

Reducing the Risks of Hepatitis C

**for People
Who Use Crack or
Crystal Methamphetamine**

Ontario Needle Exchange Network
March 2007

SUGGESTED REFERENCE

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DISCLAIMER

The opinions and recommendations in this document reflect those of the authors and Ontario Needle Exchange Coordinating Committee and do not necessarily reflect those of Toronto Public Health or any individual needle exchange program

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REDUCING THE RISKS OF HEPATITIS C FOR PEOPLE WHO USE CRACK OR CRYSTAL METHAMPHETAMINE

A REFERENCE MANUAL

Commissioned by: The Ontario Needle Exchange Coordinating Committee

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Introduction:

This reference manual has been designed to meet the needs of harm reduction workers in Ontario.

It provides concrete health, drug use, and resource information that can be used by harm reduction workers to help clients make informed choices about safer drug use and hepatitis C.

Specifically, the “Reducing the Risks” reference manual aims to increase understanding and use of information related to:

- The **hepatitis C virus**, the risks of becoming infected and how to support clients to make informed choices in relation to hepatitis C prevention, testing, treatment and managing a chronic infection.
- **Crack cocaine**, how it is used, its effects on the body, the health impacts of using, the potential for and signs of overuse and overdose.
- **Crystal methamphetamine**, how it is used, its effects on the body, who uses this drug, the potential for and signs of use and overdose.

This reference manual provides suggestions on how the above information can be used in harm reduction practice. The Ontario Needle Exchange Best Practice Recommendations are also highlighted as they apply to each of the above categories.

Excellent resources exist on each of the above topics. The “Reducing the Risks” reference manual highlights fact sheets and other educational resources, research documents, community resources, programs, and websites throughout the document. Needle exchange programs are encouraged to utilize many of these resources for background learning or teaching tools, many of which are offered free of charge.

Finally, this resource attempts to reflect the role of the hepatitis C workers who are currently working in the harm reduction field. The names of these experts are listed in the resource section of the reference manual, along with organizations having expertise in harm reduction and supporting those most at risk for hepatitis C.

Background:

The Ontario Needle Exchange Network (ONEN) works to share information on issues, policies and initiatives that impact on needle exchange programs.

With this aim in mind, the ONEN released **the Ontario Needle Exchange Best Practice Recommendations** (ONEBPR) in March 2006. Based on the best available scientific evidence, this document provides recommendations for best practices in needle exchange programs in Ontario.

The “**Reducing the Risks of Hepatitis C**” reference manual has been developed as a companion document to the ONEBPR document. It builds on the best practice recommendations by providing skill-based knowledge related to hepatitis C prevention, testing, treatment and how to support those with a chronic infection. It also provides background information on the safer use of crack and crystal methamphetamine.

The ONEN requested this partner document be created to build harm reduction workers’ knowledge and skill related to emerging community priorities. These priorities include the following:

- The majority of needle exchange clients are at high risk of being infected by Hepatitis C, or are already infected.
- Some Ontario communities are seeing an increase of crack or crystal methamphetamine.
- The health consequences of a chronic hepatitis C infection can be severe.

This “**Reducing the Risks**” reference manual addresses the seriousness of the health issues caused by hepatitis C, the particular burden experienced by needle exchange clients and the need for concrete resources and information that outreach workers can use to support their clients.

Overview of Section 1

Section 1 on hepatitis C has been organized into the following categories:

1. The “Background” presents:

- Key facts about hepatitis C
- The extent of the problem and why hepatitis C is a concern

2. “Prevention” details:

- Issues related to prevention
- Future directions for prevention
- The Ontario Needle Exchange Network position on the risks of HCV infection
- Risk of infection for people who inject drugs
- Risk of infection for people who use non-injection drugs
- HCV prevention tips
- One-on-one support to prevent hepatitis C
- Selected prevention resources

3. The “HCV Tests” sub-section features information about:

- Diagnostic and other HCV tests
- Testing issues
- Support related to HCV testing

4. The “Health Impacts of Hepatitis C” highlights the following:

- Why the liver is important
- How the HCV can harm the liver
- Consequences, symptoms and other health impacts of a hepatitis C infection
- Factors associated with disease progression
- Living with a chronic hepatitis C infection
- Supporting people diagnosed with hepatitis C

5. “Treatment” provides information on:

- The aim of treatment
- Who should be treated and what is the treatment?
- Issues related to treatment
- Situations in which treatment will not be provided
- Support related to treatment

Section 1 - Hepatitis C

Introduction

Hepatitis C is a serious health issue, especially for people who use illicit drugs or “street drugs”.

An estimated 3% of the world’s population or 170 million people are infected with the hepatitis C virus (HCV), including some 110,000 Ontarians. This is almost 5 times more than the number of people infected with the human immunodeficiency virus (HIV) (Basrur, 2006).

The vast majority of people currently infected by hepatitis C are those who have injected, smoked or snorted street drugs. Up to 75% of new hepatitis C infections in Canada each year will be related to conditions surrounding the use of these drugs (CCSA, 2005; Fischer et al., 2006).

Featured in This Section

Section 1 provides background information that can be used to support needle exchange clients around hepatitis C health issues.

This information is organized into the categories of hepatitis C *prevention, testing, health consequences* and *treatment*. Featured within each of these topics are suggestions to help harm reduction workers use this information. These tips emphasize the many roles of harm reduction programs and workers in supporting people at risk for, or those who have hepatitis C.

Educational resources such as posters, brochures, and fact sheets are shown throughout and represent some of the excellent sources of information that currently exist. These are but a few of the available resources and it is recommended that the listed websites be further explored.

One of the sources highlighted in this section is the “I-Track” study, which is the best available Canadian evidence regarding hepatitis C infection among injection drug users. The percentage of survey participants infected with hepatitis C, their knowledge of infection and their drug use practices a few of the issues discussed in this study (PHAC 2006). Where possible, data related to non-injection drug use and HCV has been presented, as well as international research and programming information from countries such as Australia, which already has a well developed hepatitis C program in place.

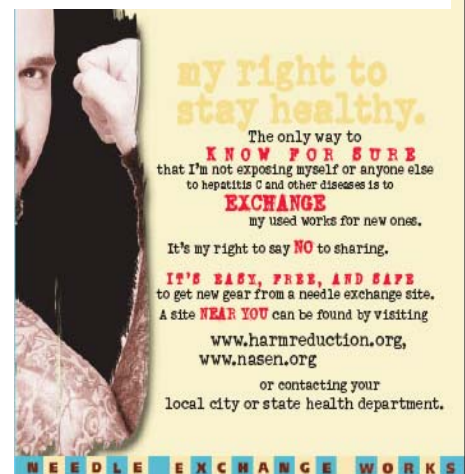


Background - Key Facts

Hepatitis C is a type of liver inflammation caused by the hepatitis C virus (HCV), which can progress to a chronic liver disease in up to 85% of those infected (CCSA, 2005; CDC, 2006).

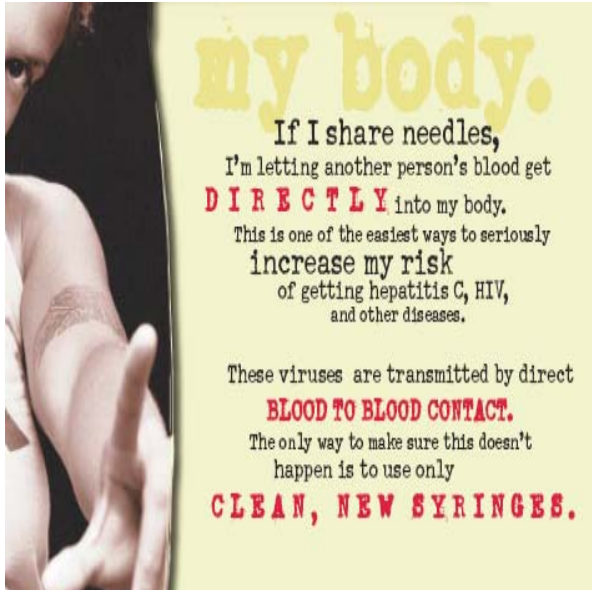
The Hepatitis C Virus:

- Enters the body when blood from an infected person comes in contact with blood of a non-infected person (Basrur, 2006).
- Uses liver cells to multiply. The body's immune system in turn attacks the infected cells, causing them to become inflamed, damaged and even destroyed (Winston & Winston, 2005).
- Constantly changes once inside the body. This makes it difficult for the body's immune system to clear the virus (CLF, 1999).
- Is 10-15 times more infectious through blood than the HIV (Health Canada, 2002)
- Is tough and can live up to 4 days outside of the human body (CDC, 2006).
- Has up to six different versions (genotypes) and several subtypes of these (CLF, 1999).
- Does not have a vaccine to prevent infection (CDC, 2006).
- Can be successfully treated in 40-80% of people, depending on the virus genotype (CCSA, 2005).



Pictures downloaded from the Hepatitis C Support Project "Why Needle Exchange" Pamphlet found on www.hcvadvocate.org

The Extent of the Problem



Downloaded from the Hepatitis C Support Project "Why Needle Exchange?" Pamphlet found on www.hcvadvocate.org

infected in Ontario:

- It is estimated that there are between 105,000 – 130,000 people who have been infected with hepatitis C. Approximately 30,000 of these people do not know they are infected (Basrur, 2006).
- 3,336 people in Ontario were estimated to be infected with HCV in 2004 (Remis, 2004).

Drug use and HCV infection:

- Injection drug use and the sharing of drug use equipment continues to be the main way of transmitting the hepatitis C infection from one person to another (CDC, 2006, Millson et al., 2005; Remis, 2004).
- It is estimated that there are 41,000 people in Ontario who inject drugs: 16,300 in Toronto, 3,100 in northern Ontario, 3,300 in Ottawa, and approximately 5,700 in each of central east, and west Ontario and 5,000 in the southwest region of Ontario (Millson et al., 2005).
- A study of people who only smoked crack or snorted cocaine showed that they had higher rates (2.8 times higher) of HCV infection than among the general population (Tortu et al., 2004).

The Extent of the Problem (continued)

I-Track Study Results:

- Data from the Ontario I-Track sites showed that 67% of survey participants from **Toronto** were positive for HCV antibodies and 68.5% were positive in **Sudbury** (PHAC, 2006).
- Additionally, the percentage of injection drug users in Ottawa who were positive for HCV antibodies ranged from 58 to 75% in two separate studies. The rate of new infections in Ottawa was estimated to be 25% per year (Millson et al., 2005).
- I-Track participants from across Canada indicate poly drug use is the norm as they report using a variety of injection and non-injection drugs in the past 6 months.
Besides injecting:
 - 80% also smoked marijuana
 - 76% also used alcohol
 - 65% also smoked crack
 - 56% also used cocaine
 - 51.5 % used Tylenol with codeine (PHAC 2006).

This information shows that for people who are at risk for HCV infection, many also use drugs that can cause additional damage to the liver (e.g. alcohol and Tylenol with codeine) (Harm Reduction Coalition, 2003).



Downloaded from the Hepatitis C Support Project "Why Needle Exchange?" Pamphlet found on www.hcvadvocate.org

Why Hepatitis C is a Concern

The HCV is easily transmitted. Research consistently shows that short-term users of injection drugs have a 20 – 40% chance of becoming infected after one year. After 5 years of injecting, as many as 90% are infected with the HCV (Frankish et al., 2002, p 13).

The health consequences can be severe for some, depending on how long they have had the infection, whether they also have an HIV or other hepatitis virus co-infections and how much alcohol they consume (CLF, 1999). Of chronically infected persons, about half will eventually develop cirrhosis or cancer of the liver (Heymann, 2004).

Treatment options are currently limited:

- In Canada, there are currently not enough liver specialists (fewer than 50 hepatologists), trained general practitioners or nurses to meet the needs of those infected with the HCV (cited in CPHA, 2005, p.7; Hepatitis C Council of BC, 2005).
- The majority of those infected are among society's most marginalized groups, many of whom are without regular medical care (Hepatitis C Council of BC, 2005).
- Treatment of hepatitis C can be difficult to tolerate with many blood tests, office visits and side effects (Winston & Winston 2005). People who use street drugs may have difficulty adhering to the treatment regime, especially if they also lack adequate housing and other supports.
- In the past, medical professionals have been reluctant to treat hepatitis C infections in people who are current users of drugs due to the restrictive eligibility criteria for treatment (CPHA, 2005).
- Only 20% of hepatitis C patients are considered eligible for treatment. For approximately 8% of those who get treatment, drug therapy frequently causes severe side effects which demand expensive interventions, not covered by provincial and territorial drug plans. Without critical supports to manage side effects, up to 20% of these patients abandon treatment before it is completed (cited in CPHA, 2005, p.6).

Prevention

Introduction

There is currently no vaccination against the HCV. Thus prevention is critical in stemming the spread of these infections. However, several issues make hepatitis C a difficult disease to prevent, monitor and treat.

This sub-section on prevention highlights the trends and issues related to preventing hepatitis C infection in people who use drugs. Suggestions for needle exchange programs to prevent hepatitis C are identified, including specific one-on-one interventions harm reduction workers can use when working with clients.

Trends in Infection

An analysis of HCV infection across Canada shows that reported cases were highest in Ontario, B.C., Quebec and Alberta, indicating a need for focused prevention efforts in these provinces (Frankish et al., 2002, p.6).

In Ontario, the number of reported hepatitis C cases each year declined from a high of 8,326 (in 1996) to just less than 6,000 cases in 2003 (Millson et al., 2005). Even though the annual number of reported infections appear to be stabilizing, these numbers are quite high.

It is important to note that most people are not diagnosed when first infected (CLF, 1999). Some people may have the virus for years before getting tested as they have few signs and symptoms of illness and do not know of their infection (CPHA, 2005; Frankish et al., 2002). Up to 30% of those infected do not know they are infected (CCSA, 2005).

Age When First Infected

Research indicates that more than half (50-80%) of those new to injection drug use become infected with the HCV within 6-12 months. The risk of hepatitis C infection is also thought to increase with the duration of injecting experience. That is, the longer a person injects drugs, the more chance they have of coming into contact with hepatitis C (Frankish et al., 2002, p3.).

The majority of I-Track respondents initiated injection drug use when they were over 16 years of age. 25% of I-Track respondents (% averaged from 7 Canadian sites) indicated they began injecting drugs at 16 years or younger. Percentages ranged from 16.7% in Sudbury to 38.1% in Toronto (PHAC, 2006).

Prevention (continued)

12.6% of street-involved youth living in Montreal (Roy et al., 2001) and Toronto (Goodman, 2005) were found to be infected with the hepatitis C virus.

Research from Australia shows the highest rates of recent infections occurred among people aged between 15-19 years and that many young people have already used the drug they first inject, through non-injecting methods, and have seen other people inject (Williams, Davies & Conrad, 2005).

Young People Who Start Using Drugs

New users of illicit drugs are often young and dependant on the using practices of others. As such, their chances of coming into contact with the hepatitis C virus are quite high, especially if the using practices of those who initiate a young person into drug use are unsafe. This has the potential to put the new user at risk of infection right from the first time they use (Williams, Davies & Conrad, 2005).

Research from Australia also shows that young people have low levels of awareness about the risks of contracting hepatitis C, even though many have an awareness of harm reduction messages such as “don’t share injecting equipment” (Williams, Davies & Conrad, 2005).

Determinants of Health and Prevention

To avoid HCV infection, people must be aware of the virus and its routes of transmission. In addition, people need to be able to understand how this information can be applied to everyday life. However, translating information into practice is strongly related to environmental and social factors. Effective prevention of hepatitis C will rely on how well the following determinants of health can be addressed for those who are most at risk of infection (CPHA, 2005):

- Access to medical care
- Freedom from addiction
- Functional literacy
- Adequate income
- Secure housing
- Safe domestic environments
- Respectful and abuse-free relationships
- A sense of belonging to a broader community

Future Directions for Prevention

In order to reduce the pool of infection among drug using populations it is essential to strengthen efforts to both prevent and treat hepatitis C infections.

New users of illicit drugs appear to be at the greatest risk of being infected (Frankish et al., 2002). Drug use is particularly high among Aboriginal people, street youth and incarcerated Canadians (Frankish et al., 2002, p.5), placing these people at increased risk for infection.

Effective prevention of hepatitis C will rely on several of factors. First, the determinants of health for those who are most at risk of infection must be addressed. Needle exchange programs have been serving marginalized drug using populations in communities for years. Inherent in this work are efforts to address the broader determinants health. However, not all programs are able to advocate for greater access to the larger determinants of health. It is important for such programs to link with other community organizations that are better positioned to help marginalized populations meet their basic needs.

Second, preventing the transmission of HCV will require a broad understanding of the possible risks of hepatitis C infection. For this reason, the Ontario Needle Exchange Network has taken an aggressive approach in identifying and reducing the risk of infection from drug use and other activities for which there is the potential for blood to be shared. This position on the risk of infection aims to support needle exchange programs develop comprehensive harm reduction initiatives to prevent of hepatitis C infections.

The Ontario Needle Exchange Network (ONEN) Position on HCV Infection Risk

The ONEN advocates for the implementation of harm reduction measures to reduce the risk of transmission of HCV and other blood-borne pathogens.

These harm reduction measures are detailed in the Ontario Needle Exchange Best Practice Recommendations. These recommendations target activities where there is the potential for transmission of blood from one person to another through punctured skin, sores and wounds or during sex when blood is present.



Image excerpted from "It's All About the Blood – Prevent Hepatitis C" poster. Found on <http://www.hepcproject.org>.

