facts about
hepatitis A, B and C

Norwegian Institute of Public Health
What is hepatitis?
Hepatitis means inflammation of the liver.

Many viruses can cause liver inflammation, including the hepatitis A, B and C viruses. Some people who are infected with hepatitis display jaundice symptoms (yellowing of the eyes and skin), fatigue, nausea or abdominal pain, but not all. From these symptoms only, it is impossible to determine which virus causes the infection. Only a blood test can confirm this.

An estimated 40,000 – 60,000 people in Norway are living with chronic infection caused by the hepatitis B or C virus.

How hepatitis is usually spread:

**Hepatitis A:**
Through contaminated food and water and via blood, for example, by sharing unclean needles/syringes used by another person. Hepatitis A can also be sexually transmitted through oral sex and oral-anal contact.

**Hepatitis B:**
Through unprotected sex, childbirth, and via blood, for example, by sharing unclean needles/syringes.

**Hepatitis C:**
Through blood, usually by sharing unclean needles/syringes. Sexual transmission can occur, but is rare.
Hepatitis A

Today, hepatitis A is rare in Norway and is most common in people who are infected abroad. From time to time outbreaks have occurred among drug users. Adults often become more ill than children if they contract hepatitis A.

The virus is excreted in the faeces of infected people. Therefore, hepatitis A is mainly transmitted through water contaminated by sewage or via food handled by infected people with poor hand hygiene.

The disease can be transmitted sexually. This is very rare, but outbreaks of disease sometimes occur among men who have sex with men.

Avoiding infection

Wash hands carefully before food preparation and after using the toilet. Other preventive measures when traveling abroad are to only drink boiled or bottled water and to avoid salads, uncooked vegetables and fruit that cannot be peeled. Avoid undercooked shellfish.

There is a vaccine against hepatitis A. It is recommended to vaccinate against hepatitis A before traveling to any country outside of Western and Central Europe, the Canary Islands, Canada, USA, Japan, Australia, South Korea and New Zealand.

Intravenous drug users should always use clean needles/syringes and other equipment used for injecting drugs. Free vaccines are given to drug users and people with illnesses that make them particularly susceptible to hepatitis A or serious effects of this disease.

Treatment

Hepatitis A can be an unpleasant disease, but is a self-limited disease that does not result in chronic infection or chronic liver disease. Hepatitis A infection gives immunity for life.
In Norway, the hepatitis B virus is most commonly transmitted through unprotected sex and through blood when sharing needles/syringes. In countries with a high prevalence, transmission from mother to child is common.

**Avoiding infection**

Condoms protect against sexual transmission, and clean needles/syringes and equipment used for injecting drugs protect against spread among intravenous drug users.

There is a vaccine against hepatitis B. Full vaccination against hepatitis B consists of three vaccine doses administered over at least 6 months. People who are especially at risk of infection can get free vaccines. This includes intravenous drug users, men who have sex with men and people living with a chronic carrier of the virus.

Transmission can occur from mother to child during pregnancy and birth. The risk of the virus being transmitted and the child becoming infected is reduced by the child receiving specific immunoglobulin and vaccine as soon as possible after birth. The child can then be breastfed. The vaccine and immunoglobulin may also be necessary after needlestick injuries from used syringes and needles.

**Hepatitis B is found in both acute and chronic form**

**Acute hepatitis B**

About half of those who become infected with hepatitis B virus will develop symptoms within two to six months after the date of infection. Most infected people will get rid of the virus and produce protective antibodies within a matter of months. They are then immune to hepatitis B for life.
Chronic hepatitis B

Approximately 5 % of adults and up to 95 % of children who become infected in connection with childbirth will never get rid of the virus. The virus remains in the liver and they become chronic carriers.

The chronic carrier state usually produces no symptoms and can only be detected by blood tests. Some may develop chronic inflammation of the liver that over time can cause cirrhosis and also increase the risk of liver cancer. It is therefore important that people who are chronic carriers of the hepatitis B are regularly followed up by the health service.

People with chronic hepatitis B can infect others regardless of whether or not they have symptoms. Therefore, carriers of hepatitis B cannot donate blood, and other members of the household can get a free vaccine against the disease. Chronic hepatitis B carriers must use condoms when having sex with people who are not vaccinated. Infected drug users should not share needles/syringes and other equipment used for injecting drugs.

Treatment

It is possible to treat chronic hepatitis B with special medication to slow the development of severe liver disease, but the treatment will rarely result in eliminating the virus from the body.
Hepatitis C

Hepatitis C is a disease caused by the hepatitis C virus. 70–80 % of those infected with the virus will become chronic carriers, with some developing chronic liver inflammation with subsequent risk of developing cirrhosis and liver cancer. Hepatitis C is the cause of the majority of reported hepatitis cases in Norway, and infection mainly occurs among intravenous drug users. There is no vaccine against hepatitis C.

Avoiding infection

Most people diagnosed with hepatitis C are infected by past or current intravenous drug use or through blood transfusions before testing was introduced. Today, all blood donors are tested. As for hepatitis B, the use of unclean needles/syringes and other equipment is the most common way of hepatitis C transmission. Sexual transmission can occur in rare cases.

Hepatitis C usually produces few symptoms, and many of those infected are only aware of the infection following a blood test that detects antibodies to the virus. Other blood tests can indicate if a person is still infected or whether they have got rid of the virus. Anyone who has been diagnosed with a positive antibody test should be followed up by the health service.

Those who are chronic carriers of the hepatitis C virus usually have no symptoms. After many years of carrying the virus, some will develop liver damage. It is therefore important that people who are chronic carriers of the virus are regularly followed up. Hepatitis C is rarely transmitted from mother to child during birth. Children born to infected mothers can be breastfed.
Treatment

In recent years, the treatment options for chronic hepatitis C have improved considerably. Anyone diagnosed with chronic hepatitis C infection should be evaluated by a specialist for treatment. If the treatment is successful, it is possible to get rid of the virus, but this will not prevent re-infection.