unwilling or unable to stop injecting and that intervention must occur to lower the risk of HIV/AIDS and Hepatitis C.*
- 2. Methadone maintenance may be part of a harm reduction strategy.*

### *Methadone*

- is a synthetic opiate taken orally*
- has similar properties to heroin and morphine*
- keeps a heroin user stable and prevents withdrawal*

## **SAFER NEEDLE INJECTION or USE**

*In your discussion, include:*

- 1) Needle Exchange Programs – Within the North Bay Area there are three outlets for the Needle Exchange program, these locations are: AIDS Committee of North Bay and Area, Nipissing Detoxification Centre, North Bay and District Health Unit. Using the Harm Reduction method, this program offers IDUs access to proper needle disposal, and a source for clean needles and supplies.*
- 2) Site selection - certain body parts are better and safer for injection than other body parts. For example, a general rule of thumb is to inject away from the centre of the body avoiding the neck, hands and feet. General education regarding the specific sites for different drugs (i.e. steroids are injected into a muscle, while other drugs are injected into the vein). Injection into the arteries is dangerous.*

- 3) *Injection rotation - it's important to rotate sites so that tissues and veins have a chance to heal.*
- 4) *Care of veins, tissues and skin - if veins tissue or skin are red, hot to touch or swollen an individual may have an infection which requires medical attention.*
- 5) Not sharing fits, spoons, cottons, filters, etc. - drug paraphernalia may contain germs and/or blood, which can transmit infections leading to blood poisoning or conditions such as Hepatitis C and HIV/AIDS.

*Copied from Train the trainer Manuel Put out by AIDS Committee of North Bay, Ontario*

# SAFE SEX, SAFER SEX AND UNSAFE SEX

The only sex acts that can truly be considered “safe” are those in which there is no possibility of an exchange of body fluids (blood, semen, vaginal secretions or breast milk). Any other act may be considered either “safer” or “unsafe”, depending on the degree of risk involved.

Safe sex is easy to understand because it is a very limited, absolute category. Unsafe sex is easy to understand also, because these activities carry a clear, high-level risk of satisfying the Transmission Equation. Safer sex is more complex because there are a number of variables to consider.

To determine the degrees of risk in safer activities apply the Transmission Equation i.e. Is an HIV/HVC **infectious fluid** involved and is there an opportunity during the **activity** that can present an **entry point** into the blood stream.

The following is a list of sexual activities, ranging from “safe sex”, to “safer sex” and finally, and of great importance, “unsafe sex”.

## **A. SAFE SEX & Sensuality:**

(All safe sex is equal in it's level of safety, which is *totally safe*; therefore, no hierarchy)

1. **Abstinence** from all sexual activity. That's right.... no sex!
2. **Hugging** might seem innocuous and perhaps not very erotic or stimulating, but it can be very sensual. Hugging can take place anywhere, there's no need for a room. A hug from friends can fill the void of not being in a relationship. Sometimes all you really need is the physical closeness of another person to feel fulfilled or expel loneliness.
3. **Full body massage** can be done naked or clothed. Massage can be an extraordinarily stimulating, intimate and, if done naked, sexual activity. Massage oil (scented or neutral), candles and incense can enhance the experience. Warm the massage oil with hands or in warm water and do long strokes on the back and legs. Knead the shoulders. Take time. Be aware. Cover your body with oil and rub body parts against your lover (with no genital to genital contact because of the possibility of exchanging body fluids). You can rub your breasts/ chest over their back; or women can rub the vagina on the partner's buttock. The man can rub his penis on his partner's back and legs, ending with mutual masturbation, or by using a dildo or vibrator. It is important if sex toys are used that they are only used on one person. If toys are shared, use a fresh condom on them for each person and, if using oil during massage, remember that condoms will weaken and break when exposed to oil.

