HIV and Hepatitis C Co-Infection

(updated April 2021)



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This educational packet is a curated compilation of resources on HIV and hepatitis co-infection.

The contents of this packet are listed below:

- HIV and Coinfections: HIV and Viral Hepatitis (CDC fact sheet)
- HIV and Hepatitis C (HIVinfo fact sheet)
- La Infección por el VIH y la Hepatitis C (HIVinfo fact sheet)
- HIV and Hepatitis B and Hepatitis C Coinfection (HIV.gov fact sheet)
- People Coinfected with HIV and Viral Hepatitis (CDC fact sheet)

You may wish to customize this packet to meet the needs or interests of particular groups, such as event participants, providers, patients, clients, or the general public. So please feel free to distribute all or part of this document as either a printout or PDF.

HIV and Coinfections

cdc.gov/hiv/clinicians/treatment/coinfections.html

HIV and Viral Hepatitis

Viral hepatitis means inflammation of the liver caused by a virus. In the United States, the most common causes of viral hepatitis are hepatitis A virus, hepatitis B virus, and hepatitis C virus. You can get some forms of viral hepatitis the same way you can get HIV —through sexual contact and sharing syringes, needles, or other equipment to inject drugs.

People with HIV, especially those who inject drugs, often have viral hepatitis. Everyone with HIV should be tested for hepatitis B and hepatitis C.

Hepatitis A

Hepatitis A is a liver infection caused by the hepatitis A virus. People who get hepatitis A may feel sick for a few weeks to several months. While most people recover and do not have lasting liver damage, some people need to be hospitalized. Hepatitis A can cause death, especially for people who are older or have other health problems.

The hepatitis A virus is found in the stool of people who are infected and can survive on surfaces for several months. Hepatitis A is very contagious, and people can spread the virus before they get symptoms such as nausea, stomach pain, and yellow eyes or skin. Infection can occur when someone ingests the virus, which can happen from:

- Close contact with someone who has hepatitis A.
- Sexual contact with someone who has hepatitis A.
- Touching surfaces or objects that have been contaminated with hepatitis A.
- Eating contaminated food or drinks.

Hepatitis B

Hepatitis B is a liver infection caused by the hepatitis B virus. Hepatitis B can range from a mild illness lasting a few weeks to a serious, lifelong illness. Some people who get hepatitis B, especially as adults, can get rid of the virus without treatment. Others,

especially those infected as infants or young children, go on to develop long-term infection.

Hepatitis B is spread through blood and other body fluids, including semen. It can be spread in these ways:

- Sexual contact with someone who has hepatitis B.
- Sharing syringes, needles, or other equipment to inject drugs.
- Needlestick injuries from someone infected with hepatitis B.
- From a woman with hepatitis B to her baby at birth (but giving the first hepatitis B vaccine within 12 hours of birth to the baby can prevent infection).

Hepatitis C

Most people who get hepatitis C develop a long-lasting (chronic) infection. Hepatitis C is one of the primary causes of chronic liver disease in the United States, and hepatitis Crelated liver injury progresses faster in people who also have HIV. Many people who have hepatitis C do not know they are infected and do not have symptoms or feel sick. Left untreated, chronic hepatitis C can cause serious health problems, including liver damage, cirrhosis (scarring of the liver), liver cancer, and even death. It is spread through contact with blood from an infected person:

- Most often spread through sharing syringes, needles, or other injection equipment. Many people who inject drugs (PWID) and have HIV also have hepatitis C.
- Less commonly spread through sexual contact. Sexual transmission of hepatitis B occurs more often than hepatitis C.

Coinfection

People with HIV in the United States are at increased risk of developing chronic viral hepatitis and liver disease. This means they could have a <u>coinfection</u>, or two or more infections at the same time.

