Hepatitis B Virus
Nomenclature and Interpretation of Laboratory Tests


HBsAg .................. Hepatitis B surface antigen. Surface antigen(s) of HBV detectable in serum.

HbeAg .................. Hepatitis B e antigen. A marker of the core of the virus. Correlates with HBV replication: implies high titer HBV in serum and infectivity of serum.

HbcAg .................. Hepatitis B core antigen. No commercial test available because it is not freely found in serum.

anti-HBs ................. Antibody to HBsAg. Indicates past infection with and immunity to HBV, or passive antibody from HBIG, or immune response from HBV vaccine.

anti-Hbe ................. Antibody to HBeAg. Presence in serum of HBsAg carrier indicates lower titer of HBV.

anti-HBc ................. Antibody to HBcAg. May indicate past infection with HBV at some undefined time or an ongoing infection.

IgM anti-HBc............ IgM class antibody to HBcAg. Indicates recent infection with HBV; detectable for 4-6 months after infection.

IgG anti-HBc............ IgG class antibody to HBcAg. Indicates non-recent infection with HBV; present more than 4-6 months after acute infection. Its isolated presence does not imply immunity and may be consistent with ongoing infection.

HBV DNA ................ Hepatitis B virus DNA. Indicates how rapidly the virus is replicating in the liver.

HBIG .................... Hepatitis B immune globulin. Contains high-titer antibodies to HBV.

**Interpretation of the Hepatitis B Profile Results**

<table>
<thead>
<tr>
<th>Profile Results</th>
<th>Interpretation</th>
<th>Recommendation*</th>
</tr>
</thead>
<tbody>
<tr>
<td>HbsAg............negative anti-Hbc........negative anti-HBs........negative</td>
<td>Susceptible</td>
<td>Vaccinate</td>
</tr>
<tr>
<td><strong>HbsAg............negative anti-Hbc........positive or negative anti-HBs........positive</strong></td>
<td>Immune</td>
<td>Vaccination not indicated</td>
</tr>
<tr>
<td>HbsAg............positive anti-Hbc........positive or negative anti-HBs........negative</td>
<td>Acutely infected or chronic carrier</td>
<td>Vaccination not indicated</td>
</tr>
<tr>
<td><strong>HbsAg............positive anti-Hbc........positive or negative anti-Hbs........negative HbeAg............positive or negative</strong></td>
<td>Acutely infected or chronic carrier (presence of HBeAg correlates with higher infectiousness)</td>
<td>Vaccination not indicated</td>
</tr>
<tr>
<td>HbsAg............negative anti-Hbc........positive anti-HBs........negative</td>
<td>Multiple interpretations possible: See below.**</td>
<td>Vaccinate (unless patient is recovering from acute infection)</td>
</tr>
</tbody>
</table>

*Vaccinate according to current ACIP recommendations
**If a person is only positive for anti-HBc while negative for HBsAg and anti-HBs, there are 4 possible explanations:
1. May be recovering from acute HBV infection (vaccination not indicated).
2. May be distantly immune and test not sensitive enough to detect very low level of anti-HBs in serum.
3. May be undetectable level of HBsAg present in the serum and the person is actually a carrier (acute or chronic).
4. May be susceptible with a false positive anti-HBc.