

APPENDIX G:

Information on Hepatitis A, B, and C

Hepatitis A Virus (HAV)

What is hepatitis A?

Hepatitis A (also called “hep A” and abbreviated HAV) is a viral infection that affects the liver. It is a temporary infection that can last from several weeks to several months. Most people infected with hepatitis A recover with no lasting liver damage. Once a person has recovered, natural immunity develops, and the person is unlikely to be reinfected with HAV. Hepatitis A can be dangerous if an infected person is medically fragile or has liver disease.

How is hepatitis A spread?

Hepatitis A is spread when a person ingests fecal matter—even in microscopic amounts—from contact with objects, food, or drinks contaminated by the feces or stool of an infected person. The virus can be carried on an infected person’s hands and can be spread by direct contact, or by consuming food or drink that has been handled by the infected person. Hepatitis A can also be spread through sexual activity in which feces enters the mouth, or intimate personal care (changing diapers, bed pans or washing). It is sometimes spread by drinking water that is contaminated with fecal matter.

Who gets hepatitis A?

Anyone can get hepatitis A. It is most common in developing countries with poor sanitation systems.

- Household members/caregivers of an infected person
- Men who have sex with men
- Sexual contacts of an infected person
- Users of injection and non-injection illegal drugs
- Travelers to countries with high or intermediate endemicity of HAV infection

What are the symptoms of hepatitis A?

Hepatitis A infection is not always symptomatic. If symptoms do appear, they may include flu-like symptoms such as fatigue, poor appetite, fever, diarrhea and vomiting. Urine may become darker in color, and then jaundice (a yellowing of the skin and whites of the eyes) may appear. The disease is rarely fatal and most people recover in a few weeks without any complications, and sometimes without many symptoms. Infants and young children tend to have very mild symptoms and are less likely to develop jaundice than are older children and adults.

How soon do symptoms appear?

The symptoms commonly appear within 15 to 50 days after exposure, with an average of 28 days. Symptoms usually last less than 2 months, although 10 percent–15 percent of symptomatic persons have prolonged or relapsing disease for up to 6 months.

For how long is an infected person able to spread the virus?

The contagious period begins about a week or two before the symptoms appear and is minimal the week after the onset of jaundice.

Does past infection with hepatitis A make a person immune?

Yes. Once an individual recovers from hepatitis A, he or she is immune for life and is not infectious to others.

What is the treatment for hepatitis A?

There is no special treatment for hepatitis A. Rest, water and avoidance of alcohol are generally recommended. If secondary symptoms such as vomiting and diarrhea are severe, treatment may be needed for those symptoms.

How can hepatitis A be prevented?

The most important way to prevent hepatitis A is through proper hygiene such as careful hand washing after using the toilet, changing diapers, and before preparing or handling food. A vaccine to prevent hepatitis A is administered in two doses six months apart. Temporary protection is available from immune globulin shots, effective before and up to two weeks after exposure to hepatitis A.

For more information:

www.cdc.gov/hepatitis/A/index.htm

www.liverfoundation.org/abouttheliver/info/hepatitisa/

Hepatitis B Virus (HBV)

What is hepatitis B?

Hepatitis B (also called “hep B” and abbreviated HBV) is a viral infection that affects the liver. It can range in severity from a mild illness lasting a few weeks (acute infection) to chronic or long-term infection.

Acute infection: In the USA, an estimated 40,000 people are infected with HBV every year. Most people recover from acute hepatitis B infection. A person with a fully developed and strong immune system can often fight off hepatitis B within a few months and become immune for life. Some people with acute HBV infection develop chronic HBV infection.

Chronic infection: People who continue to test positive for hepatitis B for six months (10 percent) have chronic hepatitis B infection. The chronic form of hepatitis B is a serious lifelong illness that increases the risk for liver damage, liver cancer, or liver failure, and can be fatal. Each year, about 2,000-4,000 people in the U.S. die from liver illness that was caused by HBV. With proper care, most people with chronic hepatitis B feel healthy their entire lives.