Both hepatitis B and HIV are viruses carried by a person's blood and are transmitted mainly through sexual contact and injection drug use. Because people can get HIV and hepatitis B in the same ways, a high number of adults at risk for HIV infection are also at risk for hepatitis B. People who have both HIV and hepatitis B are at higher risk for developing chronic hepatitis B. People who have HIV and hepatitis B coinfection can also have serious medical problems and are at higher risk for liver-related illness and death. To prevent hepatitis B infection, all patients with HIV should get a hepatitis B vaccination. As hepatitis C is a virus transmitted through direct contact with the blood of an infected person, coinfection with HIV and hepatitis C is common (62–80%) among PWID with HIV. Although transmission via injection drug use remains the most common way that people get hepatitis C in the United States, sexual transmission is an important mode of acquisition among gay and bisexual men. Hepatitis C is one of the primary causes of chronic liver disease in the United States, and hepatitis C-related liver injury progresses more rapidly among persons coinfected with HIV. Hepatitis C infection may also affect the management of HIV infection. Guidelines recommend that all people with HIV be screened for hepatitis C and that persons with increased risk be retested annually.

HIV and Viral Hepatitis in the US: The Numbers



Viral Hepatitis Prevention

Hepatitis A: The best way to prevent hepatitis A is to get vaccinated. CDC recommends hepatitis A vaccination for people who are at risk for HIV, including gay and bisexual men; people who use recreational drugs, whether they inject or not; and sex partners of people with hepatitis A.

Hepatitis B: The best way to prevent hepatitis B is to get vaccinated. CDC recommends hepatitis B vaccination for people who have or are at risk for HIV and who have never had hepatitis B. This includes gay and bisexual men, PWID, sex partners of people with hepatitis B, people with multiple sex partners, people seeking evaluation or treatment for a sexually transmitted disease, and health care and public safety workers exposed to blood on the job.

Hepatitis C: No vaccine exists for hepatitis C. The best way to prevent hepatitis C is to never inject drugs or stop injecting drugs if you currently do so by getting and staying in a drug treatment program. If you continue injecting drugs, always use new, sterile needles or

syringes, and never reuse or share needles, syringes, water, or other drug injection equipment. Using condoms lowers but does not remove the risk of getting hepatitis C through sex.

Testing and Treatment

Blood tests are used to detect viral hepatitis. The tests can detect the virus even if a person has no symptoms. In the case of hepatitis B, blood tests can help determine if people have had hepatitis B and, if not, whether they would benefit from the hepatitis B vaccine. If a hepatitis C screening test is positive, a follow-up test must be done to determine if the person still has hepatitis C or if the infection has cleared up.

Treatment for viral hepatitis varies. Hepatitis A infection usually runs its course over time, although some people may need to be hospitalized. Most people who get hepatitis A recover completely and do not have any lasting liver damage. For some people, especially those with health problems, hepatitis A can cause death. Hepatitis B can be treated with antiviral medicines, but not everyone can or should be treated. Hepatitis B treatment is lifelong and can delay or limit the effects of liver damage. Hepatitis C treatment can cure the disease with a course of all-oral medication (pills) with few side-effects, taken over the course of a few months.

For someone with HIV, coinfection with viral hepatitis may complicate HIV treatment. Because viral hepatitis is often serious in people with HIV and may lead to liver damage more quickly, CDC recommends that all people with HIV be tested for hepatitis B and hepatitis C. CDC also recommends that everyone born from 1945 to 1965 as well as younger adults with certain risk factors, be tested at least once for hepatitis C.

HIV/hepatitis B, and HIV/hepatitis C coinfections can be treated effectively in many people, but treatment is complex. People with coinfection should look for health care providers with expertise in treating both HIV and viral hepatitis.

CDC has produced a 5-minute online <u>Hepatitis Risk Assessment tool</u> that allows people to answer questions privately and get tailored recommendations to discuss with their doctor. This tool can also determine which tests and vaccines are right for an individual.

For more information, visit CDC Viral Hepatitis.

HIV and Hepatitis C

* hivinfo.nih.gov/understanding-hiv/fact-sheets/hiv-and-hepatitis-c

HIV and Opportunistic Infections, Coinfections, and Conditions

Last Reviewed: September 24, 2020

Key Points

- Hepatitis C is a liver infection caused by the hepatitis C virus (HCV).
- HCV is spread mainly through contact with the blood of a person who has HCV. In the United States, HCV is spread mainly by sharing needles or other injection drug equipment (works) with someone who has HCV.
- According to the Centers for Disease Control and Prevention (CDC), approximately 25% of people with HIV in the United States also have HCV. Infection with both HIV and HCV is called HIV/HCV coinfection.
- People with both HIV and HCV may be treated for both infections. Health care providers prescribe HIV and HCV medicines carefully to avoid <u>drug-drug</u> <u>interactions</u> and closely monitor those taking the medicines for any side effects.

