

Interpretation of Hepatitis B Laboratory Test Results*

Test	Result	Interpretation	Follow-up
HBsAg anti-HBc anti-HBs	Negative Negative Negative	Susceptible to HBV	Vaccinate for HBV
HBsAg anti-HBc anti-HBs	Negative Negative Positive	Immune to HBV due to vaccination	None required
HBsAg anti-HBc anti-HBs	Negative Positive Positive	Immune to HBV due to infection	None required
HBsAg anti-HBc IgM anti-HBc anti-HBs	Positive Positive Positive Negative	Acute HBV infection	Report and counsel [§]
HBsAg anti-HBc IgM anti-HBc anti-HBs	Positive Positive Negative Negative	Chronic HBV infection	Report and counsel [§]
HBsAg anti-HBc anti-HBs	Negative Positive Negative	Four possible interpretations [†]	Report and counsel [§]

* Adapted from materials by the Hennepin County Community Health Department and the Minnesota Department of Health

† Additional testing may be needed for diagnosis.

‡ Possible interpretations: 1) recovering from acute HBV infection, 2) distantly immune, test not sensitive enough to detect very low level of anti-HBs in serum, 3) susceptible with a false-positive anti-HBc, or 4) chronically infected with an undetectable level of HBsAg in serum.

§ See corresponding viral hepatitis fact sheet.

Viral Hepatitis B Markers and Their Significance

Marker	Definition	Common Terminology	Meaning of a Positive Test
Hepatitis B Virus (HBV)			
HBsAg	hepatitis B surface antigen	surface antigen	HBV infection (additional tests needed to determine chronic or acute status)
anti-HBs	antibody to hepatitis B surface antigen	surface antibody	immunity to HBV (due to natural infection or HBV vaccination)
anti-HBc	antibody to hepatitis B core antigen	core antibody	natural infection (acute, resolved, or chronic); not present after vaccination
anti-HBc IgM	antibody to hepatitis B core, IgM fraction	core IgM	current or recent HBV infection (within 6 months); presence of anti-HBc IgM without HBsAg denotes "window" phase late in some acute HBV infections where HBsAg has dropped below detectable levels; can persist in some chronic HBV infections

