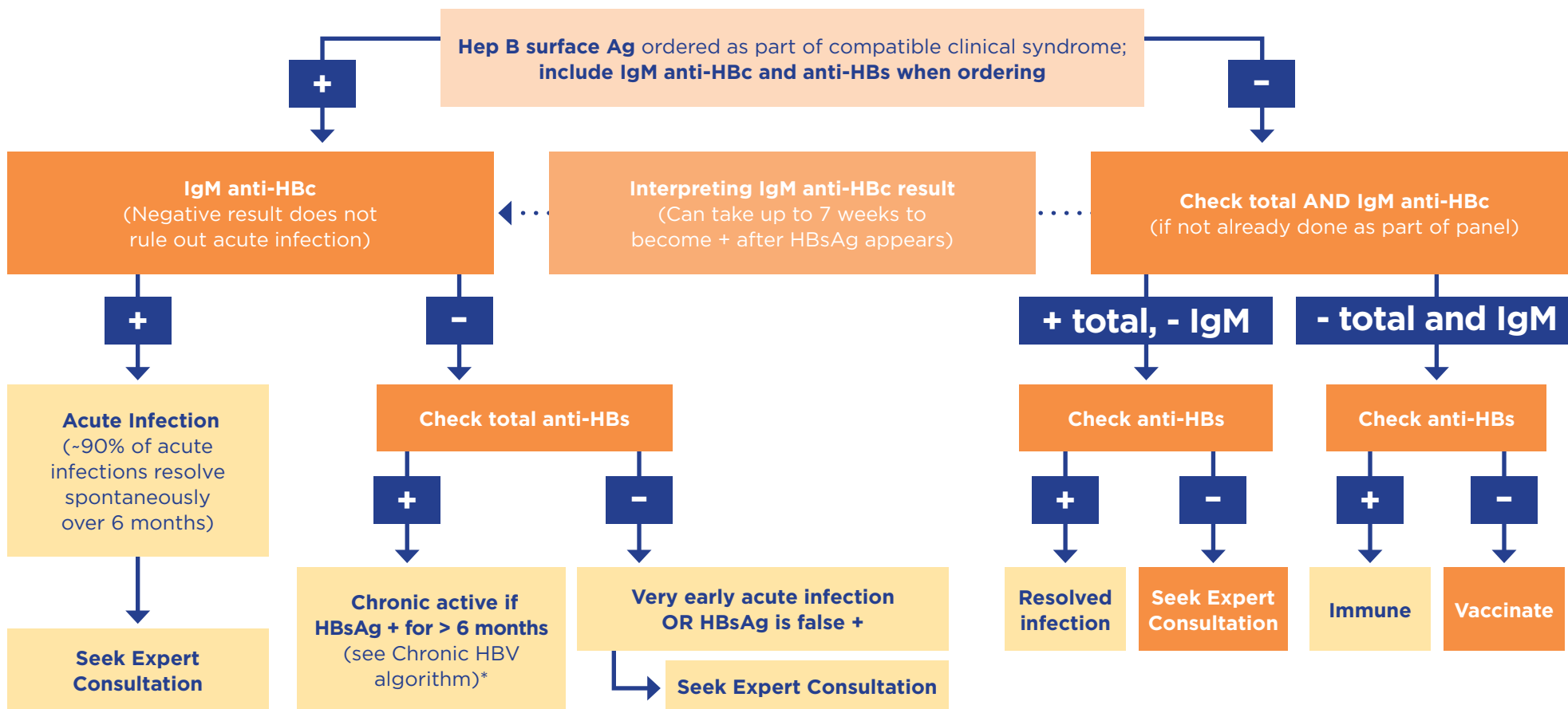


# Testing and interpretation for SUSPECTED acute HBV infection



KEY =

+ or - indicates viral activity

\*If chronic hepatitis B is suspected, Hepatitis Be Ag, Hep Be Ab and HepB DNA and ALT should ALL be ordered; these are NOT available through the SLPH

