



Interpretation of Hepatitis Test Results

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Abbreviations:

- + Positive
- Negative
- \ Not performed
- +/- Either positive or negative
- Ab Antibody
- Ag Antigen

Hepatitis A Tests		
Anti HAV IgM	Anti HAV IgG	Possible Interpretation / Stage of Infection
-	-	<ul style="list-style-type: none"> No current or previous HAV infection No immunity, vaccine may be recommended if at risk Possibly in the incubation stage
-	+	<ul style="list-style-type: none"> No active infection Immunity due to prior HAV infection or HAV vaccination
\	+	<ul style="list-style-type: none"> HAV exposure (infection or vaccination), but does not rule out acute infection
+	+/-	<ul style="list-style-type: none"> Acute or recent HAV infection * Anti HAV IgM can be detected as early as 2 weeks and disappears 3-12 months after HAV infection * Anti HAV IgG can be detected ~8-12 weeks after HAV infection and remains positive

Hepatitis C Tests		
Anti HCV	HCV RNA	Possible Interpretation / Stage of Infection
-	\	<ul style="list-style-type: none"> No infection or tested too early after exposure If recent exposure in person tested is suspected, test for HCV RNA, or retest at a later time * HCV infection can be detected by Anti HCV screening tests (immunoassay) 4-10 weeks after infection * Anti HCV can be detected in >97% of persons by 6 months after exposure * HCV RNA appears in blood and can be detected as early as 2-3 weeks after infection
+	-	<ul style="list-style-type: none"> Prior infection or no infection (false-positive screen) * If distinction between true positivity and biologic false positivity for HCV antibody is desired, and if sample is repeatedly Anti HCV positive and HCV RNA negative, test with another Anti HCV assay
+	+	<ul style="list-style-type: none"> Current infection

Hepatitis B Tests							Possible Interpretation / Stage of Infection
Initial Tests			Follow-up Tests				
HBsAg	Anti HBs	Anti HBc	Anti HBc IgM	HBeAg	Anti HBe	HBV DNA	
-	-	-	\	\	\	\	<ul style="list-style-type: none"> No current or previous HBV infection No immunity, vaccine may be recommended if at risk Possibly in the incubation stage
-	+	-	\	\	\	\	<ul style="list-style-type: none"> Immunity due to vaccination
-	+	+	\	\	\	\	<ul style="list-style-type: none"> Infection resolved, virus cleared Immunity due to previous infection. However, if immunosuppressed, virus can reactivate.
-	-	+	\	\	\	\	<ul style="list-style-type: none"> Interpretation unclear; four possibilities: <ol style="list-style-type: none"> Resolved infection (most common) False-positive anti-HBc, thus susceptible "Low level" chronic infection Resolving acute infection
+	-	+/-	+	+	-	+/-	<ul style="list-style-type: none"> Acute infection, usually with symptoms or flare of chronic infection. * HBV DNA levels are detectable by 30 days following infection, approximately 21 days before HBsAg typically appears in the serum
-	-	+	+	-	+	-	<ul style="list-style-type: none"> Acute infection is resolving (convalescent) * Some types (strains) of HBV, common in the Middle East and Asia, do not make e-antigen. Infection with these strains may result in a negative HBeAg result during active infection.
+	-	+	-	+	-	+	<ul style="list-style-type: none"> Active chronic infection (liver damage likely)
+	-	+	-	-	+	- or very low level	<ul style="list-style-type: none"> Chronic infection but low risk of liver damage; carrier state

References:

1. CDC Interpretation of Hepatitis B Serologic Test Results. <https://www.cdc.gov/hepatitis/HBV/PDFs/SerologicChartv8.pdf>
2. OAML Interpretation of Viral Hepatitis Laboratory Test Results. <http://www.oaml.com/PDF/2010/Hepatitis%20Results%20Interp.%20FINAL-Aug%2024%202010.pdf>
3. Krajden M, McNabb G, and Petric M. The laboratory diagnosis of hepatitis B virus. Can J Infect Dis Med Microbiol. 2005; 16(2): 65–72.
4. Lok ASF, McMahon BJ: Chronic hepatitis B: Update 2009. Hepatology 2009;50:661-662.
5. Liaw YF. HBeAg seroconversion as an important end point in the treatment of chronic hepatitis B Hepatol Int (2009) 3:425–433.