How is hepatitis B spread?

In the United States, hepatitis B is most commonly spread by sexual contact. HBV is spread when the blood or sexual fluids (semen, vaginal fluids) of a person infected with the hepatitis B virus enters the body of someone who is not infected through punctures in the skin or mucosal membranes (nose, genitals). In addition to sexual intercourse it can be spread through contact with another person’s blood or sexual fluids (sharing needles, syringes, or other drug-injection equipment, razors, toothbrushes, tattoo or piercing equipment). Unlike hepatitis A, hepatitis B can easily be passed from an infected mother to her baby at birth. Hepatitis B is not spread through casual contact (holding hands, sharing food).

Who gets hepatitis B?

Modes of transmission are like HIV, but hepatitis B is much more infectious. Anyone can get hepatitis B, but those at greater risk include:

- Infants born to mothers who have hepatitis B
- People who have sexual contact (vaginal or anal) with someone who is infected with HBV.
- People who have sex with multiple partners.
- People who have sex with someone with a sexually transmitted disease.
- Men who have sex with men.
- Injection drug users who share needles.
- Healthcare workers and public safety workers.

- Household members of an infected person.
- People with chronic liver disease

What are the symptoms of hepatitis B?

Hepatitis B often has no symptoms until liver damage is severe which can take 20-30 years. If there are symptoms, they usually appear within three months, but can appear between two to six months after exposure. Symptoms are uncommon in young children. If there are symptoms, they may be flu like symptoms including fatigue, poor appetite, fever, vomiting, diarrhea, joint pain, hives, or rash. Urine may become darker in color, and stool may appear clay-colored. Jaundice (a yellowing of the skin and whites of the eyes) may also occur.

For how long is a person able to spread the virus?

Once someone is infected with hepatitis B, that person can pass the virus to others. If a person clears the virus during the acute phase (does not develop chronic infection) they are not infectious to others. People who have chronic HBV can infect others, even if they have no symptoms and do not know they are infected. It is important to get tested to determine if the virus has been successfully cleared.

What is the treatment for hepatitis B?

A person who has been exposed to hepatitis B can go to their medical provider or Emergency Room within 24 hours to get the "HBIG" (hepatitis B immune globulin) vaccine/shot to prevent infection. There is no specific treatment for acute hepatitis B. Several anti-viral medications are available to treat chronic hepatitis B infection. Hepatitis B infected people should be monitored for liver disease progression by a liver specialist (hepatologist) and should receive follow-up medical care twice a year. Alcohol increases the risk of liver damage and progress faster and should be avoided.

How can hepatitis B be prevented?

A vaccine to prevent hepatitis B is recommended for all infants at birth and is required to enter school in NYC. It is recommended for all adults at risk (see above) and is given in three to four doses over a 6-18-month period. A person who is at high risk (sexual partner of someone with hepatitis B) should be tested to ensure the vaccine was effective. Correct and consistent condom use and avoiding contact with blood or sexual fluids (injection drug use equipment, tattoo or piercing equipment, razors, toothbrushes, and anything that may be contaminated with blood or other body fluids) can help prevent transmission. All pregnant women should be tested for HBV to prevent mother to child transmission.

For more information:

www.cdc.gov/hepatitis/B/index.htm

www.liverfoundation.org/abouttheliver/info/hepatitisb/

Hepatitis C Virus (HCV)

What is hepatitis C?

Hepatitis C (also called “hep C” and abbreviated HCV) is a highly contagious viral infection that affects the liver. There is no vaccine against hepatitis C. It is not possible to be immune to hepatitis C and people who are infected with hepatitis C are also susceptible to hepatitis A and B.

Acute infection: Acute hepatitis C infection is a short-term illness that occurs from several weeks to several months after exposure. Most people who are newly infected do not experience symptoms and clear the virus on their own.