4. **Masturbation** can be done alone or with a lover. It is a great way to explore your sexuality and learn about your own body. Masturbation is a great way to be intimate with a lover (risk free) and can be visually stimulating for your partner.
5. **Grinding** (sometimes called “outercourse”) is when two people “dry hump” one another fully clothed. It does not sound like much fun but it can be very stimulating.
6. **Taking a bath or shower together** can be an incredibly wonderful experience. Use some scented bath gel and soap each other up. You can use a shower massage on each other. If you are going to buy one, get one that is detachable. If you don’t have a shower massage, a bath brush is very stimulating (make sure it is the soft kind). Use your creativity! Just remember to ask, “Is there some way I can get an infected fluid into my bloodstream?” If the answer is “no”, you are safe.
7. **Using sex toys**, vibrators and dildos can be very stimulating. Remember to use a fresh condom for each person if you share sex toys. Even if you do not share your toys, keep them very clean. (You are putting them inside your body). You can wipe them with a cotton ball and alcohol or household bleach (rinse well after bleach). You can use household items if you do not have any sex toys. Cucumbers, carrots, corn on the cob, or a candle can be just as much fun. Be sure you wash them well and sterilize them before using, and put a condom over them. If you are new at using this kind of thing, go slow and make sure you communicate. Also, make sure you have a good grip so you don’t lose anything.
8. **Kissing** is “safe” if it’s dry kissing (no tongue). Use your tongue on other parts of the body such as ear lobes, toes, fingers, and bellybutton- anywhere that there is not an opening into the body, or a cut, scratch or sore. Deep (French) kissing is “safer”. There have been no confirmed reports of HIV transmission from heavy kissing.
9. **Dancing** can be a very stimulating activity. The right music for the mood you want to create is important. You can dance or strip for your partner while your partner masturbates. You can dance together naked or clothed.
10. **Fantasy** that really turns you on can be acted out or just shared with your lover. Then you can jointly incorporate them into your sex life. Maybe you would like to be blindfolded and restrained while your partner strokes you with a feather or gives you a spanking on the buttocks. Maybe you want to pretend that you are having sex in a place where you might be discovered or just going out together when you both know that you are not wearing any undergarments. Maybe you have fantasized about having sex with multiple partners. Anything is possible. The great thing about fantasy is that you do not actually have to do those things. You can, within the parameters of safety, but it can be just as arousing to have your partner whispering your fantasies in your ear while you masturbate or he helps you masturbate with a sex toy.

11. **Props** can be anything from sexy lingerie to pen and paper. You can take just about any item and, with a little creativity, incorporate it into your sex life. With a deck of cards you can play strip poker. With a bowl of fruit you can feed one another, or eat the fruit off of one another's body. With stuffed animals you can say what you would like to do to each other sexually. I found this to be an excellent way to communicate wants or to initiate sex. It is sometimes easier to talk through an inanimate object about an uncomfortable subject.

Music, candles, and incense are soothing and create a sensual atmosphere. "Playing doctor" sometimes makes it easier to bring out all the lubricants and latex. Be creative. Sometimes just thinking up things is sensual and arousing.

## **B. SAFER SEX**

**(Which includes the possibility of the exchange of body fluids, listed in descending order, according to the degree of safety i.e. least risky activities are first).**

1. **French kissing** is in the safer category because of the possibility that there will be the exchange of body fluids. Saliva need not concern us but blood should. The mouth is a very delicate area and the gums often bleed. The mouth and tongue tend to have small cuts at times. It would be unlikely to contract HIV/HCV in this way.

There have been no documented cases that anyone has ever contracted HIV/HCV from kissing alone. But kissing is often part of other (read unsafe) activities, so it is difficult to tell if the virus has been transmitted through kissing or not. Research has shown that there are enzymes in saliva that kill HIV/HCV.

2. **Dry kissing the vagina (no tongue) can simulate oral sex.** The tongue can be used on the inner thigh, or the nose or Adam's-apple can be used on the vagina—just be sure there are no cuts, sores, or scratches on the face. Alternately, oral sex can be performed on a woman using a latex barrier. Use a water-based lubricant on the woman before covering her genitals with the barrier. A barrier can be a dental dam (a 5 inch square of latex that sometimes comes in different flavors). Dental dams can be ordered through any pharmacy, or through sex toy catalogues. A condom can be used as a barrier by cutting the condom lengthwise so it can be opened to cover the woman's genitals. Plastic food wrap can be used as long as it's not the microwavable kind.
3. **Genital stimulation** can be performed using a latex surgical glove and water-based lubricant. If the hands and genitals are absolutely free of any cuts, scratches or sores, bare hands can be used.

