a series of fact sheets written by experts in the field of liver disease

HCV Transmission and Prevention

Alan Franciscus, Editor-in-Chief
Liz Highleyman

HCV IS TRANSMITTED BY DIRECT BLOOD-TO-BLOOD CONTACT.

HCV Transmission

Transmission routes include sharing drug paraphernalia for both injection and non-injection drugs (needles, cookers, tourniquets, straws, pipes, etc.). Needles used for tattooing, body piercing, and acupuncture may also spread HCV. Sharing personal items such as razors, toothbrushes, or nail files is a less likely but still possible transmission route.

Before 1992, many people contracted HCV through blood or blood product transfusions. In 1992, a reliable blood test to identify HCV antibodies became available. Since then, the blood supply has been screened. Today the likelihood of contracting HCV through infected blood is less than .01%. A small percentage of people (estimated at 1-3%) may contract HCV through unprotected sexual activity. Healthcare workers are at risk for HCV infection because needle-stick accidents and unavoidable situations may result in direct contact with blood from an infected individual.

Perinatal transmission from mothers with HCV to their infants before or during birth occurs less than 5% of the time. Whether or not transmission occurs may depend on the presence of high levels of the virus in the mother's blood; mothers coinfected with HBV or HIV are more likely to transmit HCV to their babies. The transmission route for up 10% individuals infected with HCV cannot be identified. HCV is not transmitted by casual contact such as sneezing, coughing, hugging, or sharing eating utensils and drinking glasses.

HCV Prevention

Do not share needles or any other drug paraphernalia, razors, toothbrushes, clippers, nail files, or any items that contain blood. Make sure that instruments used for tattooing, body piercing, and acupuncture are properly sterilized; most practitioners today use disposable needles. All cuts and wounds should be covered. Although sexual transmission appears to be rare, you can reduce the risk by practicing safer sex, including the use of condoms and barriers. According to the Centers for Disease Control and Prevention (CDC), if you are in a monogamous relationship you do not need to change your current sexual practices, although partners should discuss safer sex options if either partner is concerned about transmission. If the woman has HCV, avoid sex during monthly periods. Proper dental hygiene can prevent bleeding gums, another possible transmission route. Notify your doctor, dentist, and other healthcare professionals if you have HCV. Healthcare workers should observe standard universal precautions when dealing with blood. If you are a woman with HCV, talk to your doctor if you are thinking about becoming pregnant.

For more information about hepatitis C, hepatitis B and HCV coinfections, please visit www.hcvadvocate.org.

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A publication of the Hepatitis C Support Project

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How Long Does HCV Live on Surfaces ?

Alan Franciscus, Editor-in-Chief

How long is HCV stable on exposed (environmental) surfaces?
In real world situations it would be almost impossible to effectively study this problem because of the many variables involved in testing blood on exposed surfaces, such as room temperature, amount of blood exposed, viral load (low/high) and various contaminants in the environment. However, a study conducted by the Centers for Disease Control may shed some light on this issue and help provide a better understanding of the infectivity of HCV on surfaces, which will help fine tune HCV prevention measures.

A study conducted by Kris Krawczynski et. al from the Centers for Disease Control and Prevention tested the stability of dried and stored serum (blood) of HCV infected blood in chimpanzees to determine how long HCV infected blood lives on an outside surface as well as the level of infectivity of the blood exposed.

Chimpanzee plasma (CID) divided into 105 infectious doses (genotype 1a) was dried in tubes under vacuum. After overnight drying (~16 hours) samples were either rehydrated with sterile water and stored at -70C or transferred to a controlled environmental chamber (42% humidity, over saturated salt solution) for a 4 or 7 day storage at 25C and subsequently rehydrated with sterile water and kept at -70C.

Samples dried/stored 7 days and dried overnight were used for testing. To determine infectivity, samples of dried/stored plasma for 7 days, 4 days and overnight, were reconstituted in sterile water and injected into a chimpanzee. The size of the infectious dose of each inoculum was calculated at 3.3 x 104 CID. Plasma samples were tested for HCV RNA (viral load), HCV anti-body and alanine aminotransferase (ALT) levels twice weekly. In addition, liver specimens were obtained weekly or biweekly and tested for hepatitis C virus antigen (HCVAg) and histopathology (liver health).

