

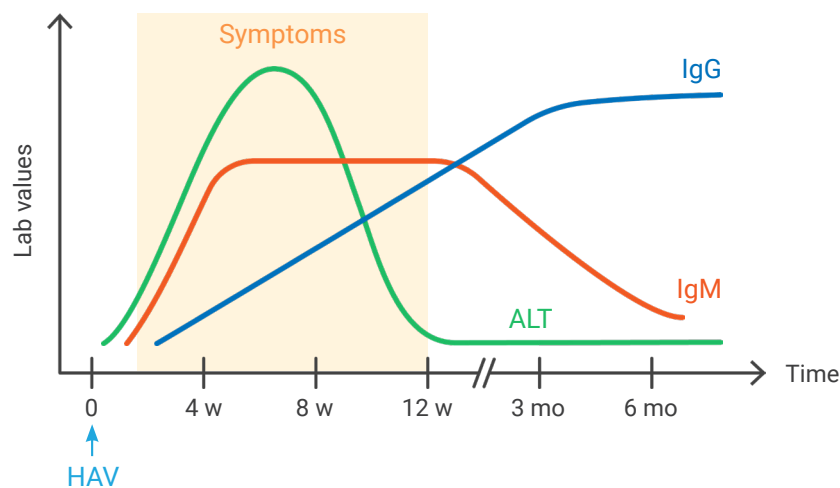
Hepatitis A virus infection

GETTING TO KNOW HAV LAB MARKERS

Course of infection

In order to diagnose an infection with HAV it is important to understand the course of infection:

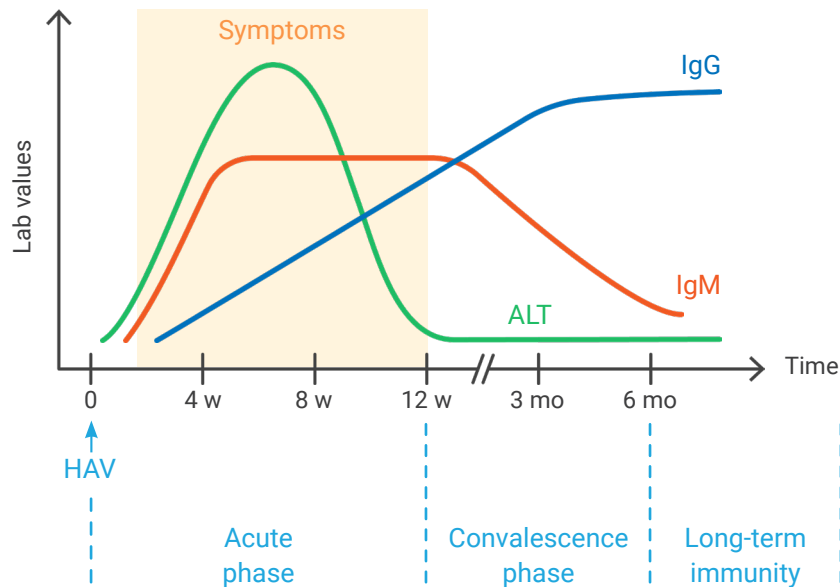
- Elevated alanine aminotransferase (ALT) activity levels indicate liver cell damage, and are an unspecific marker of hepatitis.
- Anti-HAV IgM is the first serologic marker, specific to hepatitis A infection, to occur. It starts rising early after symptom onset and drops to undetectable levels 3–6 months later, when the infection is cleared.
- Over the course of the infection, IgM is replaced by Anti-HAV specific IgG antibodies. Anti-HAV IgG is detectable in the blood for years and confers long-term protection against reinfection.



Phases of infection

We can distinguish three phases of infection according to the levels of lab markers:

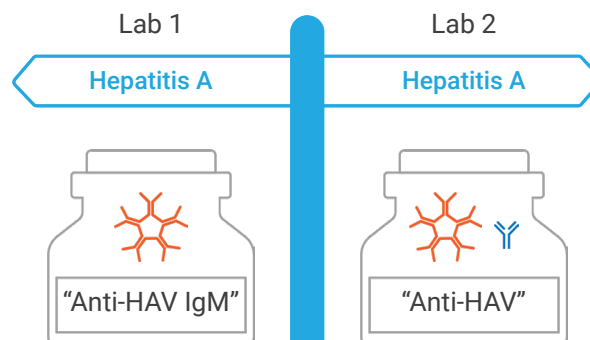
- Acute phase
- Convalescence phase
- Long-term immunity



Laboratory test systems

Diagnostic tests for HAV can be used in different combinations. Depending on which test system your lab is using, there are two different possible diagnostic pathways, to diagnose a hepatitis A infection. One of these test systems measures