4. **Vaginal intercourse with a condom**, according to the Center for Disease Control (Morbidity and Mortality Weekly Report, Vol. 42, No 30, August 5, 1993), can be considered “safe” when a fresh condom is used correctly and consistently every single time. It listed here among the “safer” entries (at the lower end) because of the possibility of human error (especially when under the influence of alcohol or drugs).
5. **Anal-intercourse with a condom** is very similar to vaginal intercourse with a condom. Just be sure to use extra lubricant and be gentle. The rectum has a much smaller opening than the vagina and is, therefore, more likely to be injured during intercourse.

### **C. UNSAFE SEX:**

*(With the greatest likelihood of exposure to HIV and possibly HCV)*

1. **Unprotected vaginal or anal sex** is always considered unsafe and includes any act that may easily cause one of the body fluids (blood, semen, vaginal fluids or breast milk) to enter the blood stream of another person.

(Excerpted from HIV, SEX and the Single Person by River Huston)

Safe sex and safer sex are new ways to approach sex.  
While it may seem complicated and lacking in spontaneity to adopt safer sex practices, many people have found ways to eroticize the experience and have in the process found new ways of sexual expression and enjoyment.  
Exploring and practicing safe-sex techniques can expand your understanding of your own sexuality, and lead to greater intimacy, and improved sexual satisfaction.

# RISK REDUCTION STRATEGIES

## A. HOW TO USE CONDOMS CORRECTLY, & CONDOM FACTS:

**Although condom use instructions are simple they must be followed carefully. The main reason for failure is incorrect use (slippage and breakage). They rarely leak or break because of faulty manufacture.**

Note: Only condoms made out of LATEX (or polyurethane) are designed to protect against HIV and other STDs:

1. Do not use condoms that have been exposed to heat or extreme cold, or any kind of friction or other extreme condition. Latex will be compromised under such conditions. This means refraining from using condoms placed in wallets, car glove boxes, or left out in the sun, for example.
2. Check the expiry date (which is usually 5 years after the date of manufacture), and never use a condom whose expiry date is earlier than the date of intended use.
3. Check the package to ensure the condom is properly sealed before opening: If you do not feel a “pillowy/cushiony” feeling associated with an airtight seal, then dispose of the condom, and get another (repeating these same procedures.) The latex of an unsealed condom becomes compromised from being exposed to air, heat, friction, or any other extreme conditions.
4. Open the package carefully by pressing the condom away from the side you are going to open. Condoms can be easily damaged when tearing open the package, especially if fingernails are long or jagged.
5. Put the condom on an erect penis, before penetration and before any foreplay, which may produce pre-ejaculate (pre-cum).
6. Gently press air out of tip before putting on the condom. Air bubbles can cause Condoms to break. If the condom does not have a receptacle tip, press the top ½ inch creating a place for semen to be caught.
7. Placing a drop of water-based lubricant in the receptacle tip of the condom will Increase sensation for the man.
8. Holding the tip flat and above the head of the penis, unroll the rest of the condom downward, covering the length of the penis. Eliminate any air spaces by smoothing  
The condom downward with the palm. If the penis is uncircumcised, pull back the

- foreskin before unrolling the condom over the head.
9. Placing a drop of **water-based lubricant** on the outside tip of the condom will increase sensation for the receptive partner. Excessive friction from dryness can weaken the latex causing breakage or can pull the condom off. Lubrication will reduce this possibility.
  10. After ejaculation and while penis is still erect, hold on to the base of the condom and withdraw gently. Avoid spilling semen.
  11. Never use a condom more than once.
  12. A new condom should be used with every partner and for every activity.
  13. Never “double up” condoms by placing one condom over another. The resulting friction between layers can cause the latex to break down (breakage). If lubricated condoms are used they will slide off each other (slippage).
  14. **Polyurethane** (sheer plastic) **condoms** are recommended to protect against HIV and other STDs for people who are latex sensitive (allergic).
  15. Novelty and natural “Sheep Skin” condoms **will not protect you from HIV infection**. The pores in such condoms are large enough to allow HIV to pass through.
  16. Female condoms (made from polyurethane) are an especially viable option for women since they may be placed in the vagina for up to 12 hours before use. Men having Sex with Men (MSM) have also successfully used the female condom for anal sex (by removing the cervical ring.)

