

Hepatitis C



Infection with the hepatitis C virus causes inflammation of the liver.

In Australia, many people became infected with hepatitis C from the late 1950s, but the hepatitis C virus was only identified in 1989 and a hepatitis C antibody test available from 1990. While the number of people known to be infected with hepatitis C virus has reduced over the past 15 years, the number of people with hepatitis C-related liver disease is increasing.



Hepatitis C is a notifiable condition¹

How hepatitis C is spread

Hepatitis C is spread by blood-to-blood contact through needle puncture, broken skin or a break in mucous membranes (the thin moist lining of many parts of the body such as the nose, mouth, throat and genitals).

In Australia, most infections are associated with sharing injecting equipment. This accounts for 90% of new cases of hepatitis C each year.

Other ways hepatitis C can spread are:

- > through non-sterile tattooing, body piercing and acupuncture
- > through non-sterile medical or dental procedures, particularly in countries where hepatitis C is more common
- > from mother to infant during delivery if the mother has high levels of hepatitis C virus in her blood
- > in occupational settings through needle stick injuries and accidental exposures to infected blood or blood products
- > through transfusion of infected blood or blood products in Australia before screening was introduced in 1990.

Hepatitis C is much more common in prisons due to multiple risk factors.

The risk of transmission (spreading of infection) is low in the following situations:

- > Sexual transmission – this has been documented but appears to be rare. However, blood contact during unprotected intercourse should be avoided, for example, during menstruation, when there is broken or inflamed skin, unprotected penetrative intercourse where bleeding is caused, or unprotected anal intercourse. Condoms provide an effective barrier in these situations. Sexual transmission is also more likely to occur when the person has a high viral load (the amount of virus measured in the blood) or also has human immunodeficiency virus (HIV) infection.
- > Mother-to-baby transmission – the risk of transmission in pregnancy and childbirth is low unless the mother is also infected with HIV. Women with hepatitis C are encouraged to breastfeed, except when they have cracked nipples.
- > Household transmission is rare and does not occur through usual family and domestic contact. However, personal grooming items such as razors, nail files, manicure scissors and tooth brushes may contain minute traces of infected blood and should never be shared.
- > The risk of spread is increased when there are higher levels of virus in the blood. This occurs during acute infection or if the immune system is suppressed, for example, when the person also has HIV infection.

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People do not appear to develop immunity to hepatitis C virus infection and can be re-infected with the same or different strains of the virus.

Signs and symptoms

Acute infection is followed by chronic (lifelong) infection in 50 to 80% of cases. The majority of people exposed to hepatitis C are unable to eliminate the virus from their body following initial (acute) infection and remain infected for life (chronic infection) if not successfully treated.

Acute infection

Less than 25% of people with acute infection develop symptoms. These may include:

- > fatigue
- > poor appetite
- > upper right sided abdominal pain
- > low grade fever lasting 2 to 10 days
- > jaundice (yellow skin and eyes) (see image)
- > nausea.



Image Courtesy Public Health Image Library (PHIL), Department of Health and Human Services, Centers for Disease Control and Prevention (CDC-USA) CDC, Dr. Thomas F. Sellers / Emory University

Chronic infection

Liver function remains normal or only mildly affected in some people with chronic infection, though most will have some liver inflammation. When the liver is inflamed over a long period of time the liver can develop scar tissue, known as fibrosis. Extensive scarring of the liver is called cirrhosis. It is believed

without treatment, 25% of people with chronic hepatitis C will develop cirrhosis over an average period of 18 years and will have a higher risk of developing liver cancer over the next decade. While many people do not have any symptoms, others may experience a variety of symptoms, including:

- > tiredness and fatigue, which may be severe
- > malaise (feeling of being unwell)
- > pain or discomfort in the upper right side of the abdomen
- > nausea, vomiting and diarrhoea
- > muscle aches
- > a fine body rash.