The chimpanzee was first inoculated with the HCV inoculum that was dried and stored for 7 days and followed during 129 days. Subsequently, the chimpanzee was inoculated with the HCV inoculum that was dried and stored for 4 days and followed for 134 days, and finally inoculated with the dried sample overnight and followed for 201 days. Data from three chimpanzees with untreated HCV inoculum were included in the study as a control group.

The authors found that HCV RNA (viral load) was detectable in plasma dried overnight and 7 days, but a ten fold decrease of detectable HCV RNA (viral load) was found in both of the samples compared with the HCV RNA level of the original, untreated HCV positive plasma sample. No evidence of HCV infections was detected in the chimpanzee given either the 7-day or 4-day dried and stored samples. All blood samples tested were negative for HCV RNA and HCV antibodies. In addition, ALT levels remained in the normal range. However after inoculation with the overnight dried sample, HCV RNA was detected in the blood of the chimpanzee from day 7 post inoculation and viral load reached 6.0 to 7.3 logs IU/mL. HCV Ag positive hepatocytes (liver cells) were observed from day 11 post inoculation, seroconversion to anti-HCV was observed on day 127, and the chimpanzee was still positive for HCV RNA (4.8 logs IU/mL) at day 201 post infection. ALT activity level was elevated over the normal range from day 11 post inoculation and remained elevated until the end of the observation period. Virologic, serologic, and clinical evidence of HCV infection and acute hepatitis was found in all three control animals.

The Bottom Line

The authors of this study concluded that infectivity studies in a chimpanzee suggest that HCV may survive on environmental surfaces at room temperature for at least **16 hours but not longer than 4 days**. The potential for HCV to survive in the environment re-emphasizes the importance of cleaning and disinfection procedures, safe therapeutic injection practices, and harm reduction counseling and services for injection drug users.

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Mother-to-Child Transmission

Alan Franciscus, Editor-in-Chief

It is estimated that approximately 240,000 children in the United States have been infected with the hepatitis C virus. Before blood was screened for hepatitis C in 1992, the majority of HCV transmission among children was caused by blood transfusions or blood products. Today, most new HCV infections in children occur in children born to HCV infected mothers.

Risk of Transmission

Although, the risk of HCV transmission from mother to child varies widely, most experts estimate the chance of an HCV positive mother transmitting the virus to her infant at about 5%. Some research has shown that the risk of transmission from the mother to the infant is higher if the HCV positive mother has a high viral load, but more studies are needed to confirm this. The chance of passing HCV from mother to child seems to increase if the mother is also infected with HIV. There is no evidence that the HCV genotype or the mode of delivery (vaginal vs. cesarean) increases or decreases the vertical, or "mother-to-child" transmission of HCV.

Breastfeeding

Breastfeeding is generally not considered to be a risk factor for mother-to-child transmission of HCV, but there is a possibility of transmitting hepatitis C to a baby if the mother's nipples are cracked or bleeding.

Testing

Testing an infant for hepatitis C is complicated since the mother's hepatitis C antibody will be passed to the child. In addition an infant is more likely than an adult to clear the virus on its own especially within the first year. Therefore, it is recommended that testing for the hepatitis C antibody should not begin for 12 to 18 months. If an earlier diagnosis is desired, a viral load test can be performed at 1 to 2 months after birth. However, caution should be used since it has been found that a baby's viral load may fluctuate in the early or acute phase of infection, and thus retesting may be required.

Risk to Pregnancy

Fortunately, if the mother has hepatitis C, it does not seem to result in a higher risk to the pregnancy.

Should Pregnancy Be Avoided?

Because the transmission rate of hepatitis C from mother to child is so low, women should not be counseled against becoming pregnant.

Preventive Measures

Unfortunately, there are no preventive measures to reduce the risk of passing HCV from an HCV positive mother to her infant. Current medications to treat hepatitis C cause birth defects.