What is hepatitis C?

Hepatitis C is a liver infection caused by the hepatitis C virus (HCV). The abbreviation HCV can stand for either the virus or the infection it causes.

HCV can be a short-term (acute) or a long-term (chronic) illness:

- Acute HCV occurs within 6 months after a person is exposed to HCV. In most people, acute HCV becomes chronic HCV.
- Chronic HCV can last a lifetime. Without treatment, chronic HCV can cause liver cancer or severe liver damage that can lead to liver failure.

HCV is a contagious infection that can spread from person to person.

How does HCV spread from person to person?

HCV is spread mainly through contact with the blood of a person who has HCV. In the United States, HCV is spread mainly by sharing needles or other injection drug equipment (works) with someone who has HCV. HCV can also be spread through sexual contact. While the risk of transmission through sexual contact is low, the risk is increased in people with HIV.

What is the connection between HIV and HCV?

Because both HIV and HCV can spread in blood, a major risk factor for both HIV and HCV infection is injection drug use. Sharing needles or other drug injection equipment increases the risk of contact with HIV- or HCV-infected blood.

According to the Centers for Disease Control and Prevention (CDC), approximately 25% of people with HIV in the United States also have HCV. Infection with both HIV and HCV is called HIV/HCV coinfection.

In people with HIV/HCV coinfection, HIV may cause chronic HCV to advance faster. Whether HCV causes HIV to advance faster is unclear.

Can HCV infection be prevented?

The best protection against HCV is to never inject drugs. If you do inject drugs, always use new, sterile needles and don't reuse or share needles, syringes, or other injection drug equipment.

People, including people with HIV, can also take the following steps to reduce their risk of HCV infection:

- Don't share toothbrushes, razors, or other personal items that may come in contact with another person's blood.
- If you get a tattoo or body piercing, make sure the instruments used are sterile.
- Use condoms during sex. The risk of HCV infection through sexual contact is low, but the risk increases in people with HIV. Condoms also reduce the risk of <u>HIV</u> <u>transmission</u> and infection with other sexually transmitted diseases, such as <u>gonorrhea</u> and <u>syphilis</u>.

Should people with HIV get tested for HCV?

Every person who has HIV should get tested for HCV. Usually, a person will first get an HCV antibody test. This test checks for HCV antibodies in the blood. HCV antibodies are disease-fighting proteins that the body produces in response to HCV infection.

A positive result on an HCV antibody test means that the person has been exposed to HCV at some point in their life. However, a positive antibody test does not necessarily mean the person has HCV. For this reason, a positive result on an HCV antibody test must be confirmed by a second test. This follow-up test checks to see if HCV is present in the person's blood. A positive result on this test confirms that a person has HCV.

What are the symptoms of HCV infection?

Most people with acute HCV don't have symptoms. But some people can show signs of HCV soon after becoming infected. Symptoms of acute HCV can include the following:

- Fever
- Tiredness
- Loss of appetite
- Nausea
- Vomiting
- Abdominal pain
- Dark-colored urine
- Clay-colored bowel movements
- Joint pain
- Jaundice (yellowing of the skin or the whites of the eyes)

Most people with chronic HCV don't have any symptoms. Chronic HCV is often discovered based on results from routine <u>liver function tests</u>.

What is the treatment for HCV?

HCV is treated with antiviral medicines. Many newer HCV medicines are more effective and have fewer side effects than older medicines. The newer medicines can cure HCV in most people.

People with HIV/HCV coinfection may be treated for both infections. However, when to start each treatment and what medicines to take depends on the person. For example, some HIV and HCV medicines can't be safely used together.