**Test for latex sensitivity (allergy) by placing the end of an unlubricated condom or latex glove on the tip of the tongue. If this causes a warm, itchy or tingly sensation it indicates latex sensitivity. Latex sensitivity increases with exposure.**

**B. HOW TO MAKE A LATEX DAM FROM AN UNLUBRICATED CONDOM:**

1. Use scissors to cut the tip off the condom and then cut lengthwise down one side of the condom. This is easier do before you unroll the condom.
2. Wipe any powder off the sheet of latex.
3. If latex material is unavailable and another effective option for a barrier is **non-microwavable** plastic wrap. Microwavable plastic wrap is made with holes to allow steam to pass through. These pores are large enough to also allow HIV to pass through.







### **C. PRODUCTS THAT CAUSE LATEX TO WEAKEN:**

1. Women's Products (to Avoid with Condom Use):
  - Monistat, a treatment for yeast infections
  - Estrace, Premarin, and Femistat vaginal creams
  - Vagisil ointment
  - Rendells cone
  - Pharmatex Ovule Spermicide
  
2. Oil-based products (to Avoid with Condom Use):
  - Vaseline
  - Hand-lotion
  - Vegetable oil
  - Oil-based food (i.e. chocolate sauce)

(Note: Spermicides, such as nonoxynol-9, are no longer recommended against HIV-infection, because these products have been found to cause irritation leading to abrasions of the sensitive lining of the vagina and anus.)



## Living with HCV

- Eat healthy foods (specific to Hep C) and drink lots of purified water
- Rest 
- Exercise in moderation 
- Regular doctor visits for monitoring 
- Take medications as prescribed
- Freedom from guilt/fear/rejection/abuse
- Solid support system and social life – don't isolate!
- Keep some autonomy
- Avoid stress 

### **Diet recommendations:**

Protein – 2-3 servings per day of meat or meat alternatives, e.g. eggs, beans, tofu

Complex Carbohydrates (grains) with every meal

Milk products – 2-4 servings per day

Fresh fruit and vegetable juices- use fresh fruit and vegetables to make juices wherever possible, other wise buy commercial juices that is preservative free. BUT avoid Carrots and spinach as they can irritate the liver.

Steamed vegetables

Yogurt

Herbal tea. With out caffeine

Avoid fatty foods if they make you feel nauseous

Enough food to maintain your weight, i.e. get enough calories.

Have lots of nutritious snacks on hand in case you are too tired to prepare food.

### **Foods to be avoided**

Processed foods- canned or frozen

Foods high in fat/ salt/ sugar content

Scavenger fish or shell fish- especially raw fish and sushi if you are not immune to Hep A.

Dairy products

Fibrous red meats

Caffeine- Tea, Coffee, Chocolate

## **Psychosocial issues**

Hep C can make you very tired, depressed, irritable, unable to cope. Unfortunately you might encounter people who don't understand. Stay away from those who are emotionally hurtful, but don't isolate yourself. A support network is out there. Stress releasers include rest, moderate exercise, meditation, yoga, and pets, not taking on more than you can cope with. But keep the pastimes/tasks you enjoy. Autonomy is tied to self-esteem.

## **PREGNANCY**

- The risk of transmission from mother-to-child continues to be studied
- No data suggests that pregnancy alters the course of HCV
- There is no conclusive evidence recommending Caesarean section

Guidelines for care:

- Standard guidelines should be followed for care during pregnancy

Preconception and early pregnancy care:

- Pregnancy is not contraindicated on the grounds of HCV alone
- Ribavirin should not be taken while pregnant

Care during pregnancy:

- There is a risk of vertical transmission which is greater if the woman is also infected with HIV
- Immunization against HAV and HBV should be provided
- C-section is not necessarily recommended
- Breastfeeding is not contraindicated unless nipples are cracked and/or bleeding
- HCV RNA and antibodies have both been detected in colostrums and breast milk, but there are no documented cases of transmission through breast milk alone.

Care of infant:

- All infants will be anti HCV positive at birth
- Uninfected infants should usually have cleared the antibodies by 12-15 months of age
- The higher the level in the mother, the longer it takes for the infant to clear
- Verification of infection may be possible by 2-3 months by using the HCV RNA test
- Early diagnosis will not alter the course of the disease
- No treatment is approved for children

**Beware**

## Living with HCV

### **DO NOT USE:**

- IRON
- NIACIN (vitamin B3)



### **NO ALCOHOL!**

It stresses your liver.

### **NO COCAINE!**

It speeds up disease progression!

