

Viral Infections

A virus defines as **obligate intracellular parasite** consists of a single nucleic acid, RNA or DNA, surrounded by a protein coat, and is capable of replication only within the living cells of bacteria, animals or plants.

Viruses are classified into different orders and families by consideration of:

- 1- The type of nucleic acid present (RNA or DNA).
- 2- The nucleic acid is single- or double-stranded.
- 3- The presence or absence of an envelope.

Hepatitis

Definition:

Hepatitis is the inflammation of the liver. The condition can progress to fibrosis (scarring), cirrhosis or liver cancer.

Causes of hepatitis

- 1- Hepatitis viruses are the most common cause of hepatitis in the world.
- 2- It can cause by other infections, toxic substances (e.g. alcohol, certain drugs), and autoimmune diseases can also cause hepatitis.

Viral hepatitis

Is caused by infection with one of the five known viruses, the hepatitis A, B, C, D and E viruses (**HAV**, **HBV**, **HCV**, **HDV** and **HEV**).

Modes of transmission for these viruses include:

- Hepatitis A and E are typically caused by ingestion of contaminated food or water .
- Hepatitis B, C and D usually occur as a result of parenteral contact with infected body fluids.

Symptoms

- 1- Acute infection may occur with limited or no symptoms.
- 2- Or show symptoms such as jaundice (yellowing of the skin and eyes), dark urine, extreme fatigue, nausea, vomiting and abdominal pain.

What are the different hepatitis viruses?

- 1- Hepatitis A virus (HAV)** is present in the faeces of infected persons and is most often transmitted through consumption of contaminated water or food.
- 2- Hepatitis B virus (HBV)** is transmitted through exposure to contaminated blood and blood products, contaminated injections during medical procedures, and through injection drug use, semen, and other body fluids.
HBV can be transmitted from infected mothers to infants at the time of birth.
- 3- Hepatitis C virus (HCV)** is mostly transmitted through exposure to infective blood and blood products, contaminated injections during medical procedures, and through injection drug use. Sexual transmission is also possible but is much less common.
- 4- Hepatitis D virus (HDV)** infections occur only in those who are infected with HBV.
- 5- Hepatitis E virus (HEV)** is mostly transmitted through consumption of contaminated water or food.