Health care providers prescribe HIV and HCV medicines carefully to avoid <u>drug-drug</u> <u>interactions</u> and closely monitor those taking the medicines for any side effects.

If you have HIV/HCV coinfection, talk to your health care provider about the best medicines for you.

This fact sheet is based on information from the following sources:

From CDC:

From the Department of Health and Human Services:

- Guidelines for the Prevention and Treatment of Opportunistic Infections in Adults and Adolescents with HIV: <u>Hepatitis C Virus Infection</u>
- Guidelines for the Use of Antiretroviral Agents in Adults and Adolescents with HIV: <u>Hepatitis C Virus/HIV Coinfection</u>

From the National Institute of Diabetes and Digestive and Kidney Diseases:

<u>Hepatitis C</u>

Provided in collaboration with NIH's Office of Aids Research.

La infección por el VIH y la hepatitis C

hivinfo.nih.gov/es/understanding-hiv/fact-sheets/la-infeccion-por-el-vih-y-la-hepatitis-c

Afecciones relacionadas con el VIH/SIDA

Última revisión: October 6, 2020

Puntos importantes

- La hepatitis C es una infección del hígado causada por el virus del mismo nombre (VHC).
- La infección por el VHC se propaga principalmente por medio del contacto con la sangre de una persona que tiene ese virus. En los Estados Unidos, el VHC se propaga principalmente al compartir agujas u otro equipo para inyección de drogas con alguien que tiene el virus.
- Según los Centros para el Control y la Prevención de Enfermedades (Centers for Disease Control and Prevention, CDC), aproximadamente 25% de las personas con el VIH en los Estados Unidos también tienen el VHC. La infección por ambos virus se llama infección simultánea (o coinfección) por el VIH y el VHC.
- Las personas con infección simultánea por el VIH y el VHC pueden recibir tratamiento para ambas infecciones. Los proveedores de atención de salud recetan medicamentos contra el VIH y el VHC cuidadosamente para evitar <u>interacción de un medicamento con otro</u> y observan de cerca a las personas que toman medicamentos para determinar si hay algún efecto secundario.

¿Qué es la hepatitis C?

La hepatitis C es una infección del hígado causada por el virus del mismo nombre (VHC). Las siglas VHC pueden referirse al virus o a la infección que causa.

La infección por el VHC puede ser una enfermedad aguda (de corta duración) o crónica (de larga duración):

- La enfermedad aguda por el VHC ocurre en los 6 meses siguientes a la exposición de una persona a ese virus. En la mayoría de las personas, la fase aguda se convierte en fase crónica.
- La enfermedad crónica por el VHC puede durar toda la vida. Sin tratamiento, puede causar cáncer o lesión grave del hígado conducente a insuficiencia hepática.

La infección por el VHC es una infección contagiosa que puede propagarse de una persona a otra.

¿Cómo se propaga el VHC de una persona a otra?

El VHC se propaga principalmente por medio del contacto con la sangre de una persona que tiene ese virus. En los Estados Unidos, el VHC se propaga principalmente al compartir agujas u otro equipo de inyección de drogas con alguien que tiene el VHC. El VHC también se puede propagar a través del contacto sexual. Si bien el riesgo de transmisión a través del contacto sexual es bajo, el riesgo aumenta en las personas con el VIH.

¿Qué conexión existe entre el VIH y el VHC?

Puesto que tanto el VIH como el VHC se pueden propagar por medio de la sangre, uno de los principales factores de riesgo de infección por ambos virus es el uso de drogas inyectables. Por eso, compartir agujas u otro equipo de inyección de drogas aumenta el riesgo de contacto con sangre infectada por el VIH o el VHC.

Según los Centros para el Control y la Prevención de Enfermedades (Centers for Disease Control and Prevention, CDC), aproximadamente 25% de las personas con el VIH en los Estados Unidos también tienen el VHC. La infección por ambos virus se llama infección simultánea (o coinfección) por el VIH y el VHC.

En las personas con infección simultánea por el VIH y el VHC, el VIH puede hacer que la infección crónica por el VHC progrese más rápido. No está claro si el VHC tiene un efecto igual en la infección por el VIH.

