

# Hepatitis C

Infection with the hepatitis C virus (HCV) causes inflammation of the liver.

Acute infection is followed by chronic infection in 50-80% of cases. The majority of people exposed to the hepatitis C virus are unable to eliminate the hepatitis C virus from their body following initial (acute) infection and remain infected for life (chronic infection) if not successfully treated. In Australia, many people became infected from the late 1950s onward, but as the virus was only identified in 1989 and a hepatitis C antibody test available from 1990, some people are only now being identified. Some of the people who have had the infection for many years are only now starting to present with symptoms of chronic liver disease.

*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 two to 10 days
- > jaundice (yellow skin and eyes – refer colour plate no. 10)
- > nausea.

*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 it can develop scar tissue, known as fibrosis. Extensive scarring of the liver is called cirrhosis. It is believed that 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 (general unwellness)
- > pain or discomfort in the upper right side of the abdomen
- > nausea, vomiting and diarrhoea
- > muscle aches
- > a fine body rash.

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

- > **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 HCV this is usually not successful. It may take three to six months for these tests to become positive after infection occurs. Anti-HCV antibodies can be detected in 50-70% of patients at the onset of symptoms and in about 90% of patients three months after the onset of infection; therefore a negative antibody result may not exclude acute HCV infection. If the antibody test is positive, it means that the person has been exposed to the hepatitis C virus at some point in their life. A PCR test is necessary to see if the virus is still present and whether the person is still likely to be infectious.
- > **Hepatitis C PCR test (also known as Hepatitis C RNA test or viral RNA test).** This test looks for the genes of the virus, its RNA, in the blood. Hepatitis C viral RNA can be detected within one to two weeks of exposure. Persistence of HCV RNA in the blood, even with the resolution of symptoms, indicates chronic infection. The levels of viral RNA fluctuate over time and may be undetectable even in the presence of active HCV infection. However, repeatedly negative PCR tests are likely to indicate clearance of the virus.

Hepatitis C is spread by blood-to-blood contact through needle puncture, broken skin or a break in mucous membranes. In Australia, most infections are associated with:

- > sharing injecting equipment (even a single episode) – accounts for 90% of new cases each year in Australia
- > immigration from a high prevalence country
- > receiving a blood transfusion or blood product before screening tests became available in 1990
- > tattooing, body piercing or acupuncture with non-sterile equipment and procedures
- > being a prisoner, where there is exposure to a number of risks.

# Hepatitis C (cont.)

The risk of transmission 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, or also has 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 not advised to stop breastfeeding unless 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. People do not appear to develop immunity to HCV infection and can be re-infected with the same or different strains of the virus.

## Incubation period

*(time between becoming infected and developing symptoms)*

6 – 9 weeks, but can range from 2 weeks – 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)*

1 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 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 infection with any of the other hepatitis viruses. They should seek advice about vaccination against hepatitis A and B. Long-term follow-up of chronic hepatitis C infection by a general practitioner and liver specialist is recommended.

## Control of spread

- > There is currently no vaccine for protection against hepatitis C virus infection. Everyone has a responsibility to help prevent transmission of hepatitis C and to take care of themselves and others. This means:
  - Not sharing or re-using injecting equipment (including not just needles but also syringes, filters, spoons, swabs, tourniquets etc).
  - 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 etc 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 minimise and generally eliminate the risk of transmission of hepatitis C.
  - Safely disposing of found or used needles and syringes in a Sharpsafe or other sealable and puncture-proof container.
  - People with HCV 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 HCV infection.

## Hepatitis C (cont.)

### Control of spread cont.

- > Exclusion from child care, preschool, school or work is not necessary.
- > Infected health care workers must comply with the requirements of their professional boards.
- > There is no evidence that the administration of immunoglobulin after exposure to hepatitis C will prevent infection.



### Hepatitis C is a notifiable disease

- > PCR
- > Handling Blood and Other Body Substances (standard precautions)

### Useful websites

- > Hepatitis C – Information and Services available in 18 languages  
<http://www.health.sa.gov.au/pehs/topics/topic-hep-c-book.htm>
- > Hepatitis C Council of South Australia  
<http://www.hepccouncilsa.asn.au/>  
– phone 08 8362 8443  
– regional callers 1800 021 133
- > Multicultural Hepatitis C resources  
<http://www.multiculturalhivhepc.net.au/>