The Risk of HCV Infection

HCV Risk

The Ontario Needle Exchange Network's position on the risk of HCV infection assumes that any activity for which there is the potential to share blood between people (even a tiny amount) places individuals at risk for infection.

It is estimated that two thirds of new HCV infections in Canada each year are related to sharing of injection drugs, needles, syringes, swabs, filters, spoons, vitamin C, tourniquets and water related to injection drug use (Fischer et al., 2006; Health Canada, 2002).

However, 10% of those who report infection (according to U.S. data) did not know how they contracted the disease (CLF, 1999). This indicates a need to think about other ways that Hepatitis C may be transmitted (e.g. such as in the shelter systems where individuals with open cuts or sores on their feet may transmit it to others through the shower stalls). Listed below are ways that the HCV can be transmitted from one person to another. The risks from injection and non-injection drug use are identified, as well risks from other sources.

The risk of HCV infection from using drugs:

Research (cited in CCSA, 2005) shows that the risk of a hepatitis C infection from drug use is related to:

- Sharing equipment used for injecting, snorting, or smoking drugs. Such equipment includes:
 - Needles and syringes
 - Alcohol swabs
 - Vitamin C
 - Filters
 - Cookers
 - Tourniquets
 - Sterile water for mixing drugs
 - Pipes for smoking crack
 - Straws for snorting cocaine

It is also possible that the HCV can be transmitted from:

- When blood is present from oral sores and people share crack stems, pipes for smoking crystal meth, hash or heroin, booze, cigarettes, joints, and huffing cloths used for inhaling solvents.

Additional risks for HCV infection (cited in Health Canada, 2002):

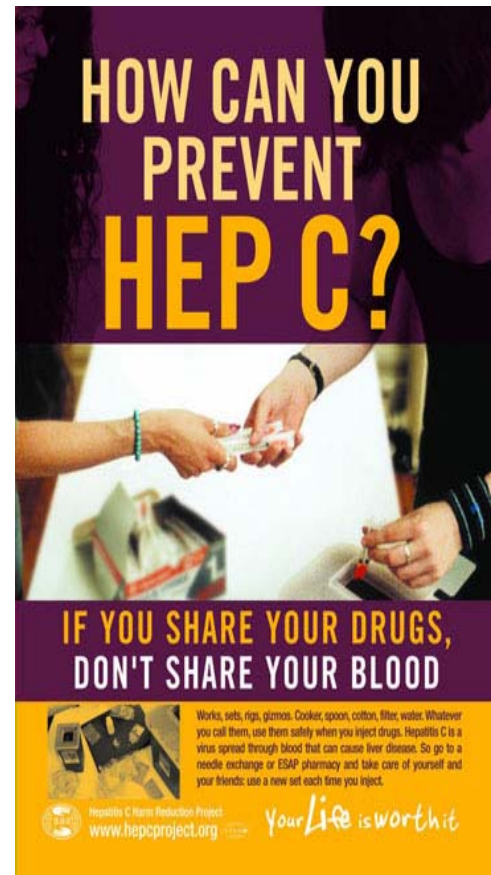
- A risk of infection exists for those who received a transfusion of blood or blood products, or organ transplant before 1992.
- Unprotected sexual activity with the presence of blood and an open sore or abrasion increases the risk, as does having multiple sex partners.
- Infection of infants from an infected mother occurs in about 5-10% of the cases.
- Sharing of household articles that may be contaminated with blood (e.g. toothbrushes, razors).
- Tattoos, body piercings, electrolysis or acupuncture with non-sterile needles.

Risk of Infection for People who Inject Drugs

Drug use practices may influence the risk of becoming infected with HCV. The following two pages identify drug use issues that may increase the risk of HCV infection and some suggestions for areas to explore with drug users to reduce their risk:

The risk of becoming infected with HCV from injection drug use is related to (adapted from Health Canada, 2001; and Williams, Davies & Conrad, 2005):

1. **Injection frequency:** The use of some drugs such as cocaine may involve from 10 – 60 injections per day, thus increasing the risk of blood borne infections.
2. **Poly-drug use:** The most recent I-Track results show that the majority of people who inject drugs also inhale or snort them, increasing their risk of HCV infection from non-injection use.
3. **“Front loading” or “back loading”** are practices where the drug is mixed in one syringe and then divided by squirting some of the solution into one or more syringes. Even though the needle is not shared, HCV can be transmitted if it was infected with blood before being used for the mixing of drugs.
4. **Knowledge and use of safe hygiene and drug use practices.**
5. **Peoples’ concept of sharing:** People may not admit to sharing their equipment or drugs due to fear of being blamed or shamed. Statements such as “I never share” may mean that users only share with an intimate partner.



Risk of Infection for Non-Injection Drug Users

The risk of becoming infected with HCV from non-injection drug use is related to (adapted from Health Canada, 2001; and CCSA, 2006):

1. Use of cocaine - people frequently have nasal erosions and ulcers and the sharing of cocaine straws can transmit blood-borne infections.
2. Poor nutrition, dehydrated and cracked lips are a common side effect of injection and non-injection drug use.
3. Smoking crack or crystal meth from a hot pipe made from a broken bottle, copper or lead pipe or antenna. Use of these types of items increases the risk that a person's lips may be cut, burnt or develop sores. These sores are an entry point for HCV, HBV and HIV.
4. Burns on the inside of a person's mouth from screens that are not pushed in tight enough and become dislodged as crack is inhaled. Brillo screens may also break apart when heated and burn lips and the inside of the mouth when crack is inhaled.
5. Pipes used to smoke crack and crystal, cocaine straws, cigarettes, marijuana, alcohol bottles, can transmit blood from one person to another due to the oral sores that crack, crystal meth and injection drug users may have.
6. Using crack and crystal in groups where sharing is the norm.
7. Higher risk sexual behaviour as a result of using crack and crystal meth.



“Being aware of blood!” poster
downloaded from:

<http://www.hepatitisc.org.au/resources/hcvprevention.html>

HCV Prevention Tips

Needle exchange programs can be a central component of a comprehensive prevention strategy aimed at reducing hepatitis C infections. The prevention tips listed below are overall suggestions for needle exchange programs. Some programs will have the capability of doing all this in-house while others can facilitate access to these services. Additional education tips for one-on-one contact with clients are found on the following page.

- Prevention efforts should target both injection and non-injection drug users, with a focus on new and experienced users (Health Canada, 1999).
- Provide opportunities to educate clients about the HIV, HBV and HCV risks from trace amounts of blood that can be found on drug use equipment and personal hygiene supplies.
- Education messages need to encourage people to plan ahead to be sure to have sterile equipment available.
- Provide opportunities for needle exchange clients to get tested for HCV, HBV, and HIV.
- Offer the HBV and HAV vaccines to all clients if they are not already immune.
- Provide opportunities to educate clients how to use and dispose of the supplies safely.
- Develop peer initiatives within the needle exchange program to provide harm reduction supplies and

Education Guidelines (adapted from Williams, Davies & Conrad, 2005).

It is important to situate hepatitis C education in the context of the person's drug use experiences and issues.

There is often "more at stake" for people when they use drugs, than thinking about hepatitis C.

They are focused on their drug, vein care, potential for overdose and many other issues.

Many people think they use drugs more safely than they do. Understanding how people perceive their drug use, compared to their actual behaviour will play an important role in whether people want to receive information and interventions related to reducing hepatitis C harm.

Finally, messages that tell users to stop sharing drugs may not work, as sharing fulfills multiple positive functions in the drug using populations.

One-on-One with Clients

Harm reduction workers can do a great deal to prevent HCV infections in their one-on-one interactions with clients. Overall, these efforts require being able to have a realistic discussion with clients about how they use drugs, listening to them and helping them identify how they can use drugs more safely. Specifically harm reduction workers can:

- Find opportunities to talk to clients about how hepatitis C is related to:
 - Their drug of choice and the range of drugs they use.
 - Do clients use clean injection supplies, stems or straws, mouth pieces and lip balm? If not what precautions do they take?
 - Are clients aware of the safest ways to use the needle exchange supplies?
 - How often they use drugs.
 - Are clients getting enough clean supplies everyday? If not what do they use?
 - Who they use their drugs with.
 - Are clients aware of the risks of sharing a range of drug use equipment and non drug use items such as toothbrushes, razors, cigarettes and nail clippers?
 - How they use (e.g. in what environment and what method).
 - Are clients aware of the steps to establishing a sterile environment, proper vein care, and safe injection practices?
- Ensure clients have sufficient supplies of sterile needles, cookers, filters, acidifiers, sterile water ampoules, alcohol swabs, tourniquets, glass stems, brass screens and mouth pieces. See the Ontario Needle Exchange Best Practice Recommendations (ONEBPR) # 1 – 7 at a glance.
 - Provide information to clients about the correct single-person use and correct disposal of injection and non-injection drug use equipment.
 - If clients share pipes and other non-injection drugs, help clients identify safest ways to share glass stems (i.e. use of mouth protectors)

One-on-One with Clients (continued)

- Talk to clients, or provide written information about: a) why a hepatitis C infection is an important health issue; b) ways in which the HCV can be transmitted; and c) how clients can protect themselves from infection.

- Provide lip balm and ask clients about the presence of mouth sores from smoking crack or crystal meth. Provide information about how to reduce these injuries:
 - Using lip balm and mouth pieces.
 - Safer products to use.
 - Correct use of glass stems and brass screens.

- Provide condoms and water based lubricant to clients and educate clients about the risks of HIV, HBV and HCV infection through sex.

- Offer HIV, HBV, and HCV tests.

- Offer HAV and HBV vaccines.



Image and text excerpted from: the “Tattoo you” pamphlet. A resource from the Hepatitis C Support Project. Found on: www.hcvadvocate.org

Selected Prevention Resources

Two pages from an excellent prevention resource are featured below. To see the complete electronic version please click on identified web link.

Preventing the Transmission of Hepatitis C

Blood to blood contact leads to hep-C transmission. This doesn't mean just touching someone else's blood. It means that someone else's blood has to get into your bloodstream.

Here are some prevention suggestions:

- Use the safer injection guidelines outlined in this brochure and practice safer injection techniques for shooting anything, including heroin, cocaine, crack, speed, steroids and hormones.
- Try to use less risky methods to take your drugs, like taking prescription drugs instead of powder, or snorting and smoking instead of injecting.
- Use your own straws: sharing snorting straws or tubes MIGHT expose you to blood—and to the hepatitis C virus.
- If you snort with others—especially people who are injecting—watch where you place your straws and tubes. Any blood on them can contaminate other people's straws, tubes or injection equipment placed in the same area. Blood from an injector's works can put you at risk, too.
- Rinsing snorting tubes and straws with cold water and then wiping them with bleach, or in a pinch alcohol, can reduce risks of exposure to blood—and hep-C.
- Keep the mouthpiece of your smoking equipment clean, and try not to share it. If you must share your pipe, wiping the mouthpiece with bleach (if glass) or alcohol (if rubber) may help prevent the spread of infections.
- Using your own rubber tip on a glass crack pipe can keep your lips from getting cut. It can also protect your lips from getting burned by a heated crack pipe. (These sores can dry out, crack open and bleed—possibly spreading hep-C.)
- Using condoms, dental dams and latex gloves reduces the risk of sexual transmission. If you do find blood on a condom, dam or latex glove, dispose of it carefully and then wash your hands thoroughly with soap and water.
- Remember to clean all sex toys after each use: any dried blood on the toys might transmit hep-C.
- Using water-based lube is a very good way to decrease the chance of irritation—and bleeding—during most sex activities.
- It is safest not to share household items, such as razors and toothbrushes, that blood can stick to.
- Make sure anyone tattooing or piercing you uses properly sterilized or brand new equipment, and that you have your own container of new ink, if you're getting tattooed.

Splitting Drugs

If you are sharing drugs, HOW you split them can spread infections, too. Fortunately, it is possible to eliminate many of these risks.

The first infected, shared item will contaminate everything else that follows in the injection process. If you dip a hep-C-infected syringe into clean water, it will contaminate both the water and the container it's in. If you squirt that water into a spoon or cooker, any drugs or cotton added will be contaminated. Draw that water into a sterile syringe, and now that syringe is contaminated, as is any other cooker you might squirt the syringe's contents into. Anyone sharing any of the items in this injection process will risk getting hep-C. As much as possible, you want to keep used items from coming in contact with other injection materials.

For more information about safer injection, contact a needle exchange or see HRC's Getting Off Right IDU Safety Manual for a complete discussion of safer injection methods.

- Using separate syringes, cookers, cottons and water for dividing your shots will help prevent contamination of all injection materials.
- If everyone must reuse their own supplies and water, do a dry divide: split the drugs on a clean surface, before adding the water.
- If you can't do a dry divide, or if you prefer not to, and only one person has a sterile or new syringe, use the sterile syringe to draw up the water and divide the shot.

If you get off with other people, and you want to make changes in how you do things, be aware that it is going to take time and cooperation. Reducing infection risks when you're in a group takes patience.

Pages excerpted from “Hepatitis C for Users”. Produced by the Harm Reduction Coalition.

http://hepcproject.typepad.com/hepc_project/Publications-publications.htm

HCV Tests

Introduction

Part of a harm reduction worker's efforts will be to encourage and facilitate access to testing for the HCV and other blood borne infections. As such, it is important for harm reduction workers to become familiar with the types of tests required to both diagnose HCV and determine the impact of the infection on the liver and treatment options.

This part of section 1 features information on HCV tests and testing issues that should be considered by harm reduction workers to fully support their clients. The Hepatitis C Council of New South Wales in Australia has a comprehensive set of fact sheets on a variety of topics including testing. Several of these are featured as part of this section and can be found on: <http://www.hepatitisc.org.au/quickref/factsheet.html> .

Information in this section has been compiled and adapted from several resources (Franciscus, 2006; Franciscus & Highleyman, 2006; and The Hepatitis C Council of NSW, 2004a.)

Diagnostic Tests

Two tests are needed to help people find out if they have hepatitis C. The first test is a HCV **antibody test**. Antibodies are the body's main defence against bacteria, viruses or vaccines. When the HCV enters the body, the immune system releases antibodies into the bloodstream to remove the HCV from the body. The HCV antibody test detects whether antibodies to the HCV are present in a person's body. A positive antibody test means that HCV antibodies were found, and that the virus has entered the body.

Approximately one out of four people will be able to "clear" or get rid of the HCV from their body. If people "clear" the HCV, they still keep the antibodies used to fight the infection. Thus, this test does not tell whether a person currently has the HCV in their blood.

People with a positive antibody test should undertake a second test called the PCR (polymerase chain reaction) test. The PCR viral detection test determines if the virus is still in a person's body. The PCR viral load or quantitative test indicates how much of the virus is in a person's blood and the PCR genotype test identifies the type of virus infection.

HCV Tests (continued)

If a person has cleared the virus, this test will come back “undetectable”. **People who have cleared the virus should be advised that antibodies against hepatitis C do not protect them against re-infection** (ASHM, 2006). If the test comes back “detectable”, it means a person is living with chronic hepatitis C.

A viral load test is also important if a person goes for treatment. It will help determine whether the treatment is having an effect in clearing the virus from the body.

Important note: A high viral load means that there is a lot of virus in a person’s body. However, it does not mean that a person will get sick more quickly. For this reason, it’s not a very good test to monitor or tell people how much the hepatitis C virus is damaging their body.



For fact sheets on tests and other HCV issues see: <http://www.hepatitisc.org.au/>

Genotype Test

People who are infected with hepatitis C virus will need to know about what virus genotype they have. There are six different types or families of the hepatitis C virus, numbered 1 through 6. These are called genotypes. Each of these types of hepatitis C also has sub-types (Hepatitis C Council of NSW, 2004b).

Types 1a and 1b account for more than 60% of all infections in North America with types 2a, 2b, 3 and 4 accounting for the rest. Type 5 is rarely found in North America except in Quebec (CLF, 1999).

A genotype test will tell people about their chances of getting rid of the virus with treatment. As well, a genotype test will tell the doctor how much medicine to give and for how long (Hepatitis C Support Project, 2006).

HCV Tests (continued)

Genotype 1 is harder to treat than genotypes 2 or 3. Current research indicate that genotypes 2 and 3 have up to an 80% chance of achieving a “sustained viral response” which means the virus has been cleared from the body. Whereas, genotype 1 has up to a 50% chance of clearing the virus (Hepatitis C Council of NSW, 2004b).

Other Tests

ALT Levels

When a person is being tested for HCV, several common blood tests will be taken. One of these measures a chemical in blood called ALT. This chemical is released by the liver into the blood when the liver is damaged or sick. High levels of ALT mean that the liver has been damaged or infected and can be caused by many things like alcohol, drugs, toxins and viruses (Franciscus & Highleyman, 2006).

In the past, if people had normal ALT levels, they were not treated with HCV medications, but now doctors will treat hepatitis C if there are other signs that the liver is damaged.

Liver Biopsy

A liver biopsy is done to find out how badly the liver has been damaged. It is a quick procedure done while the person is awake, which may produce mild to moderate pain. In this procedure a needle is put into the liver and a small sample of liver tissue is taken. In most cases, a doctor will want a liver biopsy done before treatment is indicated. However, in some situations treatment is done without a liver biopsy (Franciscus & Highleyman, 2006).

Ultrasound

An ultrasound test allows one to see the liver and how it is functioning in the body. It is used mostly to find liver cancer and sometimes cirrhosis (Franciscus & Highleyman, 2006).