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Occupational Exposure to Hepatitis C

Alan Franciscus, Editor-in-Chief

HEPATITIS C VIRUS (HCV) IS TRANSMITTED through blood-to-blood exposure. The most common transmission routes include sharing HCV infected needles and drug preparation tools, and blood products/transfusions received before 1992. Sexual transmission is less common but has been documented in studies. Some transmission routes including tattooing, body-piercing and sharing personal items such as toothbrushes and razors are possible transmission routes, but are not well documented. Health-care workers are at risk because of needlestick accidents and unavoidable situations that may result in direct contact with blood from an HCV infected individual.

Health-Care Workers

Health-care workers or healthcare personnel are defined as people whose occupational activities involve contact with patients or with blood or other body fluids from patients in health-care, laboratory, or public-safety setting.

Occupational Exposure

It has been well documented that transmission of hepatitis C in a healthcare situation can occur. However, the general rate of transmission is considered very low – about 1.8%. The risk is primarily with needlestick accidents involving hollow-bore needles. Transmission from exposure to fluids or tissues other than HCV-infected blood can occur but it is uncommon. If exposure does occur, testing should be initiated and an occupational exposure report should be filed.

Prevention

According to the Occupational Safety and Health Administration (OSHA) all workers are required to keep a barrier between them and anyone's blood or body fluids.

All healthcare workers should always follow standard universal precautions including the use of gloves and face and eye protection if appropriate. Properly dispose of or sterilize used equipment. Safely dispose of used bandages, and clean and disinfect spilled blood and body fluids. Unlike hepatitis B, there is no pre- or post-exposure vaccine or immunoglobulin (IG) to protect against HCV transmission.

Exposure

If exposure does occur the U.S. Public Health Service Guidelines for the management of HCV exposure include:

- For the source of infection—perform testing for anti-HCV (antibody).
- For the person exposed to an HCV positive source:
  - Perform baseline testing for anti-HCV and ALT activity; and
  - Perform follow-up testing at 4-6 months for anti-HCV and ALT activity—if earlier diagnosis of HCV infection is desired, testing for HCV RNA (viral load) may be performed at 4-6 weeks.

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- Transmisión Sexual de la Hepatitis C
- Cómo Conseguir los Subsidios de Discapacidad por el VHC
- Concedidos por la Seguridad Social
- Vivir con Hepatitis C
- Hepatitis C: Cómo Revelar la Noticia
- Prevención de la Transmisión del VHC

- All anti-HCV results should be confirmed by enzyme immunoassay using supplemental anti-HCV testing (RIBA).
- Information on counseling, testing and medical follow-up should be given to individuals exposed to hepatitis C.

Antiviral Therapy for Post Exposure

There are currently no treatment recommendations for patients with acute hepatitis C, but recent data has shown that up to 98% of people treated with interferon monotherapy were able to rid their bodies of the hepatitis C virus. However, the best time to start HCV medications after exposure and who should be treated remain unknown. There are currently clinical trials underway that will examine these important questions. Until then it will have to be a decision made between the patient and healthcare provider.

Additional information about this topic is available at:

CDC Report: Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis-
http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5011a1.htm

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Preventing HCV Transmission in PERSONAL CARE SETTINGS

Liz Highleyman

HEPATITIS C IS A DISEASE OF THE LIVER CAUSED by a virus called the hepatitis C virus, or HCV. The U.S. government estimates that about three million Americans have chronic HCV infection. The virus is spread by blood-to-blood contact; primarily through use of shared needles for illicit injection drug use. Sexual transmission and transmission from mother to child are also possible, but less common. Although many people with hepatitis C have no symptoms, over time the disease can cause serious liver damage including cirrhosis (scarring) and liver cancer. There is no vaccine to prevent HCV infection, but there are several important measures people can take to reduce the risk of transmission.

How is HCV Spread?

Hepatitis C is a blood-borne infection, which means it is spread through contact with the blood of an infected person. The most common method of transmitting HCV is through sharing needles used to inject drugs. Healthcare workers may contract HCV infection through needle-sticks with contaminated needles or other accidental exposures on the job. In at least 1 in 10 cases, people have no identifiable risk factors for infection; in other words, it is not known how they got hepatitis C.