¿Se puede prevenir la infección por el VHC?

La mejor forma de protección contra el VHC es nunca inyectarse drogas. Si se las inyecta, use siempre agujas nuevas esterilizadas y no reutilice ni comparta agujas, jeringas ni ningún otro equipo de inyección.

Todas las personas, incluso las VIH-positivas, pueden tomar medidas para reducir su riesgo de infección por el VHC:

- No compartir cepillos de dientes, cuchillas ni otros artículos de uso personal que puedan entrar en contacto con la sangre de otra persona.
- Si se hacen un tatuaje o una perforación en alguna parte del cuerpo, asegurarse que los instrumentos empleados estén esterilizados.
- Usar condones durante las relaciones sexuales. El riesgo de infección por el VHC por medio del contacto sexual es poco, pero aumenta en personas con el VIH. Los condones también reducen el riesgo de <u>transmisión del VIH</u> y de otras enfermedades de transmisión sexual como la <u>gonorrea</u> y la <u>sífilis</u>.

¿Las personas con el VIH deben hacerse la prueba de detección del VHC?

Todas las personas que tienen el VIH deben hacerse la prueba de detección del VHC. Por lo general, una persona se hará primero una prueba de anticuerpos contra el VHC, en la cual se determina la presencia de ese virus en la sangre. Los anticuerpos contra el VHC son proteínas que combaten la enfermedad y que el cuerpo produce en respuesta a la infección causada por el virus.

Un resultado positivo en una prueba de anticuerpos contra el VHC significa que la persona ha estado expuesta a ese virus en algún momento de su vida. Sin embargo, ese resultado positivo no significa necesariamente que la persona tenga la infección por el VHC. Por esa razón, un resultado positivo en una prueba de anticuerpos contra el VHC debe confirmarse con una segunda prueba. Esta prueba de seguimiento permite determinar si la persona tiene VHC en la sangre. Un resultado positivo en esta prueba confirma que una persona tiene el VHC.

¿Cuáles son los síntomas de la infección por el VHC?

La mayoría de las personas con la infección aguda por el VHC no tienen síntomas. Sin embargo, algunas pueden tener señales de esa infección poco después de contraerla. Los síntomas de infección aguda por el VHC pueden incluir los siguientes:

- Fiebre
- Cansancio
- Pérdida del apetito
- Náuseas

- Vómito
- Dolor abdominal
- Orina de color oscuro
- Heces de color arcilla
- Dolor de las articulaciones
- Ictericia (amarillamiento de la piel o la parte blanca de los ojos)

La mayoría de las personas con la infección crónica por el VHC no tienen ningún síntoma. A menudo, la infección crónica por ese virus se descubre por medio de los resultados de las <u>pruebas de la función hepática</u> realizadas como parte de la atención regular.

¿Cuál es el tratamiento para la infección por el VHC?

La infección por el VHC se trata con medicamentos antivirales. Muchos de los medicamentos de fabricación más reciente contra ese virus son más eficaces y tienen menos efectos secundarios que los más antiguos. Los medicamentos de fabricación más reciente pueden curar la infección por el VHC en la mayoría de las personas.

Las personas con infección simultánea por el VIH y el VHC pueden recibir tratamiento para ambas enfermedades. Sin embargo, la fecha de iniciación de cada tratamiento y los medicamentos que se deben tomar dependen de la persona. Por ejemplo, algunos medicamentos contra el VIH y el VHC no se pueden usar juntos sin riesgo. Los proveedores de atención de salud recetan medicamentos contra el VIH y el VHC cuidadosamente para evitar <u>interacción de un medicamento con otro</u> y observan de cerca a las personas que toman medicamentos para determinar si hay algún efecto secundario.

Si usted tiene la infección simultánea por ambos virus, comuníquese con su proveedor de atención de salud para saber cuáles son los mejores medicamentos para usted.

Hepatitis B & C

/ hiv.gov/hiv-basics/staying-in-hiv-care/other-related-health-issues/hepatitis-b-and-c

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Content Source: HIV.govDate last updated: April 29, 2020
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April 29, 2020

HIV and Hepatitis B and Hepatitis C Coinfection

Hepatitis B and hepatitis C are liver infections caused by a virus. Because these infections can be spread in the same ways as HIV, people with HIV in the United States are often also affected by chronic viral hepatitis.