Support Related to HCV Testing

Testing Issues

A person's decision to get tested for hepatitis C should be based on full information about the risks of infection and the testing process. As well, clients may want to talk about their fears related to getting tested. Harm reduction workers can facilitate and support access to HCV by discussing issues such as (Dodd, 2007):

- Being frightened about a hepatitis C infection diagnosis and the health implications of this disease;
- Not wanting to admit to a health care provider that they use drugs, for fear of the shame and blame that is connected to being seen as a “user”; and
- Client's feelings related to engaging the health care system to support their health needs.

One-on-one Support

Some steps that can be taken to support individuals at risk for HCV include:

- Needle exchange programs can provide information (posters and pamphlets) about the risks of HCV infection and opportunities to get tested. This information may prompt clients to ask about getting tested for HCV, HBV, and HIV. When appropriate, harm reduction workers can also ask clients if they would be interested in getting tested.
- When talking to clients one-on-one:
 - Listen to their fears about getting tested
 - Empathize with the stigma of a HCV diagnosis and
 - Inform them that **the testing process is completely confidential**. (positive results will be reported to public health)
- Inform people of the two steps in the diagnosis process, what a positive HCV antibody test means, and what to expect with the pre and post-test counselling provided by health care professionals. For more information on pre and post-test counselling please see “*Test Counselling*” fact sheet on <http://www.hepatitisc.org.au/>

Support Related to HCV Testing (continued)

- ❑ Help people understand the pros and cons of being tested.
- ❑ Integrate HCV testing as part of the needle exchange program, or link people with a health professional who is sensitive to the needs of people who use drugs.
- ❑ Arm people with questions they will need to ask the health professional and if possible, go with clients to their first appointment.
- ❑ If clients receive a positive HCV antibody test, support them in receiving the second test to confirm whether HCV is still present in their body.

Why Get Screened? The Pros and Cons of Screening for Hep-C	
Pros	Cons
You can't get treated if you don't know you're infected.	You already practice infection control (and moderate your drinking and drug use) AND you will NOT consider the current treatments, so what's the point?
Discovering you're not infected is a big relief.	Discovering you're positive can add more stress to your life, and may even have a negative impact on your emotional/mental health.
If you know you have hep-C, you can take care of your liver by avoiding things that harm it, (like alcohol) and doing things that help it, (like eating well, getting lots of rest, relieving stress, etc.).	Other people may discover your hep-C status and discriminate against you.
Knowing that you have hep-C can motivate you to get tested and vaccinated, if necessary, for HAV and HBV.	Even though the risk of hep-C transmission by sex is minimal, knowing you have hep-C means you have the added responsibility to tell your sex partners.
You may discover the type of hep-C you have responds well to current available treatments, and you could overcome the virus.	Once you're diagnosed with hep-C, health care providers and others may try and talk you into taking a treatment you really don't want.

For more information about the pros and cons of getting test, follow the web link below to access the electronic version of this resource. Page excerpted from the brochure "Hepatitis C for Users, a Harm Reduction Coalition resource which can be found on:

http://hepcproject.typepad.com/hep_c_project/Publications-publications.htm

The Health Impacts of Hepatitis C

Introduction

People who are infected with hepatitis C need information about this illness and how to reduce the damage to their liver and cope with the symptoms of a chronic infection. They may also need support in terms of advocating for necessary health services. Thus, it is very important for harm reduction workers to have a clear understanding the health impacts of a hepatitis C infection.

This part of Section 1 looks at the consequences of a chronic infection, why the liver is an important organ in our bodies and how the hepatitis C virus (HCV) can harm it. In addition, issues related to a person living with hepatitis C are outlined, as are suggestions about how to support those diagnosed with hepatitis C. Treatment of hepatitis C is discussed subsequently in the final part of Section 1.

Why the liver is important

The liver is the largest organ in the body and performs approximately 500 vital functions. It acts like a sieve and filters everything we eat and breathe – even things that get on our skin (Franciscus, 2006). It converts food and drink into energy and the building blocks for muscles, hormones, clotting factors and immune factors. It removes substances that are harmful to the body that can be found in medications, the air we breathe, and chemicals that are absorbed through the skin. It also stores many vitamins, minerals and sugars for later use (Franciscus & Highleyman, 2006).

How the HCV can harm the liver

The HCV enters the liver cells to multiply. As the virus reproduces, the immune system attacks the liver cells, which in turn become inflamed, damaged, with some cells dying and scar tissue developing. When scar tissue develops in the liver, it reduces the ability of the liver to function as a sieve, limiting its capacity to filter food and toxins in our body. It also reduces the ability of the liver to perform many of its vital functions (Morgan, 2007).

Once inside the body, the HCV changes rapidly. As a result the body's immune system may have difficulty clearing the virus from the body. In this case, the immune system will continue to attack the changing virus, causing on-going inflammation and scar tissue to develop in the liver (Morgan, 2007).

Health Impacts of Hepatitis C (continued)

Consequences, symptoms and other health impacts of a HCV infection

Infection with hepatitis C is potentially serious as it can cause problems with the liver. However, not everyone who gets infected with the hepatitis C virus will get sick and have serious liver problems (Hepatitis C Council of NSW, 2004c). When someone is infected, a number of possible outcomes can result.

In the acute phase (first 6 months) of the infection:

- Up to 15 - 20% of those infected will successfully clear the virus from their body.
- 80% of people infected will have no signs or symptoms in the acute phase. However, others may experience mild flu like symptoms including nausea, fatigue, fever, headaches, loss of appetite, abdominal pain and muscle or joint pain (Hepatitis C Council of NSW, 2004c).

In the chronic stage of infection (after six months):

- Up to 80% of HCV infections become long-term or chronic.
- Most people with chronic HCV do not have symptoms and lead relatively normal lives.
- In 10-25% of people, the disease progresses over the course of 10-40 years.
- Chronic HCV infection can lead to liver damage, the development of fibrous tissue in the liver (fibrosis), fat deposits in the liver (steatosis), liver scarring (cirrhosis) and liver cancer. In severe cases a person may require a liver transplant (Hepatitis C Council of NSW, 2004c).

Symptoms of HCV infection can be varied and resemble symptoms caused by illnesses other than hepatitis C. People with a HCV infection should consult with a doctor concerning their specific symptoms and management of these. A detailed fact sheet on the *Symptoms of hepatitis C and their management* (Hepatitis C Council of NSW, 2004d) can be found on

<http://www.hepatitisc.org.au/>



Among the health issues discussed in this fact sheet are:

- Flu like symptoms
- Fatigue and sleep disturbances
- Mood swings, anxiety & depression
- Brain fog and cognitive symptoms
- Pain or discomfort over the liver
- Muscle and joint pain
- Nausea, poor appetite and indigestion

Health Impacts of Hepatitis C (continued)

The **severe consequences** of a hepatitis C infection include (adapted from Franciscus & Highleyman, 2006):

- **Cirrhosis** is the process in which liver cells are damaged or killed and replaced with scar tissue. Extensive scar tissue formation impairs the flow of blood through the liver, causing more liver death and a loss of liver function.
- **Compensated Cirrhosis** means that the liver is heavily scarred but can still perform most functions; people with compensated cirrhosis exhibit few or no symptoms.
- **Decompensated Cirrhosis** means that the liver is extensively scarred and unable to function.
- **Liver Cancer** usually develops in the later stages of a hepatitis C infection, typically after 25-30 years.

Other Health Impacts:

In a small percentage of people, the immune system can become confused and begin to attack healthy parts of the body when the body defends itself from the hepatitis C infection. The resulting auto-immune conditions can include kidney disease, skin lesions, arthritis and inflammation of the small blood vessels (Franciscus & Highleyman, 2006).

Evidence shows that the factors most associated with disease progression are (Winston & Winston, 2005):

Alcohol consumption > 30 g/d (more than 2 drinks per day) in men and 20 g/d (1-2 drinks per day) in women.

HIV or Hepatitis B co-infection

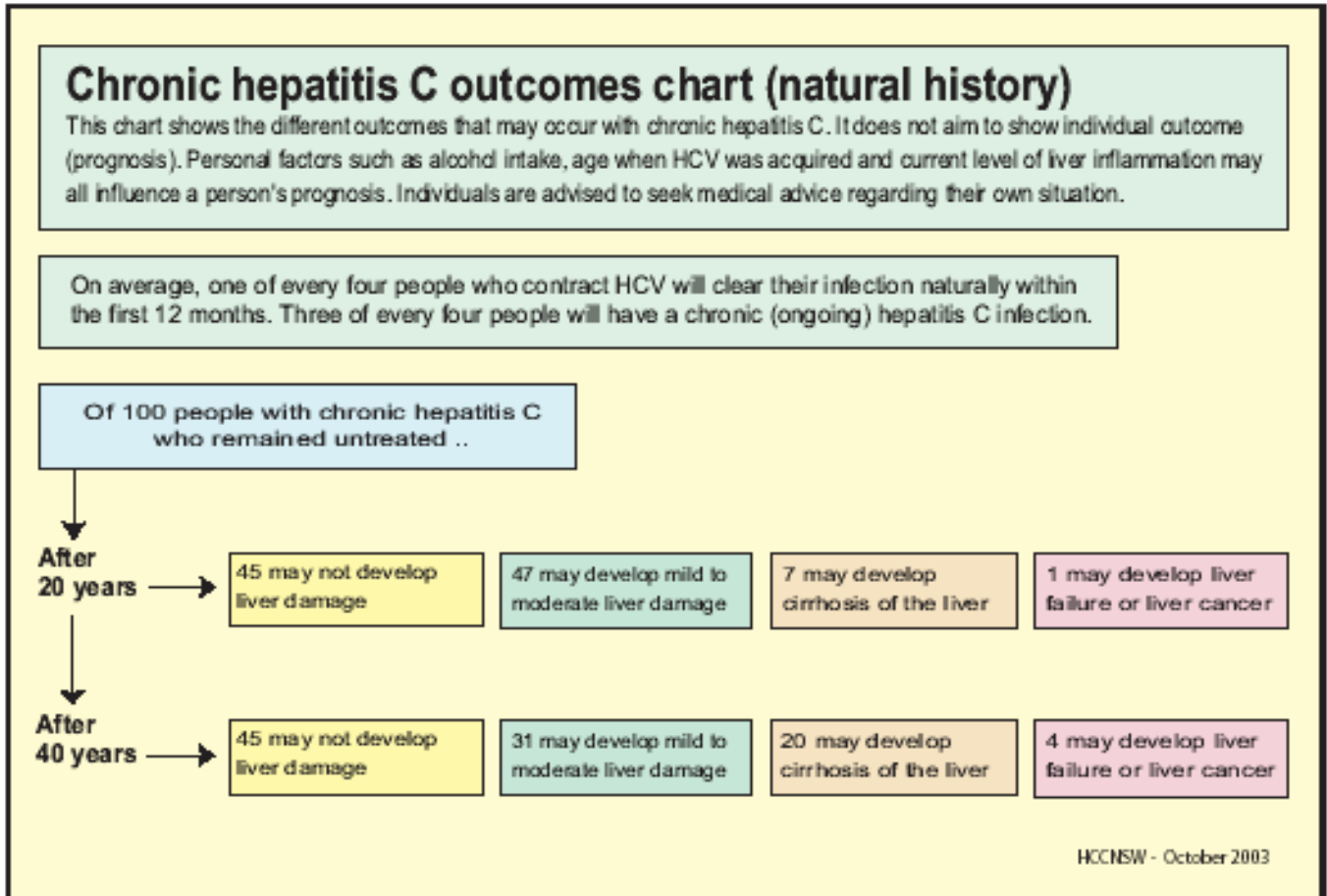
Acquisition at age 40 or greater

Male gender

Presence of steatosis (fatty liver)

Health Impacts of Hepatitis C (continued)

The chart shown below on chronic hepatitis C outcomes illustrates the chance of various health outcomes from a chronic hepatitis C infection (Hepatitis C Council of NSW, 2004c). This chart was excerpted from the Natural History Fact Sheet found on <http://www.hepatitisc.org.au/>.



Factors affecting HCV Disease Progression

Two factors that have the greatest influence over the progression hepatitis related liver disease include co-infection with HIV and HBV, and the use of alcohol (Franciscus & Highleyman, 2006; Tranchina, et al., 2004; and Winston & Winston, 2005). These two issues will be briefly described with additional sources of information cited.

Co-infection is a term used when a person has two or more infections at the same time. It is possible for people to be co-infected with HIV, HBV and HAV.

When co-infection occurs it increases the progress of the liver disease. Vaccination against hepatitis A and B should be offered to all people infected with HCV, as they are at higher risk of decompensation if co-infected (CLF, 1999).

23% of the 49,600 Canadians living with HIV are co-infected with HCV (cited in CPHA, 2005). Each disease intensifies the progression of the other and complicates the treatment of both. For example, liver damage advances more rapidly in patients co-infected with HIV and can be worsened by some of the drugs used to treat HIV (ASHM, 2006)

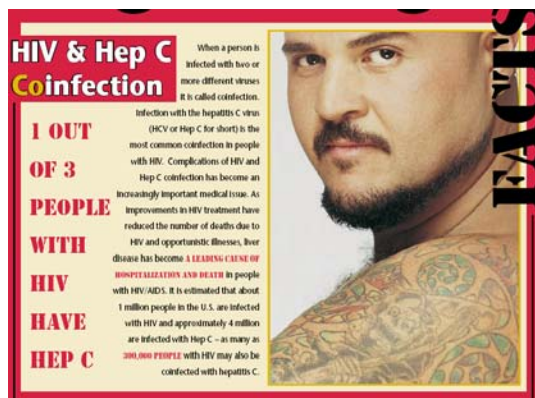
Treatment of HCV for those who are co-infected depends on the CD4 counts. People with counts above 500 cells have better treatment results. However, those with low CD4 are those in greatest need of HCV treatment (Batey et al., 2002).

Alcohol and HCV

Excessive use of alcohol (more than 5 drinks per day) has been linked to a faster progression of liver disease for people with HCV infections (Franciscus & Highleyman, 2006).

There is not conclusive evidence that moderate to light alcohol use is linked with progressed liver disease for people with HCV infections. However, most experts recommend that people with HCV reduce or stop drinking alcohol.

Many drugs (whether prescription, over the counter or recreational) must be processed by the liver. People with hepatitis C should check with their health professional about which drugs are most harmful to their liver. For more information please see the *Hepatitis C for Users* brochure found on www.harmreduction.org. This resource discusses which medications are the hardest on the liver and the most important to cut back on.



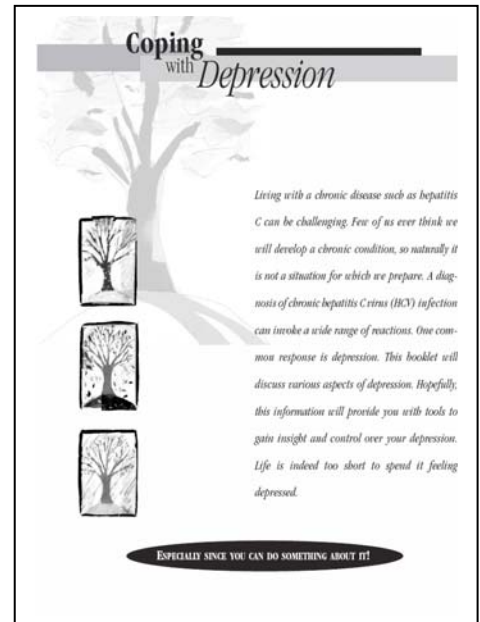
Excerpted from the “HIV & HCV co-infection FACTS. Take Action Fight Back” pamphlet. A Hepatitis C Support Project Initiative. Found on: www.hcvadvocate.org

Issues Related to Living with a Chronic Hepatitis C Infection

Those diagnosed with hepatitis C will need information and support to learn how to manage their disease and its symptoms.

Some of the issues related to helping people with hepatitis C include:

- Research shows that up to 30% of people with hepatitis C also have a diagnosis of depression and 60% of these require treatment. This high rate of depression is thought to be related to a combination of factors including excessive fatigue or concerns about their long-term prognosis (Kipnis, 2004).
- Many physicians are not fully educated about this disease and how to help clients manage and live well with the condition. Advocacy for health professional education and sensitivity to the needs of needle exchange clients may be necessary (Dodd, 2007).
- Needle exchange clients who have a hepatitis C infection will need additional support to stay healthy. Eating a healthy diet, getting regular exercise, and cutting down or stopping alcohol may be challenging for people without stable housing and few resources to sustain a healthy lifestyle (Dodd, 2007). Needle exchange programs may be involved in advocacy efforts to help clients receive basic needs such as housing.