Since HCV is a blood-borne virus, it can—at least in theory—be transmitted by contaminated personal items such as razors or nail care equipment. Any equipment used by manicurists, estheticians, barbers, and cosmetologists that may come into contact with HCV-infected blood might transmit the virus. This can happen when a small amount of HCV-containing blood—even a tiny amount that is too small to see—stays on the equipment after it is used on one person, and then comes into contact with the bloodstream (through a cut or other open area on the skin) or mucous membranes (such as the mouth or nostrils) of another person on whom the same equipment is later used. Personal equipment that is shared between persons and can come into contact with blood and spread HCV includes tattooing and body piercing needles and other equipment; cuticle scissors, nail files, and emery boards; razors and hair clippers; hair removal tools such as tweezers and electrolysis equipment; and even hair-cutting scissors and combs.

The transmission of viral hepatitis through personal care procedures has not been well studied. The U.S. Centers for Disease Control and Prevention (CDC) has not reported documented cases of HCV being transmitted this way. Nevertheless, the agency issued health and safety guidelines for personal care professionals in 1985. State laws regarding health and safety standards in personal care settings vary widely. The California Department of Health Services recently released a report about a woman whose only known risk factor for getting hepatitis C was regular visits to a nail salon.

Keeping it Safe

DISPOSABLE ITEMS

Some tools used by tattooists, piercers, manicurists, and barbers should be used only once, on a single person. Most professional tattooists, piercers, and electrologists use new, disposable needles for each customer; disposable ink pots should also be used. Paper emery boards, files, orange wood

sticks, cotton balls or swabs, sponges, neck strips, and other items that cannot be cleaned should be used on only one person and then thrown away. Whenever possible, substitute single-use items for reusable items.

RISKY ITEMS

Blade or scraper tools used to trim calluses (such as Credo blades) are especially likely to come into contact with blood. The California health code prohibits the use of such tools in nail salons. Needle-like instruments used to extract skin blemishes are also prohibited. Cutting cuticles presents a risk for contact with blood, and many experts recommend that nail salon workers should not cut cuticles. Straight razors are also likely to draw blood; therefore, disposable blades or safety razors should be used and discarded after each customer.

CLEANING AND DISINFECTING

Equipment that is used for more than one person should be properly cleaned and disinfected between users. For procedures that pierce the skin, disposable tools should be used unless they can be completely sterilized (that is, made completely germ-free). Sterilization can be done using steam or dry heat. An autoclave is a machine that sterilizes using both heat and pressure.

Other types of tools should be cleaned using a disinfectant solution. Commercial products such as Barbicide disinfect rather than sterilize. Although not well studied, research suggests that commercial solutions may not kill HCV. Look for an EPA-registered hospital grade product that kills bacteria (bactericide), viruses (virucide), and fungi (fungicide). Immerse items in the solution for at least 10 minutes (some experts recommend 20 minutes). Small items may be stored in the disinfectant solution between uses. Commercial solutions should be changed at least once per week or when visibly dirty. Alternatively, alcohol, chlorine, or a 10% solution of bleach and water may be used for disinfection. Although the effectiveness of bleach has not been studied, most experts recommend soaking items in a bleach solution for 10 minutes. Bleach solution should be made fresh daily and kept away from sunlight.

Although the actual needles and blades are disposable, tattoo guns, razor blade handles, and electrolysis machines should be cleaned with a disinfectant solution between users.

WORK SPACE PRECAUTIONS

Work-spaces should be set up so that new or clean and used or dirty equipment is separated and cannot be mixed up. Cover work surfaces with a clean cloth or paper towel or sheet before each customer. Lotions, powders, and other products should be kept in containers that allow for dispensing a portion of the product without contaminating the container, and sanitary applicators should be used for cosmetics.

Work surfaces should be disinfected between users. Manicurists should not use soaking water for more than one customer. Soaking bowls and foot spas should be disinfected after each user. Counters, chairs, lamps, and other surfaces should be cleaned regularly with a disinfectant solution. Used razor blades and other sharp items should be discarded in a puncture-proof container. Nail and hair cuttings should be disposed of properly. Used towels, sheets, and gowns should be placed in a covered receptacle and washed in hot water with detergent.

