
Hepatitis A, B and C

Hepatitis: refers to an inflammation of the liver cells and damage to the liver.

The liver's **functions** include detoxifying the blood, storing vitamins, and producing hormones. Hepatitis can disrupt these processes and create severe health problems throughout the body.

At least five viruses can cause hepatitis. The three most common are hepatitis viruses **A, B and C**. All three types can be acute, lasting for 6 months or less, and types B and C can be chronic, lasting for longer.

Types:

Hepatitis A: Hepatitis A or infectious jaundice is caused by hepatitis A virus (HAV), a **picornavirus** transmitted by the fecaloral route. **It causes an acute form of hepatitis** and does not have a chronic stage. The time between the infection and the start of the illness averages 28 days (ranging from 15 to 50 days).

Hepatitis B: Hepatitis B is caused by hepatitis B virus, a **hepadnavirus** that can cause both acute and chronic hepatitis. deaths per year worldwide due to the complications of **chronic hepatitis, cirrhosis, and hepatocellular carcinoma**. Hepatitis B can be transmitted through: Sex, Sharing needles, Accidental needle sticks, Mother to child there is a safe and effective vaccine that can protect against HBV.

Hepatitis C: Hepatitis C is caused by hepatitis C virus (HCV), an RNA virus of the family Flaviviridae. HCV can be transmitted through contact with blood and can also cross the placenta. Hepatitis C usually leads to chronic hepatitis, Patients with hepatitis C are susceptible to severe hepatitis if they contract either hepatitis A or B,

so all persons with hepatitis C should be immunized against hepatitis A and hepatitis B if they are not already immune, HCV can lead to liver damage and swelling.

There is no vaccine to prevent HCV, but treatment can cure it.

SYMPTOMS

Acute hepatitis

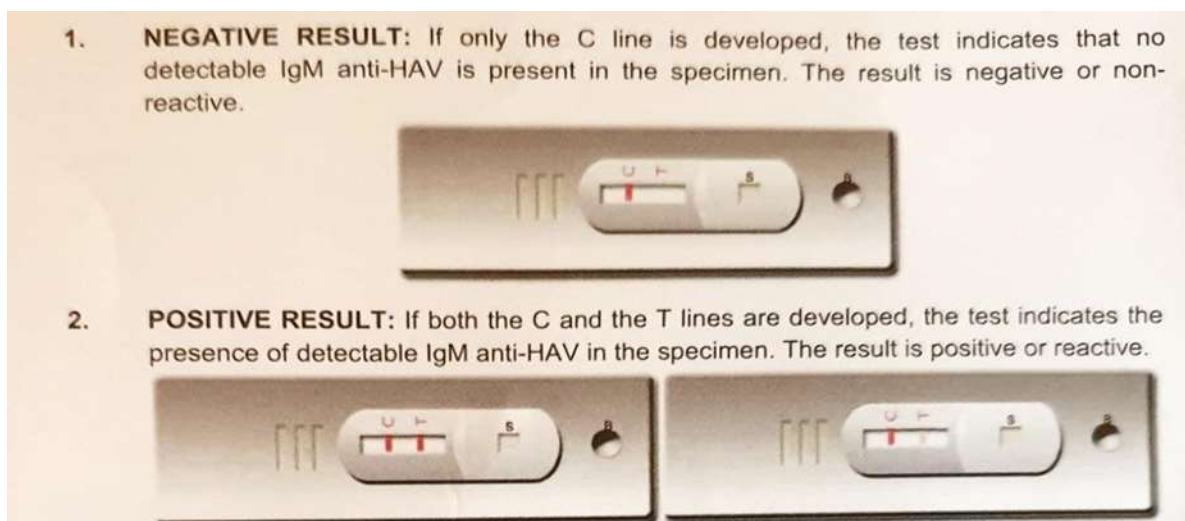
The symptoms are similar to mild [flu](#), and **may include:** [diarrhea](#), [fatigue](#), loss of appetite, mild [fever](#), muscle or joint aches, nausea, slight abdominal pain, vomiting, weight loss, [jaundice](#). It may also progress to a chronic infection, This is most likely with HBV or HCV. Chronic [hepatitis](#) can lead to progressive liver failure, resulting in jaundice, swelling of the lower extremities, confusion, and blood in the feces or vomit, dark urine, , yellow skin, whites of the eyes, and tongue.



Diagnosis: physical examination and medical history.
the following tests can confirm a diagnosis:

Blood tests: These can detect whether the body is producing antibodies to fight the disease, and they can assess liver function by checking the levels of certain liver proteins and enzymes.

A liver biopsy: This can measure the extent of liver damage and the possibility of cancer. And other tests.



Rapid test cassette Procedure HAV

1-Allow the test cassette, specimen, buffer, and / or Controls to reach room temperature (15 - 30 °C) prior to testing. Remove the test Cassette from the foil pouch and use it as soonas possible.

2- Record the ID number of the patient

3- Place the test cassette on a clean and level surface. Hold the dropper vertically and drop 1.5µl of serum or plasma or 2 µl whole blood vertically onto the membrane, and add about (80- 100µl) of sample diluent immediately into the s well.

4- Set up timer

5- Wait for the colored line (C) to appear. Read results in 15 minutes. Do not interpret the result after 15 minutes.

Procedure of HCV

1-Remove the test Cassette from the foil pouch and use it as soon as possible. Record the ID number of the patient

2-Place the test cassette on a clean and level surface. Hold the dropper vertically and transfer 20 µl of serum or plasma to the sample Well (S).

3-For whole blood transfer 50 µl into the sample well then add 1 drop of sample diluent immediately

4-Set up timer

5-Wait for the colored line (C) to appear. Read results in 15 minutes. Do not interpret the result after 15 minutes If no C line is developed the assay is invalid.

Procedure of HBV

1-Remove the test Cassette from the foil pouch and use it as soon as possible. Record the ID number of the patient.

2-Place the test cassette on a clean and level surface. Hold the dropper vertically and transfer 75µl of serum or plasma to the sample Well (S).

3-For whole blood transfer 2drop approximately 50µl into the sample well then add 1 drop of sample diluent immediately.

4-Set up timer

5-Wait for the colored line (C) to appear. Read results in 15 minutes. Do not interpret the result after 15 minutes

Results:

Positive: if both C and T bands appear that indicate the presence of antibodies in the sample.

Negative: only C band developed.