The above page was excerpted from the "Coping with Depression" report written by L. Porter and E. Dieperink, a Hepatitis C Support Project resource that can be found on: www.hcvadvocate.org

Reducing Harm to Your Liver

CUT BACK on "street" drugs: You may also want to reduce the amount of street drugs you take. Speed and ecstasy have been blamed for liver damage in some studies, but there is still disagreement on how they affect the liver. Heroin and cocaine are not harmful to the liver. However, all of these drugs are made in underground laboratories and only available through street dealers. Street drugs are almost never pure, no matter what the dealer says. They may contain other substances that may be damaging to the liver:

- cuts added by the dealer to increase profit
- by-products left behind from when the drugs are made

Text box excerpted from the *Hepatitis C for Users* brochure, produced by the Harm Reduction Coalition. The electronic version of this resource can be found on:

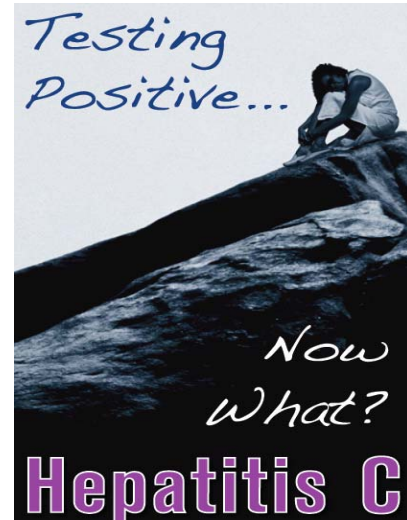
http://hepcproject.typepad.com/hep_c_project/Publications-publications.htm

Supporting People Diagnosed With HCV

The Harm Reduction Workers' Role:

Harm reduction workers are a lifeline to many of the people they serve. Supporting people with HCV may include helping them manage their stress, providing them with full information about HCV, and advocating for access to health care services. Support for those diagnosed with HCV can include actions to:

- Identify and provide sensitive and accurate sources of information about HCV in needle exchange programs.
- Remind clients about their right to disclose their diagnosis as they see fit. Help people think about who they can receive support from and the benefits of disclosure.
- Help clients learn about how they can reduce the harm to their liver from alcohol and other drugs.
- Link clients with a trusted health professional and inform them that follow-up every six months is recommended to monitor their health status (ASHM, 2006).
- Work with other agencies to create a hepatitis C support group in your community. A support group can include information and discussion about the following topics (Dodd, 2007; Hepatitis C Council of NSW, 2004):
 - Understanding the disease
 - Managing the symptoms of a HCV infection
 - Stress and HCV
 - Diet and HCV
 - Alcohol, painkillers and reducing harm to your liver
 - HCV stigma and disclosure
- Support groups can also provide healthy meals, opportunities for exercise, ways to learn about stress reduction and referral for stable housing and detox (Dodd, 2007).



Excerpted from: "Testing positive... Now what? Hepatitis C" pamphlet. A Hepatitis C Support Project Initiative. The electronic version of this resource can be found on: www.hcvadvocate.org

Treatment of HCV

This part of Section 1 looks at the treatment of a chronic hepatitis C infection.

Aim of Treatment

The **first goal of treatment** is to clear the HCV from the body. If the HCV viral load test (measuring the amount of virus in the body) is “undetectable” and ALT levels (measuring whether the liver continues to be damaged) are normal after completion of 24 or 48 weeks of therapy, the patient has achieved a “sustained virologic response” (SVR) (ASHM, 2006).

A **secondary goal of treatment** is to reduce the level of damage to the liver and possibly delay the progression of liver disease. Improvement in liver cell function occurs not only in those who clear the virus but also in those who do not (Winston & Winston, 2005).

Who Should be Treated?

Treatment is recommended for people who have a chance of clearing the virus and for people who are most at risk for developing cirrhosis. People with cirrhosis have a lower response rate to treatment, but it is thought that treatment will slow down the progression of the disease (Batey et al., 2002).

Some controversy exists around the issue of who should receive treatment and what stage of the illness. Some experts indicate that early treatment is advised as it ultimately reduces the reservoir of HCV in the community and also reduces the health risks to the individuals involved (Frankish et al., 2002).

What is the Treatment?

The **standard treatment** for HCV is the combination of:

- Weekly injections of pegylated interferon (PEG-IFN). Pegylated interferon is a man-made form of interferon, which is produced naturally in the body to fight viruses. It reduces the ability of the HCV to replicate and it also stimulates the immune system to fight against foreign organisms (ANCAHRD, 2001).
- Daily ribavirin capsules. Ribavirin works with pegylated interferon to help stop the HCV from making new copies of itself and to boost the immune system. On its own, ribavirin does not have any effect on the HCV, but it helps pegylated interferon be more effective (ADAP, 2006; Franciscus & Highleyman, 2006).

Treatment (continued)

The **standard duration for treatment** of chronic hepatitis C is 48 weeks for genotype 1, and 24 weeks for genotypes 2 and 3. Clearing the virus from the blood is not guaranteed as a result of therapy. Success for this treatment ranges from 50% (for genotype 1) to 80% (for genotypes 2 and 3) (Franciscus & Highleyman, 2006).

Once the treatment has started, the goal is to complete the whole treatment, especially the first 12 weeks (Winston & Winston 2005). At 12 weeks after starting the treatment, an *early virological response test* is taken which measures the HCV viral load. This test determines whether the patient is responding to the treatment. If the patient has not had a one hundred fold drop in their HCV viral load level, it indicates that they are unlikely to achieve a “sustained virological response” at the end of the treatment and their treatment is usually stopped at this point.

Responses to treatment vary depending on the person’s genotype, the amount of virus in their blood, age, sex, stage of liver disease, and lifestyle. Adverse effects of the medical treatment often arise including fatigue, loss of appetite and depression. These side-effects are common but do not usually require discontinuation of treatment (Winston & Winston, 2005).

Some of the issues that need to be considered prior to treatment include:

- The medical community has been reluctant to treat HCV in active drug users in the past due to the fears that users will not be able to stick to the treatment regime and that they will become re-infected. However, recent research has shown that if active users are adequately supported with compassionate health and social support, their success in completing treatment is similar to people who do not use drugs and that re-infection rates are low (Hepatitis C Harm Reduction Project, 2004).
- Treating HCV can be complex and difficult to tolerate. It requires self-injections, taking pills, having many blood tests, and making numerous office visits and enduring multiple side effects (Winston & Winston 2005). Consequently it is very important that people considering treatment are fully informed about possible outcomes and side effects and also receive appropriate pre-treatment medical and psychological assessment (Batey et al., 2002).

Treatment (continued)

Several conditions exist where treatment **will not be provided** (Winston & Winston, 2005 p. 14).
These include when a person:

- Is pregnant or unwilling or unable to practice two forms of contraception. Ribavirin is “teratogenic” which means it causes birth defects in developing fetuses.
- Has a poorly controlled psychiatric disease: peginterferon can cause and make depression worse, lead to suicide and other psychiatric conditions.
- Has a poorly controlled coronary heart disease: ribavirin induced anemia can bring on a restriction of blood supply to the heart.
- Has had a previous kidney or heart transplant. Interferon may cause a severe rejection of the transplanted organs.
- Has renal or kidney failure or insufficiency. Ribavirin is eliminated through the kidneys. In this case peginterferon mono-therapy may be indicated.

In addition, treatment for young people is often not thought of as appropriate, because of concerns about the side-effects, including depression, fatigue and nausea (Williams, Davies, & Conrad, 2005).

Support Related to Treatment

Current and former users of drugs have been successfully treated for hepatitis C with pegylated interferon and ribavirin therapy. However, users need additional support before, during and after treatment in order to have success. The following list provides suggestions of how health professionals and harm reduction workers can support current and former users in preparing for and dealing with the symptoms of treatment. This information is based on research presented at a 2003 meeting the National Institute of Drug Abuse called “Hepatitis C Infection and Substance Abuse: Medical Management and Developing Models of Integrated Care” (November 11-13, 2003, Washington, D.C.); and has been adapted from **“9 tips for treating hepatitis C in current and former substance users”**, a Hepatitis C Harm Reduction Project resource found on: http://hepcproject.typepad.com/hep_c_project/9_tips_brochure.pdf.

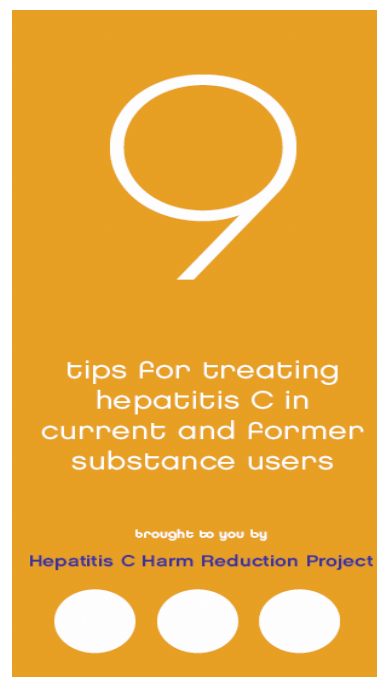
- Identify whether people have enough stability in their lives to be able to adhere to the treatment. Experience shows that many current and former users can adhere to complex and difficult therapies, such as has been shown with HIV treatment. A simple way to determine whether an individual has the potential to adhere to treatment is to assess whether people can consistently keep medical appointments. If someone is able to make three consecutive appointments, even if they have had to reschedule, it is more likely that they will be able to adhere to the treatment. People who routinely miss appointments might need more support or stability in their lives before embarking on treatment.

- Talk people through the process, providing them with full information about treatment. Specifically address individual concerns and fears about issues such as:
 - When treatment will and will not be provided
 - How to prepare for the treatment
 - The biopsy procedure
 - The medications used
 - Symptoms of the treatment and how to manage the side-effects

- Work with individuals and supporting mental health doctors and organizations to address people’s mental health concerns. These conditions are treatable and should be assessed and managed before initiating hepatitis C treatment.

Support Related to Treatment (continued)

- Help people identify a key support person or people with whom they can regularly check in during the treatment to help them monitor and cope with the side-effects. It may be a family member, close friend, harm reduction worker, methadone counsellor or another person. A support person can also accompany people to medical appointments. Ask people considering treatment to bring their support person(s) for education about what to expect from therapy.
- Coordinate care with other health care providers. Find out if people are seeing other health care professionals and ensure that each of these providers has been informed of the treatment.
- Develop a harm reduction plan for people undergoing treatment. Some people are worried that treatment may threaten their recovery or ability to manage their drug use. People in recovery may need support around relapse prevention, especially since interferon requires injection.
- Connect people to a treatment support group or help start one. Peers, other people going through treatment or who have gone through it, can prepare someone for the process and also identify with their experiences.
- Explore strategies such as integrated models of care where nurses, physicians and counsellors focus intensively on education, support, monitoring and managing mental health side effects of treatment. One example of this is “directly observed therapy”, where people receive pegylated interferon once a week at the clinic or office. This supports not only adherence to the treatment, but provides the opportunity to talk about and address treatment side effects (Hepatitis C Harm Reduction Project, 2004).
- A final note: Dehydration makes all of the side effects from the peginterferon and ribavirin worse. Correction of dehydration can reduce fatigue, reduce joint and muscle pain, increase metabolism and increase mental clarity. With every visit to the needle exchange program, people who are undergoing treatment should be encouraged to drink fluids such as water, and any other non-caffeinated drinks (Winston & Winston, 2005).



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Overview of Section 2

Section 2 on crack cocaine has been organized into the following categories:

Who uses crack cocaine?

- Crack use among the general population and among street involved people

What is crack?

- Freebase cocaine versus crack
- What does crack look like?

How crack is used

- How is it smoked?
- Unsafe crack pipes
- Injection of crack

Why people use crack?

- Why people use crack
- Poly drug use

The effects of crack and the symptoms of use

- Adrenaline release
- Dopamine and serotonin release and re-uptake

Understanding crack addiction

Physical and mental health concerns

- Lung, heart and stroke, and seizure problems, overdose, liver damage, oral sores and a compromised immune system are identified

Poverty and the stigma associated with crack

Harm reduction strategies

- Distribution of safer crack use supplies
- Safer crack kit contents
- Safer crack use education
- Other safe use strategies

Introduction

This backgrounder provides information about crack cocaine in order to support harm reduction staff in their work with people who use this drug.

Indicators suggest that crack use has increased in various communities across Canada, especially among street involved people. As crack has the potential to create increased chaos, vulnerability and physical and mental health problems in the lives of its users, it is important for harm reduction programs to take a comprehensive approach to promoting safer crack use. This approach includes the provision of safer crack use supplies and related harm reduction education. It also involves talking to users about how they can put safeguards in place to protect themselves when using.

Crack Use Among the General Population in Canada and Ontario

Crack has emerged as a drug of choice, since the 1980s because it produces an immediate high and it is easy and inexpensive to produce – making it readily available and affordable (NDIC, 2006).

It is difficult to get reliable information about how many people currently use crack cocaine due to its illegal nature. Even so, there are indications that crack use among street drug use populations in Canada may be increasing (CCSA, 2006) and that oral crack use (smoking) is a relatively neglected public health problem in comparison to injection drug use (Haydon & Fischer, 2005).

In 2004, 11% of Canadians (18 years and older) admitted using cocaine or crack at least once in their lifetime. Reported use varied in each province with British Columbia (16%), Alberta (12.3%), Quebec (12.2%), Manitoba (8.9%) and Ontario (8.7%) reporting the highest lifetime use (CECA & Health Canada, 2004).

The Centre for Addiction and Mental Health (CAMH, 2006a) reports that:

- In 2005 approximately 19,300 Ontario students or 2% of students from grades 7 – 12 used crack at least once in the past year.
- In Ontario, cocaine and crack use among students decreased during the 1980s, but since 1992 it has been rising again.

Crack Use Among Street-Involved People

The proportion of street involved people who use crack has increased in communities across Canada, in the past 10 years (CCSA, 2006).

Crack is now considered to be the most popular street drug in Toronto and other North American cities, especially among the poor, homeless, street youth and other disenfranchised people (City of Toronto, 2005, p.4).



Picture excerpted from Leonard et al., 2006b.

- 60% of Toronto street youth reported using crack, 83% used alcohol and 41% use prescription pills respectively, with 72% of youth using substances daily and usually more than one substance at a time (Goodman, 2005 cited in City of Toronto, 2005, p. 3)

- Overall, 65% of the 2006 I-Track survey participants reported smoking crack. This is a national study of people from seven Canadian communities who inject drugs. Percentages of people smoking crack varied in each community, ranging from 88.8% in Toronto to 54.7% in Sudbury (PHAC, 2006, p. 24).



Picture downloaded from:
<http://www.search.com/reference/Cocaine>

- Up to 24.2 % of people in this survey (I-Track) also indicated that they injected crack. Again, the percentages of crack injection varied community to community with a high of 24.2% in Toronto, and a low to 0.4% in Regina and Victoria (PHAC, 2006, p.20).

What is Crack?

Crack cocaine is a highly addictive and powerful stimulant that can make people feel more alert and energetic and provide a euphoric sense of happiness (CAMH, 2006a).

Crack is the street name for the crystallized form of cocaine that has been processed from the powdered cocaine hydrochloride form to make small lumps or rocks that can be smoked (NIDA, 2004). The term “crack” refers to the crackling sound the rock makes when it is heated. (CCSA, 2006).

Crack cocaine is produced by freeing cocaine from its chemical base (e.g. hydrochloride) and is considered to be a less pure form of freebase cocaine (Black, 2006).

To provide a clearer understanding of what a freebase and freebase cocaine are, the following information has been adapted from: <http://en.wikipedia.org/wiki/Freebase> .

Freebase refers to the “[basic](#)” form of an [alkaloid](#), as opposed to its water-soluble [salt](#) form.

Freebase cocaine is the [base](#) form of cocaine, as opposed to the [salt](#) form of cocaine hydrochloride. Cocaine hydrochloride is extremely [soluble](#) in [water](#). The cocaine base however, is insoluble in water and is not suitable for drinking, snorting or injecting.

Cocaine hydrochloride is not well-suited for smoking because the [temperature](#) at which it [vaporizes](#) is very high and as a result it loses its potency. Freebase cocaine base [vaporizes](#) at a low temperature, which makes it suitable for inhalation.

Drugs smoked in their freebase form are generally more powerful and act more rapidly, than in their salt form. This can make freebase drugs more addictive than their salt equivalents.

Smoking freebase cocaine is preferred by many users because the cocaine is absorbed immediately into [blood](#) via the [lungs](#), where it reaches the [brain](#) in about five seconds. The rush is much more intense than sniffing the same amount of cocaine nasally, but the effects do not last as long. The peak of the freebase rush is over almost as soon as the user exhales the vapor, but the high typically lasts 5–10 minutes afterwards. What makes freebase a particularly dangerous drug is that users typically don't wait that long for their next hit and will continue to smoke freebase until none is left.

Freebase Cocaine versus Crack

The difference between freebase cocaine and crack is related to how cocaine hydrochloride is processed to remove the base.

The production of freebase cocaine involves dissolving cocaine hydrochloride with a powerful solvent such as ether or ammonia, and then allowing it to evaporate off when heated. The results are crystalline flakes of cocaine base that are free from impurities and other residual salts. When processed with ether, the freebase can be as much as 95% pure cocaine (Black, 2006; C.O.C.A, 2006).

Crack is made by cooking it with sodium bicarbonate (baking soda) and water to remove the hydrochloride (C.O.C.A, 2006). This process produces a solid chunk or “rock”. The name crack comes from the fact that the bicarbonate of soda is not as efficient as ether or ammonia at freeing the “base” and residues of salt and bicarbonate are left causing it to crackle when smoked (C.O.C.A, 2006).

Due to the dangers of using ether and ammonia to produce pure freebase cocaine, baking soda is the method most often used to remove the base (C.O.C.A, 2006). Processing cocaine hydrochloride with baking soda however, does not purify the drug the same way the ether method does and many impurities remain. The difference in the quality of the street form of crack relies on who makes it and how it is sold (Black, 2006).

People who make and sell crack often mix or cut the cocaine powder with other things that look the same to make the drug go further (GLADA, 2004). Thus the crack sold on the street often consists of extremely small amounts of cocaine and is routinely mixed with a variety of other drugs or toxic substances (SCUC, 2005b p.5). This makes users vulnerable to a range of drug effects they might not know they are using.

What Does Crack Look Like?

Crack is white or tan and looks like small lumps or shavings of soap, but has the texture of porcelain. As well, it can also look like chips of stone or rock (<http://www.usdoj.gov/ndic/pubs3/3978/index.htm>).



