

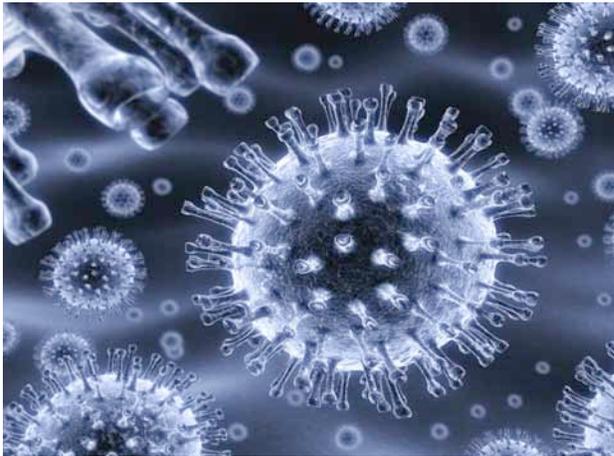


Toronto People With AIDS Foundation

# Treatment Bulletin

## Hepatitis C & HIV

March 2011



*Silybum marianum*  
(Milk thistle)

### Disclaimer

The Treatment Resources Program at the Toronto People With AIDS Foundation provides information and resources to empower people living with HIV/AIDS to be proactive around their health by working in partnership with their health care providers. We do not recommend or promote any treatment in particular. We strongly urge those interested in any specific treatment to consult a wide range of resources, including a qualified medical and/or complementary therapy practitioner who has experience in working with HIV+ individuals.

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A significant number of people living with HIV/AIDS also have hepatitis C – a virus that infects and causes inflammation in the liver. It is estimated that currently a little over 13,000 people in Canada are infected with both Hepatitis C virus (HCV) and HIV.

Being infected with both viruses is referred to as co-infection and is a concern because each can make the management and health outcomes of the other more complicated and serious. This guide is intended to provide you with an overview of HIV/HCV co-infection, its relevance and ways that you can prevent it.

## Hepatitis C

### *I. Transmission*

Transmission of Hepatitis C is very similar to HIV, which is why co-infection with both is not unusual. Hepatitis C is transmitted by direct blood-to-blood contact. Prior to 1992, many people contracted HCV through infected blood products received during transfusions. Currently, the major route of transmission is through sharing of injection drug use equipment but there are other ways that you can get HCV:

- Needles used for tattooing or body piercing that have not been sterilized properly. Contaminated ink and inkwells can also be a source of transmission.
- Sharing items that might contain blood such as razors or toothbrushes – while this is a less likely route of transmission it is still possible.
- Through unprotected sex with someone who has HCV, especially if bleeding occurs or is present during sex, or if you have a sexually transmitted infection (STI), or HIV.
- Mother-to child-before or during birth (increased risk with HIV co-infection)

### *II. Symptoms*

When Hepatitis C enters your body, it infects your liver. When your body tries to fight the infected cells, it produces inflammation (called hepatitis), and eventually can lead to scarring of your liver tissue.

Your liver is a particularly important organ that performs a large number of functions vital to keeping the body working well. It helps to filter chemicals and waste products from the blood, stores important vitamins and minerals like iron, makes bile (which is needed to help you to digest fat), and creates hormones which help you to produce platelets which stop bleeding when you injure yourself. These are only a few of the many functions it performs.

While the liver is one of the few organs in the body that has an amazing capacity to repair itself and keep working while damaged, the effects of chronic hepatitis C infection and inflammation can take their toll and interfere with its functioning.

#### *Acute HCV Infection*

Many people do not have symptoms during the first 6 months (acute period) of infection and so Hepatitis C is often not diagnosed right away. When symptoms do occur during the acute phase they usually appear between 5 and 12 weeks after infection and can include:

- Fever
- Fatigue
- Abdominal pain
- Nausea & vomiting
- Dark coloured urine
- Jaundice (yellowing of the skin, whites of the eyes, and mucous membranes such as the inside of the mouth because the liver is unable to remove a substance called bilirubin from the blood)

It is estimated that about 20% of people are able to eliminate HCV on their own but this number decreases in individuals co-infected with HIV. Those that do not clear the infection (either spontaneously or through treatment) during the acute phase are considered to have chronic HCV infection.

## *Chronic HCV Infection*

Hepatitis C disease usually develops very slowly, over decades, before people start to develop symptoms. In those co-infected with HIV, disease may develop much quicker.

As the liver becomes more damaged from the persistent inflammation that results from the immune system being activated by the presence of HCV, it becomes scarred and hardens, known as cirrhosis. If cirrhosis is extensive enough it begins to impair the functioning of the liver, a life-threatening situation. Cirrhosis also increases your risk of developing liver cancer.

Symptoms of cirrhosis include:

- Fluid retention in the abdomen (called ascites), legs, or whole body
- Jaundice
- Fatigue
- Itchy skin
- Appetite loss, weight loss, wasting
- Vomiting (there may be blood present in the vomit)
- Confusion, lethargy, sleepiness and other mental disturbances (when the brain becomes affected)

### *III. Diagnosis*

Similarly to HIV, Hepatitis C is diagnosed through a blood test. The test looks for antibodies to Hepatitis C which can appear anywhere from a few weeks up to 6 months after initial infection. Because of this, diagnosis might be missed during acute infection in some individuals, but because most people are diagnosed in the chronic stage this generally is not an issue.

A positive test will be confirmed with secondary testing. In someone who has been recently exposed, testing for the presence of viral RNA (the genetic material of the virus, which is in a similar form to HIV) is recommended since it may take a while for the body to generate antibodies. In those individuals whose immune systems are significantly compromised, HCV RNA testing is also recommended since their immune system may not be strong enough to make antibodies and so the antibody test registers negative despite HCV infection.