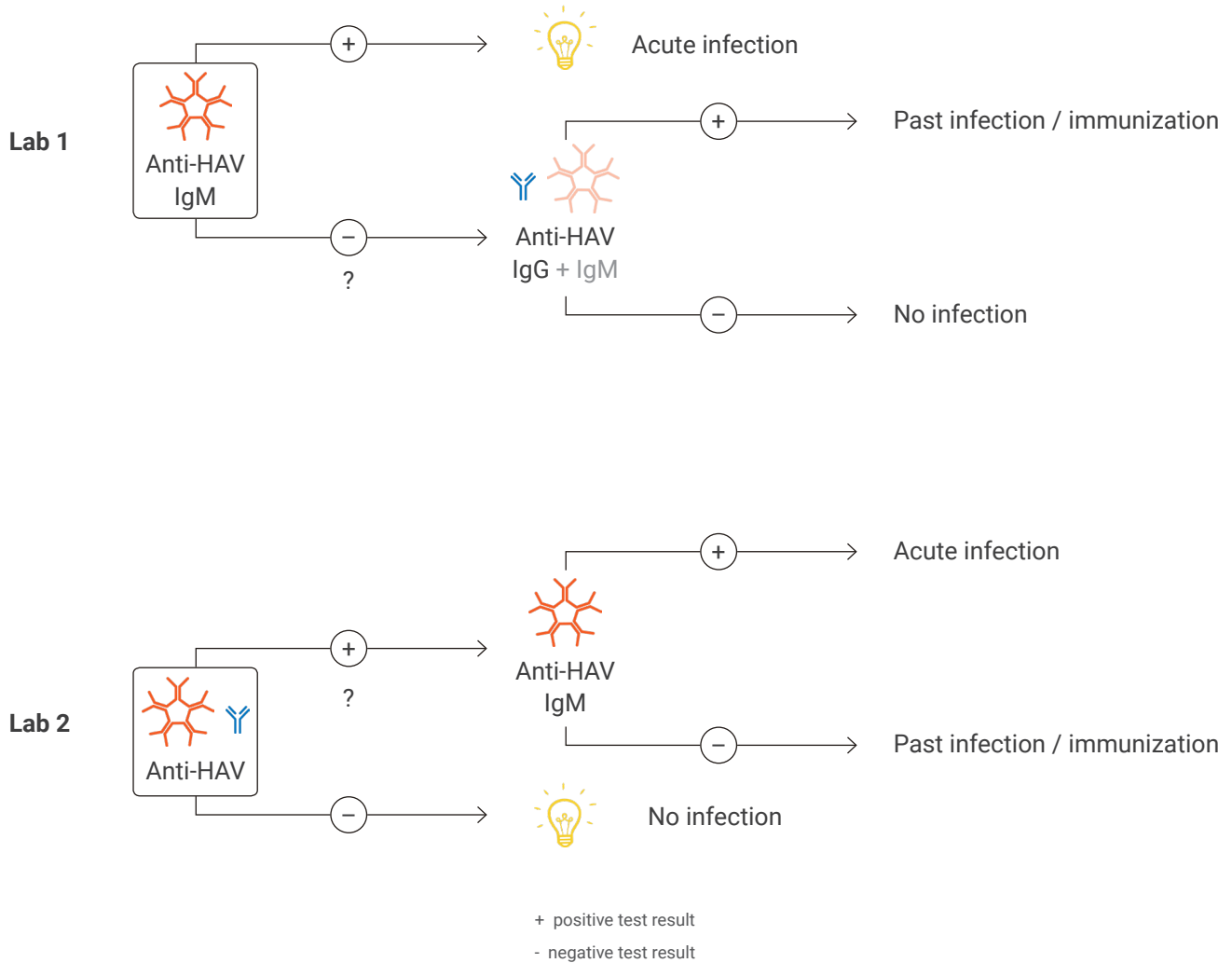
only Anti-HAV IgM antibodies. Thus, it is called “Anti-HAV IgM”. The other test system is called “Anti-HAV”. It measures Anti-HAV IgM as well as IgG antibodies, in one system.



There are also tests that can measure hepatitis A antigen or RNA, in stool, very early in the acute phase. These tests are not commonly used, as this is of

interest only in rare cases and these tests are only available in specialized laboratories.

Laboratory diagnostic paths



Further Reading

Matheny, SC and Kingery, JE. 2012. Hepatitis A. *Am Fam Physician*. **86**: 1027–1034.

Turgeon, ML. 2018. *Immunology and Serology in Laboratory Medicine*. 6th Edition. St. Louis, Missouri: Elsevier.