Picture downloaded from www.addiction2.com/cocaine_crack



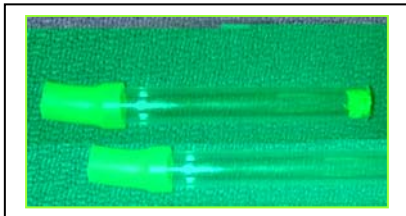
Picture excerpted from a power point presentation: The Works: A harm reduction program for drug users and sex workers, Feb 15, 2007.

How is Crack Smoked?

Crack can be heated to release vapour which is then inhaled into the lungs. A pipe or glass stem is often used to heat the rock and direct the vapours towards the user's mouth. A screen is placed at one end of the pipe or stem to hold the rock in place. The glass stem conducts heat and a protective mouth piece, placed at one end of the stem is recommended to stop the lips from being burned (Strike et al., 2006).

The Ontario Needle Exchange Best Practice Recommendations (Strike et al., 2006) for safer crack smoking suggest using a clean, single use glass tube (pyrex) with a rubber or latex mouthpiece to prevent burns to the mouth and lips. The rock of crack is placed on a brass "screen" securely wedged into the end of the tube. This screen should comprise of several layers of gauge brass mesh.

A safer pipe for smoking crack is a pyrex glass pipe with a rubber mouth piece and brass screens as shown below (picture excerpted from Leonard et al, 2006b).

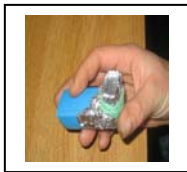


Unsafe Crack Pipes: In the absence of safer crack use materials, many crack users will create their own pipe using items like pop cans, copper elbow pipe, asthma inhalers, ginsing bottles or other metal or glass implements to smoke crack (SCUC, 2007).

Aluminium pop cans are frequently used with the rock of crack placed on a screen over a hole made in the body of the dented can and the vapours from the heated crack are inhaled through the opening in the top of the can (Leonard et al., 2006a).

Another unsafe pipe is that of metal piping which can be used alone, or as the stem of a pipe (the bowl of which is a pill bottle). The rock of crack is placed on a screen on the top of the bottle and the vapours inhaled through the metal stem (Leonard et al., 2006a).

Medicinal inhalers are also commonly used, as is steel wool “brillo” for the screen (Leonard et al., 2006a).



Inhaler



Plastic syringe
and water bottle



Ginsing bottle



Ginsing bottle



Pop can



Car antenna



(Pictures excerpted from SCUC, 2007).

Due to the high temperatures required for smoking crack, many of these products (especially plastic devices) will break down and also give off toxic fumes (SCUC, 2007).

The unsafe quality of the drug use equipment and the high frequency of repeated inhalation causes users to often have chronic cuts, burns and open sores or wounds in their oral cavity area (lips, gum, inner mouth lining) and cuts and burns to the hands. These injuries arise from smoking a glass stem that has been splintered and broken through multiple use (cited in Leonard et al., 2006a).

In addition to unsafe pipes, some screens are more hazardous than others (e.g. brillo pad or cable wire). Screens can give off fumes, or particles can break off and be inhaled into the lungs (SCUC, 2007).

Some smokers will scrape, process and inject or re-smoke the resin or residue from inside the pipe. Scraping the pipe for the resin can also scrape the pipe itself, with pieces of plastic, glass or metal becoming mixed with the resin (SCUC, 2007).

Injection of Crack

Crack cocaine can be injected. Injection releases the drug directly into the bloodstream and is considered the most dangerous way to take drugs as it presents the highest risk of contracting HIV, hepatitis and other bacterial infections. As well, wound infections can occur, particularly as cocaine acts as a local anaesthetic, numbing the injection site and making injection more hazardous (GLADA, 2004, p. 11).

If crack is injected, it must first be converted into a water soluble form by adding an acid to create a salt. Common acidifiers include ascorbic (vitamin C), citric and acetic acid, however the Ontario Needle Exchange Best Practice Recommendations (ONEBPR) suggest using vitamin C powder instead of lemon juice or vinegar (Strike et al., 2006).

The ONEBPR detail practice guidelines and supporting evidence related to the distribution of essential drug use equipment and the provision of harm reduction education. These recommendations promote safer smoking and injection of crack by suggesting that clients have sufficient supplies of sterile needles, cookers, filters, acidifiers, sterile water ampoules, alcohol swabs, tourniquets, glass stems, brass screens and mouth pieces. In addition, they recommend that clients be provided with information about:

- the risks of infection from sharing drug use equipment and supplies;
- related harm reduction education;
- the correct single-person use and correct disposal for each; and
- information about safer injection techniques and safer sex.

The ONEBPR are further detailed in *Harm Reduction Strategies* at the end of this section.

Why People Use Crack

People use crack for different reasons. Some will experiment with crack and use it recreationally to get an exhilarating high. Most people use crack, or any mood-altering drug, to change the way they feel. Crack can numb bad feelings and make people feel better for a while (CAMH, 2006b).

Focus groups in 2002 with 108 crack users in Toronto (SCUC, 2005b) found that many users continue to use crack to self-medicate and provide immediate relief from:

- Withdrawal symptoms from other drugs
- Physical and mental pain
- Loneliness
- Isolation
- Boredom
- Numerous health and social issues
- Feelings of depression and low self-worth
- Memories of a loss of family
- Worries and health symptoms related to hepatitis C infection
- A history of violence and incarceration
- The pain associated with being homeless

Poly Drug Use

Crack users tend to be extensive poly drug users. Other drugs are used to enhance the euphoric effects of crack, as well as to medicate the “come down” (NCETA, 2004).

Injection drug users who participated in the 2006 I-Track study (PHAC 2006) reported that besides injecting they also used a variety of non-injection drugs in the past 6 months including:

- 80% smoked marijuana
- 76% used alcohol
- 65% smoked crack
- 60.4% used benzodiazepines
- 56% used cocaine
- 54.5 % used oxycodone
- 54.5 % used Tylenol with codeine
- 48.1% used morphine

When people mix cocaine / crack with alcohol, they are unknowingly forming a dangerous chemical in their bodies. The human liver combines cocaine and alcohol to create a third substance, cocaethylene. This drug intensifies cocaine's euphoric effects, while potentially increasing the risk of sudden cardiac death (Andrews, 1997; NCETA, 2004; NIDA, 2006; Wilson et al; 2001).

The Effects of Crack and Symptoms of Use

Crack is a powerful stimulant drug with strong effects on both the body and mind. Many people experience feelings of euphoria and supreme confidence (GLADA, 2004).

Although individual reactions will vary when using crack, the effects described below are typical for many users. Crack cocaine produces a rapid, intense high which lasts for about two minutes. This is followed by a less intense but pleasurable feeling which lasts for about another 20 minutes (GLADA, 2004).

Crack works by triggering the release of adrenaline and by inhibiting the absorption of the neurotransmitters called dopamine and serotonin in the brain. These chemicals are part of the body's response to danger and pleasure (C.O.C.A, 2006; NIDA, 2004), and the effects of each of these is further discussed.

- a) **Adrenaline** is normally released as part of a response to danger or excitement and heightens the senses and enables the body to work at peak performance. Crack works on the body's noradrenalin system to release adrenaline. Some of the symptoms of adrenaline release include:
- An increased heart rate which occurs to increase the blood flow around the body, and the rate at which oxygen is transported to the muscles;
 - A faster rate of breathing which increases the amount of oxygen in the blood stream;
 - Butterflies in the stomach due to blood leaving the stomach and being diverted to the arms and legs where it is most needed;
 - Sweating to cool the body when it gets hotter; and
 - Shaking results from the increased energy ready for release.

Users may feel an adrenaline rush when craving crack or are just about to score (C.O.C.A, 2006).

The persistent release of adrenaline caused by cocaine use can lead to decreased need for sleep, loss of appetite, visual and auditory hallucinations, impaired cognitive ability (due to lack of sleep), severe anxiety and paranoia (C.O.C.A, 2006). The environment in which someone is using also affects these feelings (e.g. if crack is being used in a hostile environment like a crack house or with someone they don't trust) then feelings of anxiety and paranoia can be worse (C.O.C.A, 2006).

- b) **Dopamine and serotonin** are neurotransmitters or chemical messengers found in between the neurons in the brain. Nerve cells in the brain normally send messages to each other using chemicals called neurotransmitters. These neurotransmitters fire across a gap between each cell and attach onto receptor sites. Once the message has been received a transported cell then collects up the neurotransmitters so that the levels in these chemicals remain balanced (C.O.C.A, 2006; NIDA, 2004).

Crack and cocaine work by changing the way the nerve cells (neurons) communicate with each other. First, crack stimulates the neurons to release dopamine and serotonin. When dopamine is released it attaches itself to the corresponding nerve cell receptor stimulating a pleasurable response. It is normally then taken back to the neuron that released it. Crack blocks this re-uptake causing dopamine to continue stimulating the neuron receptor, which in turn leads to a higher, more pronounced feeling of pleasure (C.O.C.A, 2006; NIDA, 2004)

The faster the absorption of crack (e.g. smoking, injection) the more intense the high, but also the shorter the duration of the high (CAMH, 2006a).

Many users will attempt to chase their original high which leads to extended use of crack and cocaine. Prolonged use of crack creates a situation where the brain becomes depleted of dopamine which is partly responsible for the "come down" or "crash" (C.O.C.A, 2006). Typically in this situation a user will be physically and mentally exhausted and will sleep for 12-18 hours and wake up very hungry (SCUC, 2005a).

The depletion of these neurotransmitters can cause a chemical depression, which when combined with bad things happening in peoples' lives can lead to suicidal thoughts or severe mood changes (C.O.C.A, 2006).

Understanding the Addiction to Crack

The degree of addictiveness of crack is unclear. Some research suggests that crack is not physically or pharmacologically addictive, as it is in the case of heroin dependence (Drugtext, 2000). Rather, crack creates a psychological dependence (C.O.C.A, 2006). This means that users crave the intensity of the pleasurable feelings (SCUC, 2005a).

Some researchers caution that crack addiction must be defined as more than occasional binges: it must be repetitive and “out of control”. Not all crack users become addicted. Studies show that some are able to control their use of crack to the extent of holding a job, maintaining their family life and keeping a social network (Reinarmann & Levinne, 1997).

Even so, crack is a drug that many users find difficulty controlling (GLADA, 2004). As crack use increases, a user develops tolerance to the effects of crack and will thus increase the amount smoked in an attempt to recapture the intense high. If crack becomes the primary drug of use, a person’s need for the drug may become more chaotic and desperate. A primary crack user may have acute periods of almost constant craving, but at other times show little obvious signs of dependency, sometimes going several weeks between purchases. At the height of a binge, a user may be buying crack almost 24 hours a day for several days or even weeks (Crown Copyright, 2002).

The urge to use crack or cocaine results from a combination of the effects of adrenaline and dopamine on the brain (C.O.C.A, 2006).

For a person who uses crack, the initial release of adrenaline is often caused by an emotional “trigger”, such as meeting someone they use with, other emotional feelings or getting money that enables use. The trigger often causes the initial symptoms adrenaline release, symptoms of craving and anticipation and suddenly individuals can be on a mission to use and feel agitated or full of anticipation at the thought of using (C.O.C.A, 2006).

Once crack has been used, the compulsion to use again is created by dopamine which produces a very strong first high and feelings of confidence (C.O.C.A, 2006). Crack users will continue to chase the high even when they know that the high cannot be reached again.

If people become addicted to crack, it can be one of the hardest drugs to quit. It is hard to stay off crack because the memory of the “high” feeling is so powerful (CAMH, 2006a).

Physical and Mental Health Concerns

While street drug users are generally known to experience an increased risk of disease or death, recent research has illustrated some distinct risk characteristics among certain populations of crack users (CCSA, 2006). Chronic use of crack puts the user at risk of heart problems, permanent liver damage, stroke and seizures, lung problems, nutritional deficiencies, mental health problems and long-term changes in the brain. In addition, research has shown that long-term cocaine use can compromise the immune system (cited in CCSA, 2006). These issues are briefly discussed below.

Heart Problems: The risk of a heart attack from crack use is related to the adrenaline release caused by crack which puts greater strain on the cardiac system by (C.O.C.A, 2006; NIDA, 2004):

- Constricting blood vessels throughout the body;
- Increasing the heart rate;
- Increasing blood pressure due to a constriction of the blood vessels.

As well, erratic heart beats or arrhythmia's may be caused by crack use.

Strokes and Seizures: Strokes are thought to be caused by the constriction of blood vessels and the repeated increase in blood pressure. These combined factors can sometimes cut off the blood supply to parts of the brain, causing seizures and blackouts, and also in some cases cause delicate blood vessels to break causing bleeding in the brain. Increased body temperature may also increase the risk of seizures (C.O.C.A, 2006; NIDA, 2004).

Lung Problems: Smoking crack may cause severe wheezing, a chronic cough or in the extreme crack can cause bleeding in the lungs and “crack lung,” a condition characterized by pneumonia-like symptoms. Some of the other problems that may be associated with smoking crack include (C.O.C.A, 2006; NIDA, 2004; SCUC, 2007):

- Build up of fluid in the lungs
- Foreign particles in the lungs (poor pipes and screens)

Smoking crack can affect the cilia (small hairs that line the main tubes of the lungs). These help to clean the lungs and prevent infections, which in turn leads to an increased risk of bronchitis, pneumonia, and pleurisy (C.O.C.A, 2006).

Overdose: A crack overdose may produce tremors, seizures, and delirium. Death may result from a heart attack, changes in way the heart beats (arrhythmias), and heart failure (Beers et al., 2006). Overdose to crack or cocaine can happen to anyone. Even small amounts can cause overdose with some people who have an especially strong reaction to it.

Other signs of a crack or cocaine overdose include (CAMH, 2006a; NSW, 2006):

- Irrational behavior
- Agitation and hostility
- Paranoid delusions (e.g. thinking that people are talking about you or are trying to hurt you)
- Hallucinations
- Fever and fits
- Unconsciousness (perhaps as a result of a heart attack or stroke)

Crack smokers who also use a range of drugs are at a higher risk of overdose. Crack can temporarily mask the sedative effects of downers like heroin, creating a higher risk of overdose (SCUC, 2007). Alcohol use may increase a user's feelings of depression and increase their cravings for more crack (SCUC, 2007).

Liver Damage: Poly drug use, especially that of alcohol and crack, places added stress on the liver, causing increased harm to the liver (Andrews, 1997).

Oral Sores: Due to the high temperatures required for smoking crack, the unsafe quality of the paraphernalia used and the high frequency of repeated inhalation, users often have chronic cuts, burns and open sores in their oral cavity area (i.e. lips, gums, inner mouth lining) (Leonard et al., 2006a; CCSA, 2006).

Immune System: Crack and cocaine impair the immune system through the depletion of essential vitamins and damage to the CD4 T cells (which help to fight off infections throughout the body). The result is that they do not work as well as they should and the user is at increased risk of infection (C.O.C.A, 2006).

If bacteria are introduced to the blood from unclean injecting equipment, or impure injection solution it can cause an infection, which in turn with an impaired immune system can lead to an even more serious form of infection throughout the entire body (septicaemia). Bacteria can also get in the heart valves, brain, kidneys and lungs which can cause complications. The dangers of injecting crack and cocaine are many with the increased risk of infections at the site of injection (abscesses) or inflammation and damage of the veins (C.O.C.A, 2006).

Infections: People who use crack have been shown to be at higher risk for human immunodeficiency virus (HIV), hepatitis C virus (HCV), sexually transmitted infections (STIs) and tuberculosis (CCSA, 2006).

Mental Health Concerns: Long-term use of crack can have a powerful effect on mental health. It can result in a range of conditions from mild depression and anxiety to the extremes of cocaine psychosis with symptoms similar to schizophrenia (GLADA, 2004). Studies show that mental health issues are high among crack users, with one study showing that personality disorders (24%) were the most common symptom category of disorder in non-in treatment crack users, followed by depression (18%) and post-traumatic stress disorder (12%) (CCSA, 2006).

Poverty and Crack Use

The close association between crack use and poverty has been well documented for crack users in Canada and the U.S. with many of them being homeless or in transient housing. Crack users have been found to be more likely than non-crack illicit drug users to (Fischer et al., 2006):

- Have no permanent housing
- Have illegal and sex work income
- Indicate health problems and have hepatitis C antibodies
- Use walk in clinic
- Also use heroin
- Have been arrested in the past year and be held in detention

Other research has found similar findings:

- Focus groups with 108 Toronto based crack users in 2002/2003 found that 85% of them were homeless (SCUC, 2005).
- Crack users have been shown to rely on sex work for income generation to support their drug use. Given the short-term high and powerful withdrawal symptoms, crack use often occurs in the form of “binges” in which both crack use and income generation (e.g. sex work) occur with high frequency. Sexual activities under the influence of crack often involve high-risk practices that may include multiple sex partners, inconsistent condom use, unprotected anal sex and sex under the influence of drugs (CCSA, 2006).

The Stigma Associated with Crack Use

Crack users experience discrimination everyday. Toronto based crack users described how they thought the public saw them in focus groups held in 2002/2003 with words such as “dirt, worthless, scum, garbage, thief, filth, liar, violent” (SCUC, 2005b).

The majority of focus group participants reported that the constant negative attitudes of the general public led users to feel further isolation, to depression and more use. Many of these users described a vicious cycle of drug use, shame and isolation (SCUC, 2005b).

Many people who use crack do not have regular primary health care due to the discrimination users feel from health care providers (SCUC, 2007). In Toronto, crack users have also been shown to use emergency health care services more often than non-crack users (cited in CCSA, 2006).