**Cautions:** (ask your doctor)

Anti-inflammatories, Tylenol, fat-soluble vitamins A, D & E

**Problem Areas:** DO NOT USE: These will increase damage to Liver (HEC C)  
Alcohol (can cause cirrhosis in absence of virus – speeds up disease progression)  
Iron  
Cocaine (speeds up disease progression)

Niacin: a vitamin used to treat high cholesterol, pellagra, cholera, arthritis, Reynard's disease, Ménière's disease, and atherosclerosis (clogged arteries). Other names for Niacin include: Inositol Hexaniacinate, Niacinamide, Vitamin B3, Nicotinamide, and Nicotinic Acid.

Non-Steroidal Anti-inflammatory drug such as Aspirin and Ibuprofen



## Treatments

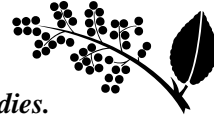
### **Combination Therapy** (*Rebetron/Pegatron*)

- Interferon injections fight infection. Ribavirin targets the Hep C virus (capsules 2x /day)
- New version using “Pegylated” interferon allows for injection once/week and fewer side effects.
- 55% of people treated with Pegatron reach undetectable levels of the virus (genotype 1); in many others it slows disease progression.
- Important to take as prescribed to prevent treatment-resistant strains.

### **Alternative Therapies**

*Let your doctor know if you plan to use alternative remedies.*

- Chinese Medicine
- Homeopathy
- Milk Thistle
- Vitamin and mineral supplements (use with care)
- Herbal therapies
- Therapeutic touch



### **Combination Therapy: *Currently recommended therapy***

**Pharmaceutical Names: Interferon & Ribavirin.** Treatment can continue for over a year.

**Pegylated Interferon** once weekly by injection & **Ribavirin** twice daily, orally.

Interferon is a synthetic form of a natural hormone produced by your body. Interferon may cause flu-like symptoms such as headache, fever, vomiting, nausea, muscle aches and pains, fatigue, and chills. Adding the PEG (polyethylene glycol) molecule helps reduce side effects and prolong the effectiveness of each dose.

**Side effects** are: unexpected tiredness, headache, fever, muscle and/or bone pain, and chills.

**Ribavirin** is a drug that was developed to treat certain viral infections in children. More recently, it was found to have some effect against Hep C but only when given in combination with interferon. Ribavirin works by interfering with the virus’s ability to reproduce itself.

**55%** of people who had never taken therapy before were **cleared of virus** after combination treatment. But only 10% of those infected qualify to start treatment, by current guidelines in the province of British Columbia.

**Factors for success** of treatment: it has a lower success rate among males, older people, those who drink more alcohol and those of African descent (don't know why). Some genotypes of the virus respond better to treatment than others.

**Is it a cure?** If virus is undetectable 6 months after ending treatment, researchers believe no more liver damage is occurring; some consider this a cure, but with the progression of the disease so slow, cannot be 100% certain. Comparable to a cancer going into remission.

## **COSTS**

### **1. Rebetron Treatment- which is Regular Interferon and Ribavirin**

COST is roughly \$900 every two weeks. The cost may be slightly more or less depending on patients' individual circumstances, such as body weight.

COVERAGE, 70% of the cost of this treatment is covered by MSP, and if a patient proves there is financial need for the remaining 30%, then Schering Canada Inc. (drug company) will subsidize the remaining 30% of the treatment cost.

### **2. Pegetron Treatment-- which is Pegulated Interferon and Ribavirin.**

COST is roughly \$1100-\$1200 every two weeks. Again this cost may be slightly more or less depending on the patients' circumstances.

COVERAGE, this treatment is not covered at all by MSP. Private insurance companies are covering some of the cost of this treatment, on a case-by-case basis. If a private insurance company is paying the bulk of the cost of the treatment, then Schering Canada Inc. will pay for the rest of the treatment provided that financial need is shown. This treatment is very new on the market (Dec. 2nd 2002), and in the future may be covered by gov. medical plans.

**\*\* Note all information subject to change in medical plans and MSP.\*\***

## **Alternative/Complementary Therapies**

All these therapies have worked to some degree for some people. Ensure your doctor knows you are seeking alternate therapy, and beware of alternate therapists who recommend discontinuing medical treatments.

Herbs recommended for HCV treatment.