Personal care professionals should be educated about disease transmission and trained to use proper health and safety procedures. Manicurists, cosmetologists, barbers, estheticians, and electrologists must be licensed in most states. Workers should wash their hands with soap and water before each customer and, if appropriate, wear disposable gloves. Any cuts or sores should be covered with waterproof bandages.

PERSONAL USE ITEMS

To be as safe as possible, some customers prefer to bring their own equipment with them to the nail salon or barbershop. This is especially important for items like cuticle scissors and razors that are likely to come into contact with blood. Some professionals will keep personal client packs or kits at the salon with tools to be used only for a specific customer.

Finally, as is the case with equipment used in nail salons, hair salons, and barbershops, personal health and beauty items used at home, including nail files, razors, toothbrushes, and pierced earrings, should not be shared.

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Sexual Transmission of Hepatitis C

WHAT YOU NEED TO KNOW

THE HEPATITIS C VIRUS (HCV) OFTEN CAUSES LIVER inflammation. In up to 80% of people initially infected with HCV, the disease becomes chronic, potentially leading to long-term liver damage. A small percentage (about 20%) of those who are HCV positive will progress to liver cirrhosis, and approximately 3-5% of those with chronic HCV infection will develop liver cancer. Experts estimate that at least four million Americans are currently chronically infected with HCV; the number of new cases of HCV in the U.S. is decreasing. Fortunately, there are several measures people can take to protect themselves from this potentially life-threatening disease.

How is HCV Spread?

HCV is a blood-borne disease, that is, it is transmitted by blood-to-blood contact. Any activity that lets one person's blood or body fluids come into contact with another person's blood or mucous membranes can potentially transmit HCV. However, some activities are much more likely than others to spread the virus. HCV can be transmitted by sharing equipment for injection and non-injection drugs (for example, needles, cookers, cocaine straws, and crack pipes).

Needles used for tattooing, body piercing, and acupuncture may also spread HCV. Sharing personal items like razors, toothbrushes, or nail files is a less likely — but still possible — transmission route. In the past, many people contracted HCV through blood transfusions, but since 1992 there has been a reliable HCV blood test and today donated blood is safe. Today the likelihood of contracting HCV through infected blood is less than .001%.

Sex and HCV

We know that blood-borne viruses can be transmitted through certain types of sexual activity. HCV has rarely been detected in semen and vaginal fluids. Most studies suggest that the virus is not often found in these body fluids, or that it is present in very small amounts and that the virus particles may be noninfectious.

Most experts believe that the risk of sexual transmission of HCV is low. Most studies show that only a small percentage of people — usually ranging from 0-3% — contract HCV through unprotected heterosexual intercourse with a long-term, monogamous HCV-positive partner. Health Canada estimates the risk that a person will get HCV from unprotected sex with a steady HCV-infected partner at 2.5% over 20 years.

Some studies indicate that sexual transmission from men to women is more efficient than transmission from women to men. Since HCV is spread through blood, the risk of sexual transmission may be higher when a woman is having her menstrual period.

According to the most recent (2002) National Institutes of Health consensus statement, people who have multiple sex partners should practice safer sex. Those in stable, monogamous relationships do not need to change their current sexual practices, although they should discuss safer sex options if either partner is concerned about sexual transmission.

Among people in so-called "high risk" groups (gay men, prostitutes, people with multiple sex partners, people seen at STD clinics), sexual transmission of HCV appears to be more common. The fact that people with more sex partners and other sexual risk factors have higher rates of HCV indicates that the disease can be sexually transmitted. On the other hand, if sexual transmission of HCV were common, we would expect to see many more new cases of the disease among people whose partners are HCV positive.

Sexual transmission of HCV between men who have sex with men and women who have sex

with women has not been well studied. Many studies show higher rates of HCV infection in gay men, but it is not known whether this is related to sexual activity. Anal sex may be a more efficient route of transmission than vaginal sex because the delicate lining of the rectum is more prone to damage that allows contact with blood. There are no known cases of HCV being transmitted through oral sex on a man (fellatio) or a woman (cunnilingus). However, it is theoretically possible that the virus could be transmitted this way if a person has mouth sores, bleeding gums, or a throat infection.