Viral hepatitis progresses faster and causes more liver-related health problems among people with HIV than among those who do not have HIV. Liver disease, much of which is related to HBV or HCV, is a major cause of non-AIDS-related deaths among people with HIV.

Given the risks of hepatitis B or hepatitis C coinfection to the health of people living with HIV, it is important to understand these risks, take steps to prevent infection, know your status, and, if necessary, get medical care from someone who is experienced in treating people who are coinfected with HIV and HBV, or HIV and HCV.

How Are Hepatitis B and Hepatitis C Spread from Person to Person?

Like HIV, the hepatitis B and hepatitis C viruses spread:

- By sharing needles, syringes, and other injection equipment.
- From mother to child: Pregnant women can pass these infections to their infants. HIV-HCV coinfection increases the risk of passing on hepatitis C to the baby.
- Sexually: Both viruses can also be transmitted sexually, but HBV is much more likely than HCV to be transmitted sexually. Sexual transmission of HCV is most likely to happen among gay and bisexual men who are living with HIV.

Is Hepatitis Testing Recommended for People with HIV?

Yes. Everyone living with HIV should be tested for HBV and HCV when they are first diagnosed with HIV and begin treatment. People living with HIV who have ongoing risk factors for getting hepatitis B or hepatitis C should be tested annually.

In addition, new HCV <u>screening recommendations</u> from the Centers for Disease Control and Prevention (CDC) call for:

- One-time screening for **all** adults 18 years and older
- Screening of all pregnant women during every pregnancy
- Testing for all persons with risk factors, with testing continued periodic testing those with ongoing risk.

How Can You Prevent Hepatitis B and Hepatitis C?

Hepatitis B: Vaccination is the best way to prevent all of the ways that hepatitis B is transmitted. People with HIV who do not have active HBV infection should be <u>vaccinated</u> against it. In addition to the 3-dose series of hepatitis B vaccine given over 6 months, as of 2017, there is a 2-dose series given over 1 month.

Hepatitis C: No vaccine exists for HCV and no effective pre- or postexposure prophylaxis is available. The best way to prevent hepatitis C infection is to never inject drugs or to stop injecting drugs by getting into and staying in drug treatment. If you continue injecting drugs, always use new, sterile needles or syringes, and never reuse or share needles or syringes, water, or other drug preparation equipment.

Treatment for HIV-Hepatitis Coinfections

HIV-HBV and HIV-HCV coinfections can be effectively treated in most people. But medical treatment can be complex, and people with coinfection should look for health care providers with expertise in the management of both HIV infection and viral hepatitis.

Hepatitis B: For hepatitis B, <u>treatment</u> can delay or limit liver damage by suppressing the virus. Like treatment for HIV, hepatitis B treatment may need to be taken for the rest of your life.

Hepatitis C: Hepatitis C is a curable disease. Left untreated, it can cause several liver damage, liver cancer, or death. However, new treatments for hepatitis C have been approved in recent years. These direct-acting antiviral treatments are much better than the previously available treatment because they have few side effects and do not need to be injected. <u>These treatments for HCV infection</u> cure about 97% of people, including those living with HIV, with just 8-12 weeks of oral therapy (pills).

This is an official U.S. Government website managed by the U.S. Department of Health & Human Services and supported by the Minority HIV/AIDS Fund.

People Coinfected with HIV and Viral Hepatitis

cdc.gov/hepatitis/populations/hiv.htm

People with HIV/AIDS should be vaccinated against hepatitis A and B and tested for hepatitis B and hepatitis C.

Beginning in 2020, CDC and the Advisory Committee on Immunization Practices (ACIP) began recommending <u>that all</u> <u>people with HIV who are ≥ 1 year of age</u> be vaccinated against hepatitis A and receive postvaccination serologic testing ≥ 1 month after completing the hepatitis A vaccine series.