Uses only standardized doses and always purchase herbs from a reputable herbal company

**Milk Thistle-** (silymarin) Used to control symptoms and prevent damage caused by HCV  
**Dandelion-**used by many people to treat a wide variety of liver ailments. Can be steamed Sautéed, or used raw.

**Garlic-** reported to have anti-viral properties and may also help gastrointestinal ailments.

**Licorice root**- same as Garlic with anti-viral properties and aids in gastrointestinal ailments.

**Thymic Factors**- essential to the health of the entire immune system.

**Ginko Biloba**-may help memory and improve blood circulation.

**St. John's Wort**- known to act as an anti-depressant, BUT check with your Doctor before starting this herb. Recent studies have suggested it may be harmful to the liver.

**Chamomile**- provides traditional anti-inflammatory

**Cleavers**- to stimulate the lymphatic system

**Echinacea**- stimulates the immune system and encourages natural production of interferon and other lymphokines

### **Herbs to avoid:**

Plants of the Senecio, Crotalaria & Heliotropium, Chaparral, Germander, Valerian, Asafetida, Comfrey, mistletoe, Skullcap, Hops, Mate tea, Jin Bu Huan, Senna, Margosa oil, Gentian, Sassafras, Pennyroyal oil, Gardolobo, Yerba tea, Groundsel, Mushrooms, Amanita, Lepiota helveola,

Always consult a Reputable Practitioner



## Liver Transplants

- Hepatitis C is the leading cause of liver transplants in Canada.
- Not a cure. The virus seems to re-infect the new liver. But it may substantially increase life expectancy.
- Shortage of livers: 30% on waiting list will die before a liver is found.
- “Living Livers”: family members may donate a part of their own liver.
- Please sign up to become an organ donor!

### **Liver Transplants**

A transplant is an option at the end stage of the disease (cirrhosis). Many transplant recipients survive 10 years. The Hep C virus will infect the new liver, as it hides out in other parts of the body besides the liver. The disease will be set back considerably, however. Most livers are from brain dead donors; it is possible for live family members to donate a part of their liver, which can grow back. Waiting lists are long; an estimated 30% of patients die waiting for a liver.

#### **When should a liver transplant be done?**

Complex issue. End stage of Hep C, I.e. major liver damage already incurred. Physician will look at rate of progression, whether complications of liver failure have occurred, and results of lab tests.

#### **Survival chances after transplantation:**

80% at one year, 70 % at 5 years



## Co-infection

- **Definition:** Infection with more than one infectious agent.
- **Examples:**
  - 1) **Infection with more than one strain of HCV**
  - 2) **HCV and HIV**
    - 40% of HIV infected people also have HCV.
    - Hepatitis C progression is much faster in co-infected people.
    - Usual therapy is to stabilize the HIV first.  
Caution – some HIV drugs are toxic to the liver.
  - 3) **HCV and other Hepatitis viruses**

Six strains and 90+subtypes; co-infection can make Hepatitis C more resistant to treatment.

**HIV/HCV co-infection** rate is around **40% of those with HIV.**

Co infection with HIV speeds up the progression of HCV. Study showed that in those with HCV only, average time to established fibrosis was 31 years. In co-infected, it was only 21 years. Other studies show similar contrasts, though times were shorter.

Treatment: Consensus is to get the HIV stabilized first, then treat HCV. Because of long-term survival with HAART, it is now appropriate (though not necessarily easy) for co-infected people to receive liver transplants.

**Hepatitis A co-infection** – can be rapidly fatal. Anyone with Hep C should get inoculated against Hep A and B.

Resource for Co-Infected individuals is HepC BC's Peppermint Patti's FAQ's  
Plus "Double Jeopardy: the HIV/HCV Co-Infection Handbook"  
[www.hepcbc.ca](http://www.hepcbc.ca)



## Important

HCV is **NOT** spread by sneezing, kissing, hugging, coughing, food or water, sharing eating utensils or drinking glasses, or casual contact.



**NO-ONE** should be excluded from work, school, play, child-care or other settings on the basis of their HCV infection status.

It is illegal to exclude HCV positive people from a workplace until they are too sick to perform the work. It is illegal to require that an employee take a test for HCV.

On the other hand, being up-front in such situations can help to allay fears, dispel myths and ignorance about the disease. It should be a personal choice.