Harm Reduction Strategies

A variety of harm reduction strategies can be used to promote safer crack use. These include the provision of safer crack use supplies and related harm reduction education. They also involve working with users to help them identify how they can put safeguards in place to protect themselves when using.

Currently in Ontario, some community health centres and public health departments (e.g. Toronto, Kingston, Ottawa) are providing a range of harm reduction services, some of which target the safer use of crack. Broadly, these services include:

- access to drug use equipment
- health education and risk reduction counselling (including safer drug use, and safer disposal practices)
- health services (e.g. testing for HIV, HBV, HCV; vaccines for hepatitis A and B; basic foot care and other minor first aid; and in some instances full primary health care and hepatitis C treatment)
- access to condoms and water based lube
- referral to addictions treatment services or social service agencies
- methadone treatment
- peer support groups
- mental health services

The availability of such harm reduction programs has been deemed an effective public health measure to prevent the spread of communicable diseases, primarily HIV and HCV and to minimize the risks associated with substance use (Strike, et al., 2006). A recent evaluation of the City of Ottawa's Public Health Safer Crack Use Initiative (Leonard et al., 2006a) provides supporting evidence, as differences in drug use patterns and risk behaviours among injection drugs users were reported after implementing a safer crack use initiative. This evaluation reports that injection drug users:

- Shifted from injecting drugs to smoking crack (which is considered a less harmful method of drug ingestion with fewer associated health risks).
 - Injection drug users reported a reduction in injection behaviours (96% reported injecting prior to project implementation and 78% reported injecting 12 months after the project had been implemented $p<.01$); and
 - The proportion of those who smoked crack among injection drug users increased after the project was implemented (77% smoked before the project and 93% smoked 12 months after the project had been implemented $p<.01$).
- Reduced the HCV and HIV risks associated with smoking crack. The proportion of users who shared their crack pipe "every time" decreased from 37% (measured 6 months before the safer crack kit initiative was implemented) to 13% of users (measured 12 months after the safer crack use project was implemented $p<0.01$).

This section on harm reduction strategies further discusses the following components of a comprehensive program to promote the safer use of crack:

- Distribution of Safer Crack Use Supplies
- Safer Crack Kit Contents
- Safer Crack Use Education and Other Safer Use Strategies

Distribution of Safer Crack Use Supplies

A main harm reduction strategy is to provide sufficient quantities of safer crack use supplies. As crack is both smoked and injected it, the Ontario Needle Exchange Best Practice Recommendations (ONEBPR) suggest that people be asked about the need for and be provided with enough quantities of:

- glass stems
- brass screens
- mouth pieces
- lip balm
- condoms and water based lube
- hand wipes
- sterile needles
- cookers
- filters
- acidifiers
- sterile water ampoules
- alcohol swabs
- tourniquets



Sufficient quantities of the drug use supplies will depend on how the client uses crack and other drugs. To determine this it will be important to talk to people about how frequently they use crack, the amount of crack smoked and injected each time, other drugs that are also used, the supplies needed for these and any problems associated with use. If crack is being injected it will be important to further discuss the types of injection sites that are used (C.O.C.A, 2006) and how to rotate injection sites to reduce vein damage.

For a consideration of some of the other factors related to risks of infectious disease transmission from injection and non-injection drug use and the related harm reduction education, please refer to Section 1 – Hepatitis C p. 10-13.

Safer Crack Kit Contents

Currently in Ontario, safer crack kits may contain any or all of the following:

- 2 pyrex glass stems
- 5-6 brass screens (makes the filter to hold the rock in place)
- Stem holder
- Sturdy poker (chop stick)
- Mouth piece (electrical tape, match book cover, or rubber tubing)
- Condoms and water based lube
- Chewing gum
- Matches or lighter
- Hand and BZK alcohol wipes
- Lip balm
- Harm reduction information



City of Ottawa Public Health
Safer Crack Kit Contents

Glass stems are made of pyrex and are provided to ensure that users have a mechanism for smoking that is clean, for their own use, reducing the need to share stems, is not toxic, and does not heat to a temperature that causes burns to lips and fingers.

Screens are provided to reduce the use of brillo and other products used for screens that have fibers that can be sucked into the user's throat, causing burns to the mouth and throat. Screens must be tightly packed into the stem to reduce the possibility that the screen will be dislodged when smoking crack.

Stem holders are used to prevent burns on fingers when smoking crack.

Chopsticks are used to tightly pack the screens into the stem.

Mouthpieces are provided to protect the user's lips from the heat of the stem, thereby reducing the incidence of burns.

Lip balm is provided to reduce the damage caused by dry, cracked or burned lips, reducing the possibility of transmitting infectious diseases such as hepatitis C.

BZK wipes and alcohol swabs are used to clean the user's pipe to reduce bacterial infections. Wipes can also be used to disinfect any cuts or scrapes.

Chewing Gum helps drug users refrain from grinding their teeth and chewing on the inside of the cheek, which sometimes happens when people smoke crack. Sugar free gum also helps improve the dental hygiene of crack smokers, especially when users are bingeing or are homeless.

Safer Crack Use Education

A second component promoting safer crack use is to provide people with drug use and health information so they can make informed choices about how they use. Thus, people who use drugs need to be provided with information about:

- the risks of infection from sharing all drug use equipment;
- the correct single-person use and correct disposal of drug use equipment; and
- information about safer injection techniques and safer sex.

Other Safer Use Strategies

Many people who use crack will also need support to identify ways that they can keep their lives safer when using. The following safer use strategies were presented in the Safer Crack Use Coalition in their Crack 101 presentation at the Ontario Harm Reduction Distribution Program Conference, March 2007.

Buying Crack: Users can protect themselves if they:

- Score discretely and not carry drugs or money in the open. Users should change the place they store or carry their money and drugs.
- Know the dealers and have a variety of sources.
- Know how drugs taste (i.e. wax vs. crack).
- Decide on how much they want to spend prior to using and buying it at all in one go. The risk of arrest, overspending, and being ripped off increases every time a user goes to score.
- Avoid street credit (borrowing) and thus street debt, which can result in violence
- Buy crack themselves, instead of letting others buy.

Getting Ready to Use: To use crack safely people will need to plan ahead and decide when, where and how to use crack. As well, it is users will be safer if they ensure they:

- Eat before using and ensure food is available for the come down.
- Find a safe place to sleep and something to help with the “come down”.
- Wear comfortable clothes.
- Find someone they know and trust with whom they can use.
- Have enough condoms and lube.
- Have a safer crack kit and put the pipe together before the score.
- Have enough water and juice, chewing gum, extra pipes, mouth piece, brass screens, and a good lighter.

Getting High: While using crack, people will need to know their limits, pace themselves and to take breaks. Some tips to discuss with users to help them do this include how to:

- Enjoy the high while it lasts and avoid ‘chasing the high’.
- Take breaks between using. A day or a week-long break will lower an individual’s tolerance to crack and increase enjoyment of the next hit.
- Prepare the pipe properly before hand to avoid wasting the toke.
- How to find a safe place to use and be aware of the surroundings while using.
- Arrange to smoke with people they get along with, stay cool, and avoid fights.
- Keep money and drugs safe (e.g. don’t flash these while using).

Managing Money: People who use crack are at risk of spending everything they have when binging. If users wish to only spend a set amount, they will need to:

- Pay bills, buy groceries and other necessities before scoring.
 - Set aside money for bus fare, cigarettes, quarters for the phone, etc.
 - Keep money that needs to be used for other purposes safe. Money can be kept in a locker with limited access hours, or with a trusted support worker or even mailed (i.e. bank card).
- Regular users might want to consider using a trustee. If users are receiving an Ontario Disability Support Payment, ask them to think about signing a PAP (pre-authorized payment) agreement between their landlord and social services to protect them against rental arrears.

Coming Down: Users need to know that the crash will be over in approximately 30 minutes and to wait it out. In addition users will need to (SCUC, 2007):

- Plan ahead to secure a place to sleep and food and water for when you wake up.
- Take breaks between using.
- Take steps to be in their safe place for the come down.

Sex Work: Marginalized sex workers who also use crack face many challenges and risks when working (tricks may pressure them to not use condoms, to share their pipe, etc). Many women are sexually and physically assaulted while working and using. To increase their safety while using sex workers can:

- Regularly check the Bad Date Book (monthly report of assaults against sex workers) to reduce the chance of bad dates.
- Get paid in cash before giving service and put earned money in a safe spot between dates.
- Monitor how much and how quickly they are using crack to stay in control.
- Make a safety plan. . . work with a buddy if possible, check-in, have someone note the license plate, make, model, any other info.
- Get free condoms and learn creative ways to negotiate for condom use with clients.
- Use a condom for sex and blow jobs and use a lip balm to further protect lips. Oral cuts and burns increase the risk for HIV and hepatitis C. Brushing or flossing teeth just before giving service also has the potential to leave tiny cuts on the gums which can increase the risk for infection.
- Plan ahead and have your own pipe.
- Carry an extra stem if possible, so others will never have to use yours. Try to save your share the crack until after business is over.

A Sample Crack Kit Distribution & Education Protocol

This sample (Toronto Public Health, 2006) has been provided to support agencies who may be interested in developing safer crack use protocols for their organization. This protocol details the process for the distribution of safer crack use supplies and the related education as follows:

- Distribute crack kits and/or individual glass stems/brass screens/mouthpieces in the quantities requested by clients with no limits on the number provided.
- If the client has used stems, screens or mouthpieces, they will be asked to deposit them directly in the sharps container. Staff should never touch returned supplies of any kind. Staff should have heavy gloves and/or tongs to pick up dropped stems and screens, thereby practicing universal precautions. Stems and screens may have sharp edges that can cause cuts.
- The client will be asked if they require any other supplies (i.e. needles, condoms, sterile water, filters, ascorbic acid, alcohol swabs, tourniquets, etc.) and will be encouraged to take other safer drug use supplies to protect themselves where appropriate.
- Staff should, when and where appropriate, educate clients about safer using strategies related to all drug use supplies. This includes sharing information about all of the supplies available through the program and provision of education/demonstration of their use. Staff should provide information regarding safer sex practices where appropriate and requested and should provide access to condoms and lube.
- Staff should, when and where appropriate, ask clients if they have other needs and offer support and/or referrals to any other health and social services (e.g., health clinic, housing, identification services, social services, withdrawal management, and other forms of drug treatment, etc.)
- Staff should discuss strategies for safe disposal of used crack smoking equipment and provide information about agency locations for disposal. In addition to reducing drug use supply related litter, the safe disposal of used crack smoking equipment can be seen as a strategy to maintain good community relationships.
- Staff should discuss with clients appropriate strategies for safer crack smoking within the community. Being cognizant of the effect of public drug use on a community is an important component of safer drug use education and is a strategy to maintain good community relationships.

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Overview of Section 3

Section 3 on crystal methamphetamine (referred to as crystal or crystal meth throughout the section) has been organized into the following categories:

Who uses crystal meth?

- Use of crystal methamphetamine by various populations

What is crystal meth?

- Composition
- What does crystal meth look like?

How crystal meth is used

- 5 ways crystal meth can be used
- Poly drug use

Why people use crystal meth?

- Why people use crystal methamphetamine

The effects of crystal and the symptoms of use

- Short and long term effects
- Dopamine, serotonin and norepinephrine

Physical and mental health concerns

- Short and long term effects

Ways of Using Crystal Meth and Risks

Stigma associated with using crystal meth

Harm reduction strategies

- Health messages
- Safer drug use supplies
- Safer use messages
- Other safe use strategies

Introduction

This backgrounder provides information about crystal methamphetamine and is intended to support harm reduction staff in their work with people who use this drug.

While the use of crystal meth has not seemed to have emerged in many communities, it has in some areas of Ontario and because of the multiple health and social impacts of this potent and highly addictive drug, it is important that harm reduction workers equip themselves with the knowledge and tools to assist clients who use crystal methamphetamine. The information provided in this section is in addition to the previously identified harm reduction education and supply provisions to reducing the risks of hepatitis C and other blood borne infections found in Section 1.

How many people use Crystal?

In their study of 3031 injection drug users recruited from 7 communities across Canada, the Public Health Agency of Canada (ITrack, 2006) reports that:

- 12.9% of all participants injected crystal meth in the preceding 6 months
- The highest proportion of crystal meth injection occurred in Edmonton (27.9%) and Victoria (26.4%)
- 6.5% of Toronto participants and 6.7% of Sudbury participants injected crystal meth
- 18% of all participants used non-injected crystal meth in the preceding 6 months
- The highest proportion of non-injected crystal meth use occurred in Edmonton (37.3%) and Victoria (28%)
- 15.8% of Toronto participants and 4.7% of Sudbury participants used non-injected crystal

The Centre for Addiction and Mental Health's *Ontario Student Drug Use Survey* (Adlaf & Paglia-Boak, 2005) investigates alcohol and other drug use among the student population (grades 7-12). The 2005 survey revealed:

- 0.9% of Ontario students used crystal meth at least once in the preceding year
- Grade nine students reported the highest average rate of use: 1.4%
- Male students use crystal meth at a rate of 1.2%
- Female students use crystal meth at a rate of 0.5%

Results from the 2005 *Ontario Student Drug Use Survey* (Ibid) indicate that rates of methamphetamine use have declined from 3.3% to 2.2% since the 2003 survey. It appears that, despite the recent media hype, there is no evidence to suggest that methamphetamine is diffused into the general student population.

Crystal Methamphetamine use Among Students: 1999 – 2005 (from Adlaf & Paglia-Boak, 2005)

	1999	2001	2003	2005
% of students (grades 7-12) who have used crystal meth in the preceding year	1.4%	0.6%	1.2%	0.9%

Anecdotal reports indicate that crystal meth is rapidly gaining popularity across North America; yet survey data regarding use of stimulants in the general adult and student populations in Ontario do not reflect such a trend at this time (RGDU, 2004). However, crystal meth use is more apparent in data from surveys of particular communities such as street youth (RGDU, 2004).

Youthlink (2004, as cited in RDGU, 2004), in partnership with Children’s Aid Society, surveyed substance use among street-involved youth and reports that 37% (28 respondents) of homeless youth in Toronto use methamphetamine at least once per month. Unfortunately this statistic does not capture the prevalence of crystal meth use specifically, rather methamphetamine use in general. The Shout Clinic (as cited by RDGU, 2004) however, recorded crystal meth use among street youth as 9% in 1992 and 14% in 1999, indicating a growing trend among this population.

There is speculation about the reasons why crystal meth use is more prevalent among street-involved youth. The fact that it is relatively cheap and provides long lasting effects may be perceived as advantageous to this population. Crystal allows users to stay awake for prolonged periods of time and suppresses appetite; two strategies which may be important for survival on the street.

In addition to street-involved youth, there is also cause to suspect that crystal meth use is also more widespread among gay and bisexual males.

“... I know if I was high I like, wouldn’t be hungry right now and sometimes it’s easier to get drugs than food” (Bungay et al., 2006).

“The combined experience we have on the street, online, in bathhouses, at sex parties and clinically, is that crystal meth use among men who have sex with men has risen significantly in Toronto. There is also evidence that men who have sex with men are perhaps the largest and most vulnerable population of users currently in Toronto” (ACT, 2006)

One American source suggests that the highest rates of crystal use belong to gay males between ages 17-29 years (Barebackhealth.net, n.d.).

Research suggests that it is important to understand the underlying context of drug use and sex, particularly when it comes to men who have sex with men (Bullock, et al., 2006).

Although Canadian survey data for this population is not currently available, the Toronto Gay/Bisexual Men's Crystal Meth Task Force (2006) reports current estimates of crystal meth use among gay and bisexual men in Toronto range from 6 – 25%. They also report that requests for services and supports among gay and bisexual men have risen significantly. As a consequence, many crystal meth resources are geared toward men who have sex with men, and/or men who are involved in the gay club/party scene.

What is Crystal Methamphetamine?

Crystal methamphetamine is a form of amphetamine. Crystal affects the central nervous system, acting as a psycho-stimulant. It acts on the body to produce a rush of adrenaline, which can increase strength and endurance. Crystal also elevates brain chemicals or neurotransmitters, like dopamine, serotonin, and norepinephrine. These chemicals relate to mood, sexual function, body movement, sleep and sensory perception, and regulation of body temperature and blood pressure.

This combination can lead users to feel very confident and alert, to have an elevated mood, feel euphoric, have increased energy, movement, and speech, and decreased appetite. Some gay men also report feeling very sexual on crystal, with a reduction in inhibition and an increase in their ability to have sex for a long period of time. (ACT website, April, 2007)

Methamphetamines are stimulants that are made in powder and crystalline form. The crystalline form of methamphetamine (crystal meth) appears semi-transparent and shard-like, and can be snorted, injected, swallowed, smoked and used through anal or vaginal insertion.



(Left to

right: Images retrieved from <http://crystalrecovery.com>; www.talktofrank.com/drugs.aspx?id=178; and <http://www.drug-help.net/imgs-drugs/amphetamines.jpg>).

Crystal Meth Ingredients:

Crystal meth can be made relatively easily using inexpensive and readily available products. There are literally thousands of different recipes for making crystal meth, therefore it is impossible to know the specific chemical make-up of any given sample.

Here is a partial list of ingredients commonly used to make crystal meth:

- Pseudoephedrine or ephedrine (ingredient in some cough/cold medications)
- Red phosphorous (striking pad of matchbook)
- Acetone (nail polish remover)
- Lithium (camera batteries)
- Toluene (brake cleaner)
- Naptha (camp stove fuel)
- Anhydrous ammonia (farm fertilizer)
- Methanol (gasoline additive)
- ‘Draino’ (drain cleaner)



Toxic ingredients used to manufacture crystal meth (ACT, 2007)

These ingredients are used in various steps of the manufacturing process to create certain chemical reactions. Unfortunately they often end up contaminating the final product.