Your doctor may order a liver biopsy to determine the extent of the damage and scarring caused to your liver. A liver biopsy is a procedure that removes a small piece of tissue from your liver so that it can be examined under a microscope. This is done in hospital by inserting a needle into the liver for just a fraction of a second and you will usually be sent home within a few hours. While not a pleasant procedure, it is one of the best tools available to measure the extent of damage, and there are pain control options available to you.

You will also need to have regular blood tests to monitor your HCV infection and status of your liver function. This is generally done through blood tests. Liver function tests include AST (aspartate aminotransferase) and ALT (alanine aminotransferase), which are both enzymes that can be found in the liver (though AST can be found in other tissues such as the heart as well). When your liver is damaged it leaks these enzymes into the blood and are a sign that your liver cells have sustained some damage.

### *IV. Treatment*

The decision to treat your hepatitis C is a decision that needs to be made between you and your doctor. The main goal of treatment is to eliminate HCV from your body and so it is intended to be curative and improve liver health. Two drugs are currently used in combination to treat Hepatitis C: ribavirin and pegylated interferon (PegIFN).

Interferons are found naturally in your body and help it to fight viral infections. With PegIFN, a synthetic interferon is attached to a chemical called polyethylene glycol (PEG) to allow it to stay in your body longer. Because it is injected, this means you only need one injection per week rather than 3 times per week, which is required with regular interferon.

Ribavirin is an antiviral drug that acts against HCV. It always need to be taken in combination with PegIFN and is taken orally in pill form. The usual course of treatment for individuals co-infected with HIV and HCV is 48 weeks.

The side effects associated with HCV treatment can be uncomfortable, and have caused some individuals to stop treatment part way through. There are ways however, to manage these side effects.

Side effects of interferon include:

- Flu-like symptoms such as fever/chills, headache, muscle aches, joint aches
- Nausea, vomiting, appetite loss, diarrhea and weight loss
- Fatigue
- Dry skin, eyes and mouth, hair loss
- Depression, mood swings, anxiety, difficulty concentrating, suicidal thoughts (rare but has occurred), especially if you have a history of mental health issues
- Low white and/or red blood cells, low platelets, and other blood cell changes.

Side effects of ribavirin include stomach upset, vomiting, diarrhea, and anemia but the biggest concern is for women and pregnancy. Ribavirin has been shown to cause birth defects and even fetal death. Both men and women need to use effective birth control measures to prevent pregnancy during and for 6 months after treatment. Men must use condoms since semen contains ribavirin and can expose their partner to the drug.

HCV treatment can cause a temporary decrease in CD4 numbers but generally return to pre-treatment levels once treatment finishes and is generally not a cause for concern.

There is a possibility you may not clear the virus with your first course of treatment and another course may be necessary. There are some factors which may decrease the effectiveness of your treatment including:

- HCV viral load (the lower the viral load before treatment the better the response)
- HCV genotype, or strain (types 2 and 3, respond better)
- More advanced liver disease
- Longer time with HCV infection
- HIV status (treatment may be less effective for those co-infected than HIV-negative individuals)
- Higher body mass index (BMI) is associated with less effective treatment response
- Insulin resistance and diabetes
- Poor adherence to treatment

There are many options available to you to help you manage the side effects of HCV treatment. Speak to your health care provider or pharmacist, who can help you devise strategies for coping during the course of your treatment.

### Hepatitis C & HIV

One of the biggest concerns with HIV and HCV co-infection is how the two infections interact with each other. Having both also makes each one a little more difficult to treat.

Having HIV can make HCV replicate faster and so can lead to liver damage and liver cancer sooner. Since HIV drugs are processed by the liver, a damaged liver can affect how HIV drugs act in your body. Finally, because HIV weakens your immune system, it makes it harder to fight HCV. As you can see – the interaction between the two is complicated!

You and your doctor will work together to manage both and decide on treatment based on the health of your immune system and your liver and decide if and when the best time to treat your HCV is.

## Prevention & Management

Prevention of Hepatitis C involves reducing the risk factors for transmission. This includes not sharing or re-using needles or other drug equipment and ensuring safe tattooing, practicing safe sex, and not sharing razors or toothbrushes. While there are vaccines for hepatitis A and B, currently one for Hepatitis C does not exist.

If you are co-infected there are things you can do to keep your liver and immune system healthier longer.

### *Tips for staying healthy when you are co-infected with HIV and HCV include:*

- Eat healthy foods and get plenty of sleep. Everyone can learn to eat well – consider seeing a dietician or nutritionist if you need help.
- Avoid alcohol and recreational drug use – these can cause further damage to your liver, especially when used in excess.
- Try to reduce or quit smoking. There are lots of options to help you quit – from medication to acupuncture to hypnosis – you don't need to do it alone.
- If you decide to start treatment for Hepatitis C, talk to someone about managing side effects and how best to prepare ahead of time. Being prepared can make the course of treatment much more manageable.
- If you feel stressed out, learning stress reduction techniques can be helpful. This can include yoga, deep breathing, or even something as simple as learning to take time for yourself.
- Don't be afraid to ask for support from those around you. A little help can go a long way!

## Acknowledgements

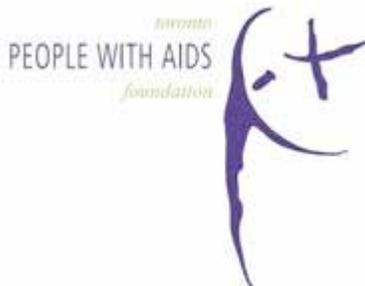
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### Mission

The Toronto People With AIDS Foundation exists to promote the health and well-being of all people living with HIV/AIDS by providing accessible, direct, and practical support services