Further, CDC and <u>ACIP recommend that unvaccinated</u> people with HIV receive hepatitis B vaccination. Vaccination

should be followed by serologic testing to confirm adequate immune response. CDC recommends that people with HIV be tested for hepatitis B.

CDC now also recommends one-time <u>hepatitis C testing of all adults</u> (18 years and older), including those with HIV. CDC continues to recommend people with risk factors, like people who inject drugs, be tested regularly.

People with HIV and Hepatitis A

People with HIV who have underlying liver disease are at risk for severe disease from hepatitis A infection, and widespread hepatitis A outbreaks associated with person-to-person transmission have been occurring in the United States since 2016. Therefore, CDC and ACIP recommend hepatitis A vaccination for this population. Because the response to the vaccine might be reduced in people with HIV infection who are immunosuppressed, postvaccination serologic testing should be performed for all people with HIV infection ≥ 1 month after completing the hepatitis A vaccine series. All people with HIV infection who receive hepatitis A vaccine, regardless of postvaccination serologic testing results, should be counseled that the vaccine might not provide long-term protection against hepatitis A. Therefore, they might need to receive immune globulin (IG) after a high-risk exposure (e.g., a sexual or household contact).

People with HIV and Hepatitis B

Hepatitis B virus (HBV) and HIV are bloodborne viruses transmitted primarily through sexual contact and injection-drug use. Because of these shared modes of transmission, a high proportion of adults at risk for HIV infection are also at risk for HBV infection. People with HIV who become infected with HBV are at increased risk for liver-related morbidity and mortality [1-4]. To prevent HBV infection in people with HIV, ACIP recommends universal hepatitis B vaccination for all susceptible people infected with HIV [5]. The first vaccine dose can be administered immediately after collection of blood for prevaccination serologic testing [5] and regardless of CD4+ lymphocyte cell count [6]. To confirm adequate immune response, post-vaccination serologic testing for protective concentrations of antibodies to hepatitis B surface antigen should be conducted 1–2 months after completion of the hepatitis B vaccine series [5]. People with HIV who test positive for HBV should receive HIV antiviral medication with activity against HBV (e.g., tenofovir and entecavir).

People with HIV and Hepatitis C

In 2009, approximately 21% of adults with HIV who were tested for past or present hepatitis C virus (HCV) infection tested positive, although coinfection prevalence varies substantially according to risk group (e.g., men who have sex with men [MSM], high-risk heterosexuals, and people who inject drugs) [7-9]. As HCV is a bloodborne virus transmitted through direct contact with the blood of an infected person, coinfection with HIV and HCV is common (62%–80%) among injection-drug users who have HIV [8-10]. Although transmission via injection-drug use remains the most common mode of HCV acquisition in the United States [10], sexual transmission is an important mode of acquisition among MSM with HIV who also have risk factors, including those who participate in unprotected anal intercourse, use sex toys, and use non-injection drugs [6]. HCV is one of the primary causes of chronic liver disease in the United States, and HCVrelated liver injury progresses more rapidly among people coinfected with HIV [11-15]. HCV infection may also affect the management of HIV infection [6, 15, 16]. CDC now recommends one-time <u>hepatitis C testing of all adults</u> (≥ 18 years of age), including those with HIV. CDC continues to recommend people with risk factors, like people who inject drugs, be tested regularly. The American Association for the Study of Liver Disease (AASLD) and the Infectious Diseases Society of America (IDSA) also recommend that people who are coinfected with HIV and HCV be provided with curative, direct-acting antiviral medications to treat their HCV infection.

Scientific Guidelines and Recommendations

<u>Prevention of Hepatitis A Virus Infection in the United States: Recommendations of the</u> <u>Advisory Committee on Immunization Practices, 2020</u>

<u>CDC Recommendations for Hepatitis C Screening Among Adults – United States, 2020</u> MMWR 2020; 69(2);1–17 <u>Prevention of Hepatitis B Virus Infection in the United States: Recommendations of the</u> <u>Advisory Committee on Immunization Practices</u> MMWR 2018; 67 (RR 1);1–31

<u>Sexually Transmitted Diseases Treatment Guidelines 2015</u> MMWR 2015;64(No.3)