Clandestine laboratories used to manufacture crystal meth are dangerous places to be in or live around as many of the chemicals used in the production process are highly explosive and flammable (ACT, 2006). In addition, the materials are highly toxic and corrosive. For every 1kg of crystal meth, produced, up to 6kg of toxic waste is produced (Deguire, 2005).

How is Crystal Used

There are five ways to take crystal meth:

- Snorting
- Swallowing (also known as ‘parachuting’)
- Smoking
- Injecting
- Anal/vaginal insertion (also known as ‘booty bumping’, or ‘hooping’)



(Images retrieved from www.anypositivechange.org; <http://2stopmeth.org/images/methinfo13L.jpg>;

- Crystal meth is commonly smoked through a glass pipe with a bowl. After the crystal is activated with a lighter or mini-torch, it forms a liquid then turns to vapour which is inhaled (crystalrecovery.com). Smoking delivers an intense rush almost immediately (less than 1 minute) (Toronto Gay/Bisexual Men’s Crystal Meth Task Force, 2006). This method may cause irritation to the lungs and lead to breathing problems (San Diego Harm Reduction Centre, n.d.). Crystal meth can also be smoked on aluminum foil heated by a flame underneath, sometimes referred to as “chasing the dragon” or “chasing the white dragon”. Crystal meth must be heated and not burned to cause the desired smoke. (www.addiction-rehab-consultants.com/meth.htm)
- Crystal meth can also be injected which also delivers a rush within about 1 minute. The hydrochloride salt of methamphetamine is soluble in water so it does not need to be heated prior to injection, just mixed with sterile water (ibid). Some people find that crystal needs to be heated to dissolve it (which may be due to adulterants) completely. Risks exist for Hepatitis and HIV from sharing injecting equipment (needle, water, tourniquet, filters, etc.)
- Like cocaine, crystal meth can be ground into a powder and snorted through an inhaler straw or ‘bumper’. Unlike cocaine, crystal should not be snorted in a line because of the intensity of the high, a “bumper” is sufficient. The effect is delayed (3-5 minutes) and somewhat less intense (Toronto Gay/Bisexual Men’s Crystal Meth Task Force, 2006). Sharing snorting equipment (i.e. straws, bills, etc.) present the risk of spreading diseases such as HIV and Hepatitis C. Snorting can also irritate and damage nasal passages (San Diego Harm Reduction Centre, n.d.)
- Inserting crystal meth anally or vaginally involves injecting a needle-free syringe into the rectum or vagina (Fenway Community Health, 2007). This is referred to as booty bumping. The effect is similar to that of snorting and is absorbed into the bloodstream within 3-5 minutes (Toronto Gay/Bisexual Men’s Crystal Meth Task Force, 2006). Risks include damage to rectal/vaginal

membranes and exposure to HIV, Hepatitis C and other blood borne infections following use of non-sterile equipment (San Diego Harm Reduction Centre, n.d.).

- Crystal can also be swallowed in tablet form, or by dissolving it in liquid and mixing into a drink. The effect is delayed (15-30 minutes) and less intense than other methods of ingestion (Toronto Gay/Bisexual Men's Crystal Meth Task Force, 2006). The main risk of injecting crystal in tablet form is that because of the delay between when the tablet is taken and the high occurs, people may take more meth to speed the process. While the disease transmission risks are lower with this method of use, the risk of overdose exists and people using crystal this way should be advised.

Poly Drug Use

Crystal is often used with a variety of other drugs including marijuana, ecstasy, heroin, alcohol, ketamine, and Viagra (MARC, 2007).

- Research suggests that crystal acts as an aphrodisiac for some gay/bisexual men, and that it is often found in the gay party scene (MARC, 2007). However, one of crystal's side effects is difficulty maintaining erection, and Viagra is sometimes taken to maintain arousal. This is a dangerous combination as it increases blood pressure and risk of stroke (Toronto Gay/Bisexual Men's Crystal Meth Task Force, 2006).
- Mixing crystal with other substances is often unintentional. Users expect their drugs to be pure, but this is often not the case. According to RCMP data, over 58% of drugs sold as ecstasy actually contain methamphetamines (MARC, 2007). At the time of the writing of this manual, there were several reports from staff and clients of Ontario needle exchange programs that some drugs sold as crack were mixed with crystal meth.

“There are two classes of drugs that are very dangerous when combined with Tina: other stimulant drugs and depressant drugs. Coke and ecstasy are stimulant drugs. Stimulants have a synergistic effect. Combining stimulants can push our body too far and besides feeling sick, our body temperature can reach dangerous levels, we risk cardiac arrest and potentially a stroke. An additional caution around ecstasy; sometimes ecstasy contains Tina so we may be taking more Tina than we think we are” (Toronto Gay/Bisexual Men's Crystal Meth Task Force, 2006)

Why People Use Crystal

Crystal is used for a variety of reasons, primarily because of the positive effects it provides the user. These may include (CAMH, 2007):

- increased energy and alertness
- increased confidence
- decreased need for sleep and eating
- euphoria
- increased sexuality

Crystal appeals to a wide variety of people including injection drug users, students, athletes, truck drivers or anyone who desires to stay awake for long periods at a time and be able to function (Saul, 2005). A person who desires to lose weight may also choose crystal for its ability to both reduce appetite and increase energy.

In the study, *Crystal!: A study of use and sexual risk among men who have sex with men (MSM) who are poly-drug users in Toronto* (Bullock, et al., 2006), crystal was reportedly used for self-medicating purposes. Crystal is known to provide a false sense of coping and security; therefore a person may choose crystal to forget problems and to feel confident and free of tension or nervousness. Self-medication was, in fact, the number one reason for use. This reason for using was followed by “fun and celebration”, “sexual enhancement” and “sociability”.

The Effects of Crystal and Symptoms of Use

Crystal works by changing the users’ brain chemistry. It stimulates the central nervous system and triggers the release of the neurotransmitters dopamine, serotonin, and norepinephrine in the brain.

- a) **Dopamine and serotonin** are neurotransmitters, or chemical messengers, that are produced naturally by the human body. They have a number of functions, but are most often associated with the brain’s pleasure system. The flood of dopamine to the brain produces intense feelings of euphoria and wellbeing. Serotonin is associated with emotional states so that when crystal is taken the user feels hypersensitive and aroused (crystalrecovery.com, n.d.).
- b) **Norepinephrine** is a secondary neurotransmitter related to adrenaline. The release of norepinephrine produces many of crystal’s physical effects including increased heart rate and blood pressure, and subsequent cardiovascular complications (Toronto Gay/Bisexual Men’s Crystal Meth Task Force, 2006).

The way crystal meth makes you feel depends on a variety of factors including weight, age, dosage,

duration of use, and method of ingestion (CAMH, 2003). Generally, crystal produces a euphoric high and feelings of stimulation much like cocaine, except longer lasting.

The short term effects of crystal meth last between 4-24 hours. Users may experience:

<ul style="list-style-type: none">▪ Feelings of euphoria▪ Increased alertness▪ Increased Energy▪ Talkativeness▪ Excitability▪ Sexual enhancement▪ Loss of appetite▪ Decreased fatigue▪ Anxiety▪ Panic	<ul style="list-style-type: none">▪ Increased heart rate▪ Increased blood pressure▪ Increased breathing rate▪ Sweating▪ Headache▪ Restlessness▪ Teeth grinding/jaw clenching▪ Incessant talking▪ Irritability▪ Insomnia
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Physical and Mental Health Concerns

Using crystal disrupts the body’s normal production and maintenance of dopamine levels. The spike in dopamine levels caused by crystal is followed by a crash which is characterized by the depletion of dopamine levels. The more often crystal is used, the more difficult it becomes for the brain to stabilize dopamine production (Toronto Gay/Bisexual Men’s Crystal Meth Task Force, 2006). This is why feelings of depression, fatigue, and inability to experience pleasure are all a part of coming down (Ibid).

Although “a little bit goes a long way” (Ibid), tolerance to the effects of crystal build up quickly. Users may find that the intensity of each ‘rush’ diminishes with prolonged use (CAMH, 2003).

- A **binge**, or ‘**meth run**’, occurs when the user continues using the drug until it is all used up, or the person is physically unable to use. A binge can last from a night to several days.

- **Tweaking** is a term to describe the intensity of the users’ fixation on whatever he or she may be doing while high on crystal. This may include anything that gets the user’s attention (fixing, cleaning, sex, picking at skin, etc.). Tweaking may also involve visual hallucinations, becoming irritable, paranoid, and making abnormal, semi-purposeful movements (McGhee, 2004).

Health Canada (2007) reports that an **overdose** of meth may result in hyperthermia (dangerously high body temperature) and seizures. If the overdose is not treated, death may result. The risk of overdose is highest when meth is injected although one of the biggest hazards of the oral form (pills or capsules) is the "lag time"; the period from when meth is swallowed until the high occurs. People sometimes become impatient for the effect to hit and may take more meth to speed up the process. That's when the person may suffer an unintentional overdose.

The health and mental effects of crystal use can be divided into short-term and long-term effects.

Short-term Effects:

When a person first smokes or injects crystal, there is an intense rush accompanied by a state of euphoria. During this period the person becomes extremely energetic, talkative and confident; heart rate, breathing and body temperature increase and appetite decreases. Irritability, craving, depression and hunger (Saul, 2005).

Higher doses may lead to convulsions, irritability, insomnia, confusion, anxiety, aggression and hyperthermia (extremely high body temperature). As heart rate and blood pressure are both increased, there is risk of chest pain, heart attack, stroke, permanent damage to blood vessels in the brain and inflammation of the heart lining (Saul, 2005).

Long-Term Effects:

Addiction to crystal and tolerance to the drug develops in regular crystal users. A person soon finds that they need more frequent and larger doses of the drug and may try riskier routes of taking the drug such as injecting into a vein instead of smoking with a pipe. The aforementioned "binge and crash" pattern often results and any attempt to stop taking the drug results in withdrawal symptoms which may include fatigue. Prolonged crystal use can lead to psychosis, memory loss, anorexia and violent behaviour. There are similarities between the psychological symptoms of crystal use and schizophrenia, both of which exhibit paranoia, hallucinations, compulsive behaviour and formication (the sensation of insects or parasites on one's skin) (Saul, 2005).

With regards to the effect of crystal on neurotransmitters and brain functioning, there is some suggestion of damage to dopamine and serotonin neurons (Saul, 2005). More research is needed to discover whether this damage is permanent.

‘Meth mouth’ is a term that has been used by some to describe the state of severe gum and tooth decay some habitual meth users experience (Saul, 2005). This effect is suspected to relate to reduced blood flow to the teeth and gums, and dry mouth from less saliva (CAMH, 2003). Another possible explanation is that crystal causes “dry mouth”, or Xerostomia, which may lead the user to drink sweetened, carbonated drinks that in turn cause more decay and disease in the mouth (American Dental Association, 2005). It is often claimed that smoking crystal meth speeds up the process (of losing teeth) by leaving crystalline residue on the teeth and while this is confirmed by dentists, no clinical studies have been done to investigate. www.addiction-rehab-consultants.com Helping people who use crystal to develop realistic plans to care for their teeth is important. Providing sugar free gum and/or toothbrushes are good strategies.

If a crystal user chooses to inject the drug, they may be at risk of HIV and Hepatitis infection. These viruses are transmitted primarily through the blood. The sharing of needles and drug equipment provides a perfect conduit for transmitting the virus from one person to another. As well, crystal may cause a person to feel more sexual at the same time as lowering their fears about any issues surrounding sex. This can lead to risky sex behaviours (i.e., not using a condom) and thus, increase a person’s chance of contracting HIV or other sexually transmitted (www.himynameistina.com).

Other long term effects may include:

- Depression
- Weight loss
- Heart strain
- Loneliness and isolation
- Loss of job, school, friends

Harm Reduction Strategies

A variety of harm reduction strategies can be used to promote safer crystal meth use. These include the provision of safer drug use supplies and related harm reduction education. The best beginning of any work with people who use drugs is the initiation of a trusting dialogue about how the person is using, including methods of administration, where they are using and with whom. The goal is to have a discussion about ways that the individual can better protect themselves from the potential negative effects of the drugs they use. Harm reduction workers have to involve the people they are working with to identify how they can put safeguards in place to protect themselves when using. This work has to be non judgemental and user centred.

Harm reduction services can include:

- access to sterile drug use equipment
- health education and risk reduction counselling (including safer drug use, safer disposal and safer sex practices)
- health services (e.g. testing for HIV, HBV, HCV; vaccines for hepatitis A and B; basic foot care and other minor first aid; and in some instances full primary health care and hepatitis C treatment where needed)
- access to condoms and water based lube
- referral to addictions treatment services or social service agencies if client requests
- peer support groups
- access to mental health services if client requests

The following is a summary of harm reduction recommendations from a variety of sources:

The AIDS Committee of Toronto (www.torontovibe.com) recommends:

- Set limits: Decide how you want to party before you start
- Sleep: Nap or rest your eyes even if you feel you cannot sleep
- Stay hydrated by drinking water, Gatorade, or other sports drinks
- Avoid alcohol and energy drinks because they dehydrate you
- Eat: Even though you don't feel hungry and your mouth and throat are dry. Try eating apple sauce, bananas, honey, yogurt, and protein shakes
- If you are injecting, try snorting or swallowing to give your veins a break; or try to rotate your sites (try not to use to same site over and over).

The Toronto Gay/Bisexual Men’s Crystal Meth Task Force (www.himynameistina.com) recommends:

- Before doing crystal, think about how you are going to feel coming down
- Do a body check before getting high (cuts and sores on mouth, hands, and genitals are transmission points for HIV, Hep C and other STIs, and are more difficult to notice when you are high)
- Avoid mixing drugs (recreational and prescription). If taking prescription drugs, check with doctor before using crystal
- Use condoms and more lubricant than you think you might need when having sex
- If you are taking HIV medications, try to stay on schedule by having solid food available (i.e. meal replacement bar) and a timer to remind you

Additional safer use strategies include:

- Avoid mixing crystal with Viagra or poppers as the combination can have a serious effect on blood pressure
- Try not to stay up for longer than 2-3 days
- Take some time during your high to relax and be quiet from constant activity
- Short cat naps can help take the edge off
- Resist the urge to binge on sugar as it can cause increased mood swings and intense drug cravings. Eat more protein instead
- Take a multi-vitamin
- Some suggestions for foods that won’t damage teeth and might keep you going include yogurt, cheese, milk, protein/sports bars, fruits, veggies, meal supplements like Ensure or Boost, water, juice (100% juice, not juice drink)

Safer drug use:

A main harm reduction strategy is to provide sufficient quantities of safer drug use supplies. Sufficient quantities of the drug use supplies will depend on how the client uses crystal and other drugs. To determine this it will be important to talk to people about how frequently they use, the amount of crystal smoked, snorted and/or injected each time, other drugs that are also used, the supplies needed for these and any problems associated with accessing necessary supplies. The Ontario Needle Exchange Program: Best Practice Recommendations maintain that staff should provide safer drug use supplies in the amounts requested with no limits. If a client is not going to be able to access the needle exchange program for an extended period of time or if there is the possibility of a binge, they should be provided with enough supplies to ensure they have the ability to protect themselves. (For a consideration of some of the other factors related to risks of infectious disease transmission from injection and non-injection drug use and the related harm reduction education, please refer to Section 1 pp. 18-20).

“... some other blood-borne infectious diseases can be transmitted by using crystal meth, depending on how it is consumed. When smoking, pipes can get hot and cause damage and bleeding to someone’s lips. If one shares a pipe, there is a chance that a small amount of blood from an infected person can remain on the pipe, and get onto someone else’s lips. The blood can get in contact with a small cut or sore on the lips, providing an opportunity for the transmission of hepatitis C. Similarly, the lining inside the nose can bleed onto a straw used for snorting. There is a chance that a small amount of blood from an infected person can remain on the straw. If one shares a straw to snort meth, that blood can find its way into the nose of another person and transmit hepatitis C. Hepatitis C. Unlike the HIV virus, the Hepatitis C virus survives well in dried blood exposed to air, therefore increasing the risk of transmission when sharing drug paraphernalia. Hepatitis C causes damage to the liver and is very difficult to treat. It is a major cause of cirrhosis of the liver, liver failure and liver cancer.”

Fact Sheet: Crystal Meth and HIV, Canadian AIDS Society

Injecting Crystal Methamphetamine:

If the client is injecting crystal, provide sufficient quantities of:

- Needles
- Cookers
- Filters
- Sterile water ampoules
- Alcohol swabs
- Tourniquets

In methamphetamine research, injection users often do not experience severe tooth decay, presumably because there is no residue as there is when smoking it. Conversely, injection users may experience greater jaw clenching which can cause loose teeth. Injection use also often causes skin rashes (sometimes called “speed bumps”) and many different types of infections due to the methamphetamine damage to the skin. www.addiction-rehab-consultants.com. Advise clients to rotate injection sites to avoid abscesses and discuss strategies to reduce infections related to scratching (i.e. washing hands, cleaning with alcohol pads)

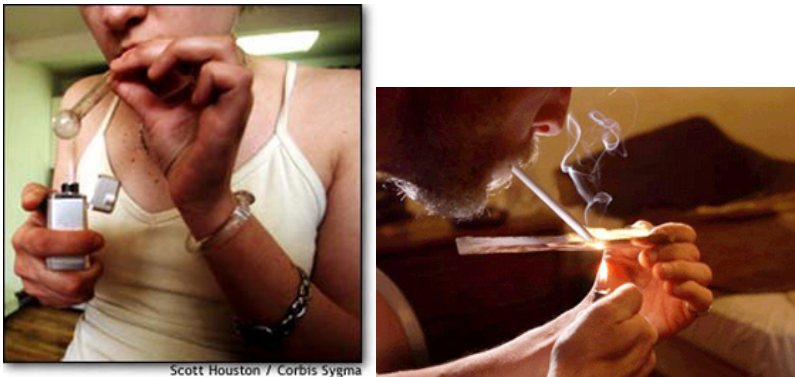
Smoking Crystal Methamphetamine:

While some needle exchange programs are able to distribute pyrex stems and brass screens to people who smoke crack, there is currently no “pipe” for safer smoking of crystal available through needle exchange programs in Ontario. When crystal meth is heated it turns to liquid, therefore the “pipe” has to have a bowl instead of the glass tube used for smoking crack.