Chronic infection: Chronic hepatitis C develops in 75-85 percent of the people who are infected with the virus. Chronic HCV is a serious, lifelong illness that increases the risk for liver damage, liver cancer, or liver failure and can be fatal. An estimated 3.2 million people in the U.S. have chronic hepatitis C. Most people who are infected with hepatitis C do not know they are infected; yet, they can infect others.

How is hepatitis C spread?

Hepatitis C is transmitted through blood. It is spread when the blood of a person infected with the hepatitis C virus enters the body of someone who is not infected through punctures in the skin. Most people become infected from sharing needles, syringes or other equipment used to inject drugs. Others are infected when they are stuck with needles in healthcare settings. Children born to mothers who are infected with HBV can be infected. Hepatitis C is not spread through casual contact (holding hands, sharing food).

Who gets hepatitis C?

Anyone can get hepatitis C. Common risks are:

- Injection drug use (even one time)
- Blood transfusion before 1992 in the U.S.
- Poor infection control in health care (rare in the U.S., but common in developing countries)
- Sex where blood is present and passed from one person to another
- Mother to child during childbirth
- Other blood exposure: sharing tattoo or piercing equipment; sharing razors, toothbrushes or other personal care items; or fighting where blood is drawn.

What are the symptoms of hepatitis C?

Hepatitis C often has no symptoms until liver damage is severe. This can take 20-30 years. A person who is infected with hepatitis C may experience flu-like symptoms, including fatigue, poor appetite, fever, vomiting, diarrhea, joint pain, hives, or rash. Urine may become darker in color, and stool may appear clay-colored. Jaundice (a yellowing of the skin and whites of the eyes) may also occur.

How soon do symptoms occur?

If symptoms occur, the average time is 6–7 weeks after exposure, but this can range from 2 weeks to 6 months.

For how long is a person able to spread hepatitis C?

Someone who is infected with hepatitis C, either acute or chronic infection, can pass it along to others. A person who clears the virus naturally during the acute phase or is successfully treated and cured is not infectious to others.

What is the treatment for hepatitis C?

Medical treatment is available for hepatitis C. If hepatitis C is treated during the acute phase, there is a very good chance the person will not go on to develop chronic infection. A screening test for chronic hepatitis C can detect the virus, and in some cases the person may be treated with antiretroviral drugs. Treatment has rapidly improved for chronic hepatitis C. It is important to see a liver specialist (hepatologist) semi-annually to assure that liver health is monitored. Alcohol increases the risk of liver damage and should be avoided.

How is hepatitis C diagnosed?

There are two tests to determine if someone is currently infected with hepatitis C. The first test is usually the hepatitis C anti-body test which determines if a person was ever infected with hepatitis C. The second test (HCV-PCR) confirms diagnosis of hepatitis C infection and determines if the virus is currently in the body.

What's the relationship between hepatitis C and HIV?

HIV and hepatitis C can both be transmitted through injection drug use, which increases blood exposure and transmission of many infections. Approximately 30 percent of people with HIV also have hepatitis C. Infection with both diseases increases stress on the liver and can cause the liver disease to progress faster. Treating both diseases at the same time can be challenging, so it is important to find a medical provider who is experienced in treating HIV/HCV co-infection.

How can the spread of hepatitis C be prevented?

There is no vaccine against hepatitis C and a person is never immune. Hepatitis C can be prevented through safer sex (using condoms correctly and consistently), harm reduction (never sharing drug use equipment and taking steps to recover from injection drug use and other high risk practices that may include blood contact); and infection control in health care. People who have had hepatitis C should minimize the chances that others be exposed with their blood and should explore treatment which may significantly reduce the amount of virus the body, and therefore reducing transmissibility to others.

For more information:

www.cdc.gov/hepatitis/C/index.htm

www.liverfoundation.org/abouttheliver/info/hepatitisc/