There are no known cases of HCV being spread through kissing, including deep, open-mouth, or "French" kissing. It is theoretically possible that HCV could be transmitted this way if one partner has mouth sores, bleeding gums, or any other condition that could permit blood-to-blood contact. But this mode of transmission is believed to be very rare.

Special Considerations

Experts believe that HCV (like HIV) is more likely to be transmitted if either the positive or the negative partner has a sexually transmitted disease (STD), especially one that causes sores or lesions (for example, herpes or syphilis). Always have any suspicious symptoms checked by a doctor, and get prompt treatment for curable STDs such as chlamydia, gonorrhea, and syphilis. Some studies suggest that people who are co-infected with both HCV and HIV are more likely to transmit HCV; the same may also be true for people co-infected with both HCV and hepatitis B virus (HBV). In addition, a person with HIV whose immune system is compromised may be at higher risk for contracting HCV.

Safer Sex

Some people feel more secure knowing that they are doing everything they can to prevent sexual transmission of HCV. Safer sex practices can also help prevent the spread of hepatitis A and B, HIV, and other STDs.

Using condoms is the surest way to prevent transmission of HCV and STDs. Latex condoms are best for disease prevention; natural skin condoms have small pores that can let viruses through. Polyurethane (plastic) condoms are also a good choice, especially for people who are sensitive to latex. Internal or "female" condoms (brand name "Reality") are polyurethane sheaths worn inside the vagina rather than on the penis.

Learn how to use condoms correctly. Most "condom failure" is really caused by incorrect use. Pinch the tip as the condom is rolled on in order to create an air pocket that will leave room for the semen. Hold onto the base of a regular condom or hold an internal condom in place when withdrawing after sex to keep the semen from spilling. Tie the condom to prevent spills, and dispose of it properly. Condoms (both regular condoms and internal condoms) should be used only once. Some people choose to use condoms for oral sex on a man. For oral sex on a woman, barriers can be used to reduce the risk of disease transmission. Commonly used barriers include latex dental dams, sheets of plastic wrap, and latex sheets sold specifically for sex.

To prevent disease transmission through broken skin, some people use latex or nitrile (plastic) gloves or "finger cots" for manual sex. It is a good idea to cover any cuts or sores with a bandage that will not allow fluids to seep through.

Use only water-based lubricants with latex condoms or barriers. KY jelly and most commercial lubricants sold specifically for sex are water-based. Avoid oil-based lubricants (such as Vaseline, coconut oil, or moisturizing lotion) since these damage latex and can cause a condom or barrier to break. Avoid lubricants or pre-lubricated condoms that contain nonoxynol-9. Manufacturers recently stopped including this ingredient after it was shown that nonoxynol-9 caused irritation and damage to mucous membranes of the vagina, rectum, and penis that may actually increase the risk of disease transmission.

To reduce the risk of HCV transmission during oral sex or deep kissing, practice regular good oral hygiene — healthy teeth and gums may be the best defense against the spread of diseases through the mouth. Many experts recommend that people avoid brushing or flossing their teeth right before or after oral sex or deep kissing, since these can cause bleeding gums and tiny abrasions.

Conclusion

While sexual transmission of HCV remains somewhat controversial, most studies indicate that transmission through sexual activity is uncommon, and most experts believe the risk of sexual transmission is low. According to the National Institutes of Health, people in stable, monogamous relationships do not need to change their current sexual practices, although they should discuss safer sex options if either partner is concerned about sexual transmission. People with multiple sex partners should practice safer sex, in particular the use of latex condoms.

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HCV and Tattoos

Alan Franciscus, Editor-in-Chief

The transmission of HCV by tattooing practices has not been well documented, but there is a very real possibility that a person could become infected this way if precautions are not followed very carefully. Because it is harder to obtain sterile tattooing tools in prisons or on the streets, getting a tattoo in these settings carries a much greater risk of transmitting HCV.

There are regulations in most states regarding the operation of tattoo parlors. Most states prohibit tattooing of minors or restrict tattooing of minors unless written permission is obtained from the parent or guardian. Check with the local or state department of public health about regulations in your area.