People who smoke crystal meth should be encouraged to:

- Use their own pipe
- Protect lips from hot pipes by using a mouthpiece
- Keep lips moist and crack free by using lip balm
- Use pipes that are not cracked or broken
- Use pipes that are not made from plastic or other materials that may result in toxic fumes
- Smoke in ventilated areas to avoid inhalation of any possibly toxic oxidation by-products

Another concern regarding smoking crystal meth is the presence of oxidation byproducts created when the heated drug comes in contact with air. Even if the initial drug is pure methamphetamine, the act of smoking it produces other chemicals, some of which may be toxic. www.addiction-rehab-consultants.com.



(pictures retrieved from crystalrecovery.com)

Harm reduction workers should engage clients who smoke crystal in a discussion about:

- What they use to smoke crystal – does the pipe have any jagged, broken edges that might cause cuts and/or burns, is the pipe made of toxic material especially when it is heated (i.e. plastic)
- How they can reduce the harm from cuts and/or burns by creating a makeshift mouthpiece i.e. rubber band, lid from a pen with the end cut off, etc., especially if they are sharing their pipe (they can remove the mouthpiece before sharing if necessary)
- What they can use instead of potentially toxic or dangerous pipes i.e. buy more suitable pipes at a head shop

Snorting Crystal Methamphetamine:

If the client is **snorting crystal meth**, they should be encouraged:

- not to share straws, bills, paper or other items used to snort due to the risk of HIV and Hepatitis transmission.
- keep nasal passages moist with water

Safer Sex Education

Provide condoms and lube in sufficient quantities, discuss realistic safer sex practices and have a discussion about ways people can protect themselves. Have an open dialogue about the effect crystal can have on sex drive, how to plan ahead and build on that to help the person develop their own harm reduction strategies.

An important health message for crystal meth users is to *sleep, eat, and stay hydrated.*

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Community Resources

The following list highlights organizations and resources that provide a range of information on Hepatitis C, Crack and Crystal Methamphetamine.

Disclaimer: The Ontario Needle Exchange Network does not endorse or promote any of the resources contained herein.

Canadian Resources: HCV-specific

York Region Hepatitis C Education & Support Group

Support group and source for educational resources on Hepatitis C.

4261 Highway #7 East, Unit B6-9

Unionville, Ontario L3R9Z6

Phone: (905) 940-1333 / 1-800-461-2135

Email: info@hepcyorkregion.org

Web: www.hepcyorkregion.org

Peel Region's Hepatitis C Website

Internet resource including information under such headings as *What is Hep C?*, *Am I at risk?*, *Do I know someone with Hep C?*, and *How do I manage?*

Health Line Peel: (905) 799-7700

Email: healthlinepeel@peelregion.ca

web: www.peel-hepc.ca

HIV/AIDS Regional Services (HARS)

Education and support organization. Services include prison support, counselling, advocacy, access to free condoms, a Needle Exchange and an extensive resource library & education department.

844a Princess Street

Kingston, Ontario K7L 1G5

Tel: (613) 545-9809 / 1-800-565-2209

web: www.hars.ca

Hepatitis C Society of Canada

National non-profit voluntary health organization. Website contains local contact information for chapters in ten provinces and territories.

P.O Box 33544

50 Dundurn Street South

Hamilton, Ontario L8P 4X4

Phone: (905) 524-0212 / 1-800-652-HEPC (4372)

Email: mail@hepatitiscsociety.com

Web: www.hepatitiscsociety.com

<p>The Hepatitis Information Network</p> <p>Information pertaining to Hepatitis C for clients and carers. Learning modules and quizzes online. Last updated, 2000/2001.</p> <p>Web: www.hepnet.com</p>	<p>Canadian Hepatitis C Information Centre</p> <p>Internet resource containing educational materials and links to external Hepatitis C resources.</p> <p>400-1565 Carling Avenue Ottawa, Ontario K1Z 8R1</p> <p>Phone: (613) 725-3154 / 1-866-804-HEPC (4372)</p> <p>Email: hepc@cpha.ca</p> <p>Web: www.hepc.cpha.ca</p>
<p>Durham Hepatitis C Support Group</p> <p>Information and discussion group available to anyone with or affected by Hepatitis C. Refer to website for meeting times and locations.</p> <p>Contact: Sandy</p> <p>Email: smking@rogers.com</p> <p>Web: www.creativeintensity.com/smking/durhamgrp.htm</p>	<p>Hamilton Hepatitis C Network</p> <p>Provides general information about Hep C and specific information about support group meetings and contacts in Hamilton.</p> <p>162 King William St., Suite 103 Hamilton, Ontario, L8R 3N9</p> <p>Phone: 905 522 1148, ext. 312</p> <p>Fax: 905 522 9124</p> <p>Email: info@hamiltonhepc.net</p> <p>Web: www.hamiltonhepc.net</p>
<p>Hepatitis C Education and Prevention Society (HepCBC)</p> <p>HepCBC is an umbrella organisation comprising a variety of autonomous organisations, each of which is dedicated to educating and advocating for those infected and affected by HCV. Website provides in-depth factsheets (English & Spanish), link to online support group, and other information.</p> <p>306 - 620 View Street Victoria BC, V8W 1J6</p> <p>Phone: (250) 595-3892</p> <p>Fax: (250) 595-3865</p>	

Canadian Resources: Other

All Nations Hope AIDS Network (ANHAN)

Saskatchewan-based network of Aboriginal people, organizations, and agencies providing support and service to First Nations, Metis, and Inuit families and communities affected by HIV/AIDS and Hepatitis C.

2815 5th Avenue

Regina, SK S4T 0L2

Toll free: 1-877-210-7622

Web: www.allnationshope.ca

Ontario Needle Exchange Network & Coordinating Committee

Developed as a forum for information exchange and discussion of issues relevant to needle exchange programs in Ontario. Membership includes seven regional representatives of NEPs funded through the Public Health Branch of the Ministry of Health and Long Term Care.

Contact:

Shaun Hopkins, The Works

277 Victoria ST. , Main Floor

Toronto, ON M5B 1W2

Phone: (416) 392-0521

Email: shopkins@toronto.ca

Canadian Harm Reduction Network

A virtual meeting place for individuals and organizations dedicated to reducing the social, health, and economic harms associated with drugs and drug policies. Includes a discussion board, links to relevant articles, events, and job postings.

Web: www.canadianharmreduction.com

The Safer Crack Use Coalition (SCUC)

An alliance of stakeholders organized to address such as harm reduction materials, comprehensive health and social services, and personal support for crack users.

338 Dundas Street East (c/o Street Health)

Toronto, ON M5A 2A1

Phone: (416) 760-2949

Web: <http://scuc.pasan.org/>

Canadian Centre on Substance Abuse (CCSA)

A national agency providing evidence-based information and advice from a harm reduction perspective. Website contains factsheets and other publications related to Hepatitis C.

75 Albert Street, Suite 300

Ottawa, ON K1P 5E7

Phone: (613) 235-4048

Fax: (613) 235-8101

Email: info@ccsa.ca

Web: www.ccsa.ca

Canadian Hemophilia Society

A national organization serving people with inherited bleeding disorders. Website contains information about HCV and HIV.

45 Charles Street East, Suite 802

Toronto, ON M4Y 1S2

Tel.: 416 972-0641, or 1 800 668-2686

Fax: 416 972-0307

E-mail: chs@hemophilia.ca

Web site: www.hemophilia.ca

Public Health Agency of Canada

Federal government resource for information on Hepatitis C and other diseases, initiatives, and health advisories.

Web: www.phac.aspc.gc.ca

Public Health Agency of Canada I-Track Study

A Comprehensive study examining risk behaviours among injecting drug users in Canada. Available in print or online.

Web: <http://www.phac-aspc.gc.ca/i-track/>

Canadian AIDS Treatment Information Exchange

A Canadian non-profit charity supporting people affected by HIV/AIDS. Website provides information about treatment, services, and support. Primarily focused on HIV/AIDS, website contains information on HCV treatment and co-infection.

555 Richmond Street West, Suite 505

Box 1104

Toronto, ON M5V 3B1

Phone: (416) 203-7122, or 1-800-263-1638

Fax: (416) 203-8284

Web: www.catie.ca

Canadian HIV/AIDS Legal Network

An advocacy organization dedicated to promoting the human rights of people living with and vulnerable to HIV/AIDS, through research, legal and policy analysis, education, and community mobilization.

1240 Bay Street, Suite 600

Toronto, Ontario M5R 2A7

Web: www.aidslaw.ca

Prisoners HIV/AIDS Support Action Network (PASAN)

A community-based network of prisoners, ex-prisoners, organizations, activists and individuals working together to provide advocacy, education, and support to prisoners on HIV/AIDS, HCV and related issues.

489 College Street, Suite 500

Toronto, ON M6G 1A5

Phone: (416) 920-9567, or 1-866-224-9978

Fax: (416) 920-4314

Web: www.pasan.org

International Resources: HCV-specific

Hepatitis Caring Ambassadors Program

Website contains Hep C facts, news, and disease management information.

PO Box 1748

Oregon City, Oregon

97045

Phone: (503) 632-9032

Web: <http://www.hepcchallenge.org/>

Hepatitis C Support Project: HCV Advocate

A California-based website containing educational information and links to local and international resources for people affected by Hepatitis C.

Information available in English, French, Spanish, Vietnamese, Russia, Tagalog, German, and Chinese.

Email: alanfranciscus@hcvadvocate.org

Web: www.hcvadvocate.org

Australian Hepatitis Council

An Australian website containing potentially useful information to clients and service providers.

Publications available for download from the website include *"Preparing for Testing"*, *"Women & Hepatitis C"*, *"Guide to Healthy Eating"*, and *"My Choice to Tell"*.

Email: ahcinfo@hepatitisaustralia.com

Web: <http://www.hepatitisaustralia.com/>

Hep C Australasia – Online community

Hep C Australasia is a community-based internet discussion forum which aims to empower people affected by hepatitis C and provides a place to share ideas, opinions, support, tears and laughter. It is an Australian based service which welcomes overseas members

Web: <http://www.hepcaustralasia.org/>

Hepatitis C Harm Reduction Project

A resource for drug users and outreach workers sponsored by the Harm Reduction Coalition.

Web: www.hepcproject.org

Healthy Hepper

A web resource dedicated to providing information about natural solutions for Hep C. Links to discussion forums, recipes, and mailing lists.

Web: www.healthyhepper.com

<p>Hepatitis C Connection, Education & Support</p> <p>A Colorado-based education, support, and prevention network for those affected by and at risk of Hepatitis C. Provides factsheets in English and Spanish, links to resources, and more.</p> <p>190 E. Ninth Ave Suite 320 Denver, CO 80203 Phone: 1 (800) 522-HEPC Web: www.hepc-connection.org</p>	<p>Hepatitis Neighbourhood</p> <p>An American-based web resource with links to online HCV support groups, message boards, and chat rooms. Note: Website is owned and operated by a pharmaceutical distributor.</p> <p>Web: www.hepatitisneighborhood.com</p>
<p>Organization to Achieve Solutions in Substance Abuse (OASIS)</p> <p>An Oakland, California based organization attending to the healthcare and psychosocial needs of persons infected with hepatitis C (HCV). Website contains informational videos, printed materials, and links to evidence-based literature.</p> <p>520, 27th Street Oakland, CA 94612 Phone: (510) 496-0189, or 1-800-282-1771 Fax: (510) 834-0916 Web: www.oasisclinic.org</p>	<p>Hepatitis C Council of New South Wales</p> <p>Australia-based organization offering assistance to people affected by HCV. Website contains educational factsheets and information on peer support.</p> <p>Web: www.hepatitisc.org.au</p>

International Resources: Other

Hepatitis Foundation International

A Maryland-based resource for Hepatitis C information and support. Website includes links to library resources, publications, videos, and more.

504 Blick Drive

Silver Spring, MD

20904-2901

Phone: 1-800-891-0707

Fax: (301) 622-4702

Web: www.hepfi.org

HIVandHepatitis.com

A California-based online publication that provides information about and treatment options for HIV, HVC, and co-infection. Note: Website sponsored by numerous pharmaceutical companies.

Web: www.hivandhepatitis.com

Canadian Resources: Crystal Methamphetamine

HiMyNameIsTina.com: The Toronto Gay/Bisexual Men's Crystal Meth Task Force

HiMyNameIsTina.com is a project of the Toronto Gay/Bisexual Men's Crystal Meth Task Force. The website is the centre piece of Toronto's first crystal meth education/awareness campaign. It's written primarily by and for gay and bisexual men, and other men who have sex with men, and contains a wealth of information about crystal meth and related topics.

Web: www.himynameistina.com

Methamphetamine Response Committee (MARC)

An interactive, youth-oriented web resource created by a British Columbia-based coalition of community stakeholders. Access to educational information on a wide variety of topics including the chemical components of meth and the production process, legal issues, health effects, and community resources.

Web: www.methfacts.org

Email: Jennifer.vornbrock@vch.ca

<p>Canada Health Portal</p> <p>A federal government website providing information about and health risks associated with crystal use and other substances.</p> <p>Web: http://chp-pcs.gc.ca</p>	<p>Crystal Meth Anonymous (CMA)</p> <p>Crystal Meth Anonymous is a fellowship of people for whom crystal meth has become a serious problem. Meetings are held regularly abstinence is not required. CMA Toronto membership is primarily gay men, although membership is open to all. Meetings held at the 519 Community Centre (519 Church Street, Toronto).</p> <p>Web: www.crystalmeth.org</p> <p>Info line: (416) 925-9872 ext.2126</p>
<p>Toronto Raver Information Project (TRIP)</p> <p>TRIP provides safer sex and safer drug use info and supplies to party people in Toronto's electronic music communities. TRIP provides a variety of workshops on safer drug use, safer sex, and safer partying to other organizations, volunteer groups, schools, universities, colleges, etc.</p> <p>Web: www.tripproject.ca</p> <p>Email: trip@ctchc.org</p>	<p>CrystalRecovery.com</p> <p>An internet resource for facts and anecdotal information about crystal meth. Site includes a question and answer forum, information about treatment and recovery, and harm reduction.</p> <p>Web: www.crystalrecovery.com</p>

International Resources: Crystal Methamphetamine

Knowcrystal.org

A resource funded by the San Diego Harm Reduction Centre. Website contains factual information, without judgment or stigma, geared to gay and bisexual men who use crystal meth or know someone who does.

Web: www.knowcrystal.org

Email: info@knowcrystal.org

Tweaker.org

Straightforward information about crystal meth presented in a user-friendly format.

Web: www.tweaker.org

Crystalneon.org

Comprehensive information for gay and bisexual men who use methamphetamine. Presented from a harm reduction perspective.

Web: www.crystalneon.org

LatinoAIDS.org

Information about crystal meth for the latino community.

Web: www.latinoaids.org/crystalmeth

LifeOrMeth.org

This straightforward web site contains a hot line for crank users among other information. The website's main message is: Live for yourself, or live for the drug.

Web: www.lifeormeth.org

Hepatitis C Society of Canada – Local Support¹

Bancroft

Jean Ann Barnaby
(613) 474-1267

Barrie

Jeanie
hepcsupportbarrie@rogers.com

Brampton

(905) 452-0049
Christine Laughane

Durham Region

DurhamHepatitis C Support Group
Smilin' Sandi
smking@rogers.com
1-800-841-2729

Hamilton

Hepatitis C Society of Canada
National Office
(905) 524-0212
1-800-652-hepC (4372)
www.hepatitiscsociety.com

Kingston

HARS Hep C Info
(613) 545-3698
hars@kingston.net
www.hars.ca

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St. Catherines

(905) 682-6194
jcolangelo@cogeco.ca

Sault Ste. Marie

(705) 949-1683
Charles Duguay
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Sudbury

Circle C Support Group
(705) 522-5156
Ernie Z.
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Toronto

CLF
416-491-3353
glipton@liver.ca

Unified Networkers of Drug Users Nationally
undun@sympatico.ca

¹ Information current as per Hepatitis C Society of Canada website at the time of publication.
Reducing the Risks of Hepatitis C for People Who Use Crack or Crystal Methamphetamine

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(905) 295-4260

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Hepatitis C Network of Windsor & Essex County

(519) 562-1741

amonkman@hepcnetwork.net

www.hepcnetwork.net

York Region

(905) 940-1333

(905) 886-3446 Joe Rinella

1-800-461-2135

info@hepcyorkregion.org

www.hepcyorkregion.ca

For an up to date list of Needle Exchange Programs in Ontario, please contact the Ontario Harm Reduction Distribution Program at (613) 544-9735 or www.ohrdp.ca