## HELP for HEP C

### Support Group Listing:

**Hepatitis C Society of Canada**

**1-800-652-HEPC (4372)**

[www.hepatitiscsociety.com](http://www.hepatitiscsociety.com)

### Information:

**Canadian Liver Foundation**

**1-800-856-7266**

[www.liver.ca](http://www.liver.ca)



**AIDS Resource Centre**      **862-2437 or**  
(Information & Speakers)    **1-800-616-2437**  
[www.arcok.com](http://www.arcok.com)

**HepC BC**                      **250-361-4808**  
[www.hepcbc.ca](http://www.hepcbc.ca)

**C**  
**Compassion**

## Be Supportive



- **Show you care.**
- **Share this information.**
- **Stop the spread of hepatitis.**
- **It's your choice.**

## **Glossary**

**Acute hepatitis C:** An inflammation of the liver, caused by the hepatitis C virus. It begins suddenly or gradually, and rarely lasts longer than one or two months. Usually, there is little immediate damage to the liver, but in rare cases acute hepatitis C can cause severe, even life-threatening liver damage.

**Antibodies:** Proteins produced by our body as a natural defense to infections. They attach to the virus and try to destroy it.

**Bacteria vs. Virus:** Bacteria are single-celled organisms, some of which can cause diseases in humans. A virus is an infectious organism, which is visible only with very powerful microscopes. Unlike bacteria, viruses are genetic material wrapped in a coat of protein and they survive by changing the function of the cells they infect. These infected cells supply the viruses with energy and the means to reproduce themselves.

**Biological response modifier:** Medication that changes the genetic make up of a cell, to produce a desired response.

**Cholesterol:** A fatty substance found in all tissues and an important part of the membranes of each cell in the body. The liver uses cholesterol to manufacture bile acids, which aid in digestion.

**Chronic hepatitis C:** Patients with chronic hepatitis C have the disease for life if it is left untreated. There are different states of chronic hepatitis C:

\* Chronic state carrier: Very little inflammation or liver function damage. Symptoms are usually mild.

\* Chronic persistent: Very little development of liver damage over time. However, some patients may develop chronic active hepatitis C over time.

\* Chronic active: Damage to the liver is extensive and liver cells are destroyed. Cell damage causes scar tissue in the liver (fibrosis), resulting in cirrhosis. In such cases, liver function is reduced. This can lead to liver failure.

**Cirrhosis:** A type of permanent and progressive liver damage. Any chronic liver disease can lead to scarring. Once present, cirrhosis is permanent, but its progress can be stopped.

**Enzymes:** A chemical substance made up of protein, which is produced by living cells. Enzymes change the rate of chemical

reactions in other substances.

**Fibrosis:** Scar tissue that forms in reaction to an infection or injury. It can occur in the liver as a result of long-term inflammation.

**Glucose:** A simple sugar, which is essential to your cells for energy. Glucose passes directly into the bloodstream from the small intestine and is stored in the liver as glycogen.

**HCV Antibodies:** Antibodies that attack the hepatitis C virus. Having HCV antibodies in your blood means that you are currently infected, or, that your body has overcome HCV and you are no longer infected. Further tests are required.

**Hormones:** Powerful chemical substances that are produced by the cells of a particular organ, which are released into your blood stream and can, regulate the activity of other organs.

**Infection:** An invasion of body tissues by "germs", like viruses and bacteria.

**Inflammation:** A reaction of your body to injury or disease. Inflammation may result from physical damage, infection, or surgery and is characterized by heat, swelling, redness or pain.

**Liver Biopsy:** Removal of a small piece of tissue, which is examined under a microscope to evaluate effects of a disease. A special needle is passed through the skin and into the liver to remove a very small piece of tissue for examination.

**Platelets:** Disk-shaped structures that float in blood plasma, or fluid, and are crucial to the clotting process.

**Relapse:** The return of symptoms of a disorder after what seemed like a recovery.

**Side effects:** Conditions, or consequences, experienced by a patient when taking medication, that is not directly related to the desired effect, but is caused by that medication.

**Virus:** A type of "germ" that may cause an infection. It is made of genetic material wrapped up in a protein coat. ***For ongoing news, support, and information about hepatitis C, contact:***

**HepNet**

The Hepatitis Information Network  
[www.hepnet.com](http://www.hepnet.com)

