



INTERPRETATION OF HEPATITIS B SEROLOGY

HBsAg or Surface antigen (Hepatitis B surface antigen):

Indicates either acute Hepatitis B infection or, more often, a carrier of Hepatitis B. These individuals are infectious to others. This is the test that should be ordered for prenatal screening. Babies born to mothers with HBsAg require Hepatitis B Immune Globulin (HBIG) and Hepatitis B vaccine at birth.

Anti-HBs or HBsAb or Surface antibody (Antibody to Hepatitis B surface antigen):

Indicates immunity to Hepatitis B from either exposure to the virus or from vaccination. Anti-HBs will usually not be present with HBsAg. This is the test that should be ordered to assess if the vaccine has been effective. A titre of greater than or equal to 10 IU/L indicates protection to hepatitis B.

Anti-HBc or IgG anti-HBc or HBcAb or Core antibody (IgG Antibody to Hepatitis B core antigen):

Indicates that the person either has or had Hepatitis B. This antibody develops after exposure to the Hepatitis B virus and persists for many years. It does not develop after immunization with Hepatitis B vaccine. Anti-HBc does not tell you whether the patient is still infectious (HBsAg positive) or whether they have developed immunity to the virus (anti-HBs) since anti-HBc will be present in both conditions.

IgM anti-HBc or Anti-HBc IgM (IgM Antibody to Hepatitis B core antigen):

Indicates acute or recent infection with Hepatitis B. This is the test that should be ordered (along with HBsAg) when acute Hepatitis B is suspected.

HBeAg (Hepatitis B e antigen):

Will only be present in a person who is also HBsAg positive. HBeAg indicates a person who is highly infectious to others.

Anti-HBe (Antibody to Hepatitis B e antigen):

Indicates a person who was HBeAg positive but has since developed immunity to this antigen. If they are still HBsAg positive then they are still infectious to others but less infectious than when they were also HBeAg positive.

INTERPRETATION OF HEPATITIS B MARKERS

	Acute Infection	Chronic Infection	Past Infection
HBsAg	+	+	-
e antigen (HBeAg)	+ early, then -	+/-	-
Anti-HBs	-	-	+
Core Antibody			
- anti-HBc IgM	+	-	-
- anti-HBc IgG	+	+	+
e antibody (anti-HBe)	- early, then +	+/-	+
HBV DNA	+ early, then -	+/-	-
Liver Enzymes:			
Alanine Aminotransferase (ALT)	Markedly elevated	Elevated or normal	Normal

* +/- means either positive or negative.

Adapted from: Middlesex-London Health Unit May 2006.