Diagnosis

Hepatitis C is diagnosed by blood tests. There are two types of tests to confirm hepatitis C infection

- > antibody test
- > hepatitis C PCR test

Antibody test

This detects antibodies against hepatitis C virus (anti-HCV) and is the most commonly used test. Antibodies are proteins in the blood which the body produces to try to destroy the virus, although with hepatitis C virus this is usually not successful. It may take 3 to 6 months for these tests to become positive after infection occurs. Anti-HCV antibodies can be detected in 50 to 70% of patients at the onset of symptoms and in about 90% of patients 3 months after the onset of infection; therefore a negative antibody result may not exclude acute hepatitis C infection. If the antibody test is positive it means that the person has been exposed to the hepatitis C virus at some point in his or her life.

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Hepatitis C PCR test

Also known as Hepatitis C RNA test or viral RNA test (a test for genetic material of the virus)

A PCR (polymerase chain reaction) test in a pathology laboratory is necessary to see if the virus is still present and whether the person is still likely to be infectious. Hepatitis C viral RNA can be detected within 1 to 2 weeks of exposure.

Persistence of hepatitis C virus RNA in the blood, even when symptoms start to settle, indicates chronic infection. The levels of viral RNA vary over time and may be undetectable even in the presence of active hepatitis C infection. However, repeatedly negative PCR tests are likely to indicate clearance of the virus.

Incubation period

(time between becoming infected and developing symptoms)

6 to 9 weeks, but can range from 2 weeks to 6 months. The majority of infected people do not develop symptoms of acute hepatitis.

Infectious period

(time during which an infected person can infect others)

One or more weeks before symptoms develop in the acute stage; lifelong in chronic infection.

Treatment

Improved antiviral therapy is available and new treatments have increased the number of people who have been able to clear the virus (are cured of hepatitis C) and avoid ongoing symptoms and liver damage.

People who are infected with hepatitis C should seek advice about minimising further damage to their liver from alcohol and drug use, and preventing co-infection with blood borne viruses, including immunisation against hepatitis A and hepatitis B.

Lifelong monitoring of chronic hepatitis C infection by a general practitioner and liver specialist can assist in preventing the progression to severe liver disease including liver cancer.

Prevention

Exclusion from childcare, preschool, school and work is not necessary.

There is currently no vaccine for protection against hepatitis C virus infection. People with hepatitis C should ensure they are vaccinated against hepatitis A and hepatitis B.

There is no evidence that giving immunoglobulin (a solution containing human antibodies that is made from blood products) after exposure to hepatitis C will prevent infection.

Infected health care workers must comply with the requirements of their professional boards.

Everyone has a responsibility to help prevent the spread of hepatitis C and to take care of themselves and others. This means:

- > Not sharing or re-using any injecting equipment – not only needles but also syringes, filters, spoons, swabs and tourniquets.
- > Avoiding body tattooing or body piercing performed by those who are untrained and unregulated. Sterile technique under sterile conditions in premises which are regularly inspected by environmental health officers is recommended. Equipment, ointments, dyes and dye pot surfaces should be sterile. Ask about sterilising procedures.
- > Covering any open sores, cuts or abrasions with waterproof dressings.
- > Always using standard precautions if blood or body fluids must be handled. This will generally eliminate the risk of spreading hepatitis C.

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- > Safely disposing of found or used needles and syringes in a sharps safe or other sealable and puncture-proof container.
- > People with hepatitis C virus or at risk of infection with the virus should not donate blood, organs or other tissue. All donated blood and body organs are screened for hepatitis C virus.

For more information about Hepatitis C read the Get tested, get treated, eliminate Hepatitis C infographic.

Useful links

SA Health website – www.sahealth.sa.gov.au

- > Handling blood and other body substances
- > Hepatitis B
- > Hepatitis A, B, C, D and E summary
- > Clean Needle Program
- > Viral Hepatitis Support Nurses

Hepatitis SA website – www.hepatitissa.asn.au

¹ In South Australia the law requires doctors and laboratories to report some infections or diseases to SA Health. These infections or diseases are commonly referred to as 'notifiable conditions'.

You've Got What? 5th Edition

Communicable Disease Control Branch

Telephone: 1300 232 272 Email: HealthCommunicableDiseases@sa.gov.au

The SA Health Disclaimer for this resource is located at www.sahealth.sa.gov.au/youvegotwhat



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