

Let's Talk About: Hepatitis B, Hepatitis C, and Fatty Liver Disease



ST. PAUL'S HOSPITAL
COMMUNITY FORUMS

Liver Disease

Although liver disease is stereotypically linked to alcohol or drugs, the truth is that there are over 100 known forms of liver disease caused by a variety of factors and affecting everyone from infants to older adults.

It is important to keep your liver healthy because it plays a key role in your overall health. It helps digest food and stores vitamins and minerals. It acts as a filter for chemicals and other substances that enter your body. It also helps to produce blood and proteins that keep your body working.

Hepatitis is the swelling and inflammation of the liver, caused mainly by various viruses but also by some poisons (e.g. alcohol), autoimmune or hereditary conditions.

What is Hepatitis B?

Hepatitis B is a type of liver disease caused by the Hepatitis B virus (HBV) and is one of the most common strains of viral Hepatitis (the others are the Hepatitis A virus and the Hepatitis C virus). Many people who become infected with Hepatitis B never feel sick and recover completely. Others get a brief, acute illness. Less than 5% of adults who get acute Hepatitis B develop chronic Hepatitis, which can lead to cirrhosis (liver scarring) and/or liver cancer later in life. Chronic Hepatitis B is a "silent" disease because often no symptoms appear until the liver is severely damaged. Infants and children infected with Hepatitis B have a much greater likelihood of developing a chronic infection than adults.

Adults have a 95% chance of clearing the infection completely and developing lifelong protection against this virus. The acute infection rarely (in less than 1% of cases) leads to severe illness that requires a liver transplant.

Hepatitis B can be prevented by a vaccine.

What is Hepatitis C?

Hepatitis C is an infection of the liver caused by the Hepatitis C virus (HCV). Most people have few, if any, symptoms after the initial infection, yet the virus persists in the liver in about 85% of those infected and may develop into chronic Hepatitis which can lead to cirrhosis (liver scarring), liver failure and even liver cancer later in life. Like chronic Hepatitis B, chronic Hepatitis C is a "silent" disease because often no symptoms appear until your liver is severely damaged.

There is currently no vaccine available to prevent Hepatitis C.

What is a fatty liver?

A fatty liver is the result of the accumulation of excess fat in liver cells. Fatty tissue slowly builds up in the liver when a person's diet exceeds the amount of fat his or her body can handle. A person has a fatty liver when fat makes up at least 5-10% of the liver. Simple fatty liver can be a completely benign condition and usually does not lead to liver damage. However, once there is a buildup of simple fat, the liver becomes vulnerable to further injury, which may result in inflammation and scarring of the liver.

How does fat get into the liver?

Fat from a person's diet is usually metabolized by the liver and other tissues. If the amount of fat exceeds what is required by the body, fat is stored in the fatty tissue. Other reasons for accumulation of fat in the liver could be the transfer of fat from other parts of the body or the inability of the liver to change it into a form that can be eliminated.

What is NASH?

NASH represents the more severe end of the spectrum of non-alcoholic fatty liver disease. NASH stands for Non Alcoholic SteatoHepatitis. SteatoHepatitis means fatty liver with inflammation, occurring in people who do not drink alcohol or drink minimally.

NASH differs from the simple accumulation of fat in the liver, which is a completely benign condition. Up to 20% of adults with NASH develop cirrhosis and up to 11% may experience liver-related deaths. Many individuals develop chronic liver failure and require liver transplantation. The prevalence of NASH is 2-6% in the general population.

Diagnosis:

To determine whether or not you have Hepatitis B or Hepatitis C, you will need to have blood tests.

Fatty liver disease is usually suspected in patients who have an enlarged liver or have abnormal liver tests. An ultrasound of the liver can suggest the presence of a fatty liver. In some cases, your doctor may advise a liver biopsy, a procedure where the physician inserts a needle into the liver and extracts a sample tissue, which is then examined under a microscope.