The Centers for Disease Control issued the following statement on tattooing and hepatitis C on January 15th, 2005:

"Although some studies have found an association between tattooing and HCV infection in very selected populations, it is not known if these results can be generalized to the whole population. Any percutaneous exposure has the potential for transferring infectious blood and potentially transmitting bloodborne pathogens (e.g., HBV, HCV, or HIV); however, no data exist in the United States indicating that persons with exposures to tattooing alone are at increased risk for HCV infection. For example, during the past 20 years, less than 1% of persons with newly acquired hepatitis C reported to CDC's sentinel surveillance system gave a history of being tattooed. Further studies are needed to determine if these types of exposures, and the settings in which they occur, are risk factors for HCV infection in the United States. CDC is currently conducting a large study to evaluate tattooing as a potential risk."

Most tattoo artists are very concerned about safety and want to make sure that a customer who receives a tattoo is protected against getting hepatitis C and other blood-borne illnesses.

We recommend only commercial tattoo parlors that practice the following precautions:

• All single use items including ointments, tattoo ink, needles, gloves, trays and any other materials that come into contact with blood should be used only once and discarded in a 'sharps" bin or a puncture-proof container.

• Use disposable or new needles

• Use separate ink pots

• Reusable materials should be autoclaved. An autoclave is a machine that uses a combination of steam, pressure, and heat to sterilize equipment. There is an indicator on the autoclave machine to verify that the equipment has been sterilized. The tattoo shop should keep a record of the usage and testing of the autoclave. Ask to check the records if there are any doubts about safety.

• A new set of safety gloves are used for each person. The safety gloves should be changed if there is a possibility that the tattoo artist touched any surface.

• The shop is clean and professional – floors, tables, and equipment should all appear clean and disinfected.

• Cover fresh tattoos with a dressing to prevent infection or HCV transmission.

• Properly dispose of all equipment that may have come into contact with blood; use a "sharps" bin or a puncture-proof container.

• After the tattoo procedure, the tattoo artist will disinfect the work area with an EPA approved disinfection solution.

Check with friends for recommendations to shops that practice safe tattooing. Visit the tattoo parlor before committing to a tattoo and ask questions about safety procedures. Ask the artist or owner of the parlor if you can observe a customer getting a tattoo and check to make sure that the artist is carefully following the standard safety precautions listed above. If the artist is reluctant to answer questions about safety practices, shop around for another tattoo parlor that is more willing to talk. Another basic rule is to shop around for an artist based on their experience and knowledge and to stay away from any artist or shop that advertises "low-cost tattoos." The price of the artist should be a reflection of their experience, knowledge and artistry.

As consumers we should all be careful about safety practices and make it our responsibility to keep it safe.

Be sure to check out our complete series on HCV Treatment – Side Effect Management, which can be found at *http://www.hcvadvocate.org/hepatitis/factsheets.asp*

- Managing Side Effects
- Anxiety, Mania, and Depression!
- Dental Hygiene
- Depression
- Depression—For Family and Friends
- Diarrhea
- Hair Loss
- Headaches
- Hemolytic Anemia
- Injection Site Reactions
- Maintaining a Positive Attitude
- Mouth Sores
- Nausea
- Neutropenia
- Rashes
- Weight Loss

Visit the HCV Advocate Web Site: www.hcvadvocate.org

Below are just some of the publicatons and services you can find at www.hcvadvocate.org:

- HCV Advocate Monthly Newsletter (English)
- HCV Advocate Quarterly (Spanish)
- Educational materials in English, Spanish, French, Vietnamese, Russian, Talalog and Chinese
- Medical Writers' Circle
- Hepatitis Journal Review
- Weekly News Review
- Disability & Benefits Column
- Hepatitis B information
- HIV/HCV Coinfection information
- Support Group Listings for USA, Canada and Elsewhere
- Links to Clinical Trials
- Links to other Helpful Organisations
- Event Listings
- Fact Sheet series: (English, French and Spanish)
  *Easy C Facts
  *Basics
  *HCSP Fact Sheets

For more information about hepatitis C, hepatitis B and HCV coinfections, please visit www.hcvadvocate.org.

•hcspFACTsheet•

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The information in this fact sheet is designed to help you understand and manage HCV and is not intended as medical advice. All persons with HCV should consult a medical practitioner for diagnosis and treatment of HCV.