Hepatitis B Serology

Interpretation & Management

HBsAg Hepatitis B Surface Antigen	HBsAb Hepatitis B Surface Antibody	HBcAb Hepatitis B Core Antibody	Interpretation	Management
+	− / +	+	CURRENT INFECTION	Recommended for monitoring and treatment, if needed. Refer sexual and household contacts for HBV screening; if susceptible, vaccinate
−	+	+	PRIOR INFECTION WITH IMMUNE CONTROL	No transmission risk; HBV dormant in liver. Reactivation risk if on immunosuppressive medication
−	−	+	PRIOR INFECTION OR OCCULT INFECTION	If immunocompetent[2], counsel as prior infection. Reactivation risk if on immunosuppressive medication. If immunocompromised, check for occult infection[1].
−	+	−	IMMUNE – PROTECTED	Has been vaccinated. No booster is needed.
−	−	−	NOT IMMUNE – NOT PROTECTED	Vaccinate[3]

[1] Occult HBV infection is defined by the presence of detectable HBV DNA in persons who are negative for HBsAG. Patients with occult HBV infection should be managed similarly to those with current infection, but note that most have very low HBV DNA levels and do not need HBV treatment.

[2] Consider HBV vaccination for persons with no known risk factors or persons not from an area of intermediate or high endemicity as this may represent a false-positive anti-HBc result. The rate of false positive anti-HBc is less than 2 per 1,000 tests using current assays.

[3] For "susceptible" persons considered at high risk for HBV who previously received a complete vaccine series without follow-up serologic testing, acceptable management options include a) give a booster vaccine dose followed by serologic testing 1-2 months later, with completion of a full vaccine series if the post booster anti-HBs test remains negative or b) give full vaccine series followed by post-vaccination serologic testing 1-2 months after the last vaccine dose.

Tang AS, Thornton K, and HBV Primary Care Workgroup. Hepatitis B Management: Guidance for the Primary Care Provider. February 25, 2020. [https://www.hepatitisB.uw.edu/hbv-pcw/guidance]

Counseling HBsAg+ Patients

Give a plan for follow-up care. Patients will require regular (minimum every 6 months) follow-up and monitoring for disease progression.

Educate and counsel on the long-term implications of chronic HBV infection (e.g., cirrhosis and hepatocellular carcinoma).

Advise patient to inform all current and future medical providers of their HBsAG-positive status, especially if they ever need treatment for cancer or any immunologic condition such as rheumatoid arthritis or other immune disorders.

Counsel to avoid or limit alcohol use.

Advise to optimize body weight and address metabolic complications, including control of diabetes and dyslipidemia (to prevent concurrent development of metabolic syndrome and fatty liver).

Provide education on how to prevent transmission of HBV to others.

Persons with chronic HBV:

SHOULD:

- Verify that sexual contacts, household contacts, family members, or injection partners are screened and vaccinated
- Cover open cuts or scratches
- Clean blood spills with diluted bleach (1:10)
- Use condoms to prevent HBV transmission during sexual intercourse with partners who are susceptible to HBV infection.

SHOULD NOT:

- Share toothbrushes, razors, nail clippers, or earrings
- Share injection equipment
- Share glucose testing equipment
- Donate blood, organs, or sperm

CAN:

- Participate in all activities, including contact sports
- Share food and utensils, or kiss others
- Pursue educational or career opportunities without limitations, including work as a health care professional

Tang AS, Thornton K, and HBV Primary Care Workgroup. Hepatitis B Management: Guidance for the Primary Care Provider. February 25, 2020. [https://www.hepatitisB.uw.edu/hbv-pcw/guidance]