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This evening's presentations will be available to view on our website:

www.phcmedicine.ca

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Treatment and Research

Symptoms - Hepatitis B and C:

Symptoms may not appear for up to 6 months after the time of infection. Early symptoms may include:

- Appetite loss
- Fatigue
- Fever, low-grade
- Muscle and joint aches
- Nausea and vomiting
- Yellow skin and dark urine due to jaundice

If you have acute or chronic Hepatitis B or Hepatitis C, you may infect others. To prevent spreading the virus:

- Adopt safe sex practices.
- Avoid sharing personal hygiene items (e.g. razors, toothbrushes, nail clippers)
- Do not share needles
- If you decide to have a tattoo, piercing, manicure or pedicure, ensure that the facility uses single use needles and inks and/or follows proper sterilization procedures
- If you have been exposed to the Hepatitis B virus (within the previous seven days or less), an injection of Hepatitis B immune globulin may help protect you.
- If you are pregnant, make sure you are screened for Hepatitis B. If the test result shows that you have the virus, make sure your baby receives the free Hepatitis B vaccine. If you have Hepatitis B, breastfeeding is safe if the baby has received both protective antibody called immune globulin, and the first dose of Hepatitis B vaccine within the first 12 hours of life.

Hepatitis B and Hepatitis C viruses cannot be spread by casual contact, such as holding hands, sharing eating utensils or drinking glasses, breastfeeding (unless nipples are cracked and bleeding), kissing, hugging, coughing, or sneezing.

Treatment:

Hepatitis B

An injection of Hepatitis B immune globulin may be given to prevent one from developing the disease if exposure to Hepatitis B is known within 7 days. Besides this, there is no treatment for **acute** Hepatitis B.

If you have **chronic** Hepatitis B, two types of treatment exist: interferon and antiviral medicines. Current approved Hepatitis B oral medications include lamivudine, adefovir, telbivudine, tenofovir, and entecavir. These treatments do not provide a

cure, but they offer control of the virus so that further damage to the liver can be prevented.

Hepatitis C

Depending upon what form (genotype) of the Hepatitis C virus one is infected with, treatment can cure the illness. However, it is possible to be reinfected with another genotype of Hepatitis C virus.

For some Hepatitis C patients, drug treatment may be appropriate and must be administered after careful assessment by a physician. The current standard of care is a combination of pegylated interferons taken by injection once a week plus ribavirin pills taken daily. Depending on the HCV genotype, cure rates range from 40 to 90 per cent.

Two new drugs have recently been approved by Health Canada for the treatment of patients infected with genotype 1. Protease inhibitors (either boceprevir or telaprevir) are pills and must be taken in combination with pegylated interferon and ribavirin. In clinical trials, the addition of protease inhibitors to the current standard of care has significantly increased cure rates in patients with genotype 1 and many patients may be treated for shorter durations. No alternative therapies which include herbal remedies, homeopathic medicines, and minerals have been proven safe and effective for treatment of Hepatitis C.

Fatty Liver

The treatment of fatty liver disease is related to the cause. At this time, it is not possible to predict which patients will develop NASH. Once there is a buildup of simple fat however, the liver becomes vulnerable to further injury, which may result in liver inflammation and scarring (NASH).

Patients who are obese are advised to achieve a gradual and sustained weight loss through proper nutrition and exercise. Patients with diabetes and high lipids in their blood have to improve their sugar control and lower lipids levels. Usually, a low fat, low calorie diet is recommended along with insulin or medications to lower blood sugar in people with diabetes.

Currently, there is no medication proven to effectively treat fatty liver disease.

Sources:

Canadian Liver Foundation

<http://www.liver.ca>

Public Health Agency of Canada

<http://www.phac-aspc.gc.ca>

St. Paul's Hospital is an acute care, teaching and research hospital located in downtown Vancouver. It is home to many world-class medical and surgical programs, including heart and lung services, HIV/AIDS and kidney care.

St. Paul's serves both the local community and patients from across BC and the Yukon. St. Paul's is one of 14 health care facilities in Vancouver operated by Providence Health Care, one of Canada's largest faith-based health care organizations. Providence's 1,000 physicians and 6,000 staff deliver compassionate care to patients and residents in British Columbia while training medical professionals and making innovative advances in research.

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