Recommendations for Identification and Public Health Management of Persons with Chronic Hepatitis B Virus Infection MMWR 2008;57(RR-8)

<u>Recommendations for Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-Related Chronic Disease</u> MMWR 1998;47(RR-19)

Resources

CDC

Federal

<u>HIVinfo</u>

References:

- 1. Gatanaga H, Yasuoka A, Kikuchi Y, et al. Influence of prior HIV-1 infection on the development of chronic hepatitis B infection. Eur J Clin Microbiol Infect Dis. 2000 Mar;19(3):237-9.
- 2. Thio CL, Seaberg EC, Skolasky R, et al. Multicenter AIDS Cohort Study. HIV-1, hepatitis B virus, and risk of liver-related mortality in the Multicenter Cohort Study (MACS). Lancet. 2002 Dec;360(9349):1921-6.
- 3. Bonacini M, Louie S, Bzowej N, et al. Survival in patients with HIV infection and viral hepatitis B or C: a cohort study. AIDS. 2004 Oct 21;18(15):2039-45.
- 4. Weber R, Sabin CA, Friis-Møller N, et al. Liver-related deaths in persons infected with the human immunodeficiency virus: the D:A:D study. Arch Intern Med. 2006 Aug 14-28;166(15):1632-41.
- 5. Schillie S, Vellozzi C, Reingold A, et al. Prevention of Hepatitis B Virus Infection in the United States: Recommendations of the Advisory Committee on Immunization Practices. MMWR 2018;67(1):1-31.

- 6. Panel on Opportunistic Infections in HIV-Infected Adults and Adolescents. Guidelines for the prevention and treatment of opportunistic infections in HIVinfected adults and adolescents: recommendations from the Centers for Disease Control and Prevention, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. Available at
- 7. Garg S, Brooks J, Luo Q, Skarbinski J. Prevalence of and Factors Associated with Hepatitis C Virus (HCV) Testing and Infection Among HIV-infected Adults Receiving Medical Care in the United States. Infectious Disease Society of America (IDSA). Philadelphia, PA, 2014.
- 8. Yehia BR, Herati RS, Fleishman JA, Gallant JE, Agwu AL, Berry SA, et al. Hepatitis C virus testing in adults living with HIV: a need for improved screening efforts. PLoS ONE 2014;9(7):e102766. <u>https://doi.org/10.1371/journal.pone.0102766</u>.
- 9. Spradling PR, Richardson JT, Buchacz K. Trends in hepatitis C virus infection among patients in the HIV Outpatient Study, 1996–2007. J Acquir Immune Defic Syndr 2010;53:388–396.
- 10. Centers for Disease Control and Prevention. <u>Viral Hepatitis Surveillance—United</u> <u>States, 2015</u>. Atlanta: US Department of Health and Human Services, Centers for Disease Control and Prevention; 2017.
- 11. Telfer P, Sabin C, Devereux H, et al. The progression of HCV-associated liver disease in a cohort of haemophilic patients. Br J Haematol. 1994;87(3):555–561.
- 12. Soto B, Sanchez-Quijano A, Rodrigo L, et al. Human immunodeficiency virus infection modifies the natural history of chronic parenterally acquired hepatitis C with an unusually rapid progression to cirrhosis. J Hepatol. 1997;26(1):1–5.
- 13. Benhamou Y, Bochet M, Di Martino V, et al. Liver fibrosis progression in human immunodeficiency virus and hepatitis C virus coinfected patients. The Multivirc Group. Hepatology. 1999;30(4):1054–1058.
- 14. Graham CS, Baden LR, Yu E, et al. Influence of human immunodeficiency virus infection on the course of hepatitis C virus infection: a meta-analysis. Clin Infect Dis. 2001;33(4):562–569.
- 15. AIDSinfo. Fact sheet. HIV and hepatitis C. Accessed July 6, 2018.
- 16. American Association for the Study of Liver Disease/Infectious Diseases Society of America. HCV Guidance: Recommendations for Testing, Managing, and Treating Hepatitis C. Available at <u>https://www.hcvguidelines.org/</u>. Accessed July 6, 2018.