## Who should be tested for HBV?

- Past or present drug use, history of sex partners who use drugs
- Sex partners and household contacts of people with hepatitis B
- Men who have sexual contact with men
- People who are HIV+ or who have hepatitis C
- Infants born to hepatitis B positive mothers
- Health care and public safety workers exposed to blood or body fluids (CSF, pleural/peritoneal/amniotic fluid) on the job
- Hemodialysis patients
- Signs or symptoms of acute or chronic liver disease (ex. Jaundice, elevated AST or ALT)

## HEPATITIS B SURFACE ANTIGEN POSITIVE

Test for HIV and HCV; screen and vaccinate all household and sexual susceptible contacts

### Acute Hepatitis B suspected if anti-IgM (+)

- May take several months to resolve, check:
  - CBC
  - CMP
  - INR

### Chronic Hepatitis B suspected if anti-Hbc (+)

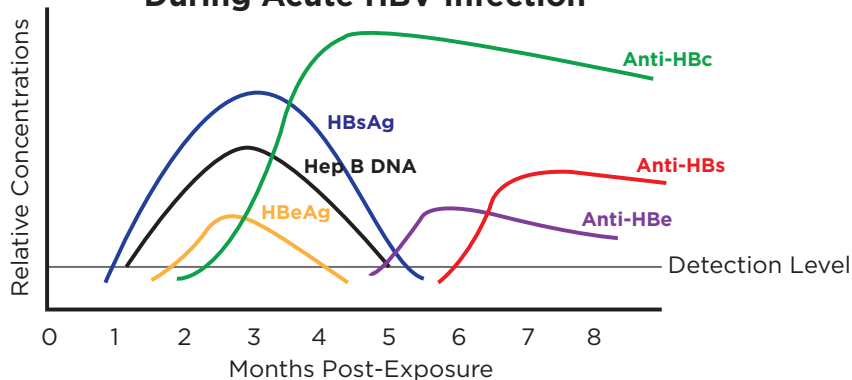
- Order (not through SLPH):
  - HBeAg
  - HBeAb
  - HBV DNA

### Refer to GI:

- Consider Hospitalization: Coagulopathy, Encephalopathy, Severe Jaundice (also consider age, social support, co-morbid liver disease or inability to tolerate oral intake).
- If ALT remains elevated or HBsAg remains (+) after 6 months, suspect chronic infection.

INITIAL TESTS			FOLLOW-UP TESTS				Possible Interpretation/Stage of Infection
Hep B Surface Antigen (HBsAg)	Hep B Surface antibody (anti-HBs)	Hep B Core antibody total (anti-HBc IgG + IgM)	Hep B Core antibody IgM (anti-HBc IgM)	Hep B e antigen (HBeAg)*	Hep B e antibody (anti-HBe)	HBV DNA	
Negative	Negative	Negative	Not performed	Not performed	Not performed	Not performed	No active or prior infection; not immune- may be good candidate for vaccine; this is possible in the incubation stage
Negative	Positive	Negative	Not performed	Not performed	Not performed	Not performed	Immunity due to vaccination
Negative	Positive or Negative	Positive	Not performed	Not performed	Not performed	Not performed	Infection resolved (recovery), virus cleared; immunity due to natural infection. However, if immunosuppressed, virus can reactivate.
Positive	Negative	Positive or Negative	Positive or Negative	Positive	Negative	Detected or none detected	Acute infection, usually with symptoms; contagious; could also be flare of chronic infection.
Negative	Negative	Positive	Positive	Negative*	Positive	None detected	Acute infection is resolving (convalescent)
Positive	Negative	Positive	Negative	Positive	Negative	Detected	Usually indicates active chronic infection (liver damage likely)
Positive	Negative	Positive	Negative	Negative*	Positive	None detected or detected at very low level	Chronic infection but low risk of liver damage – carrier state.

### Serological Patterns Observed During Acute HBV Infection



\*Note: There are some types (strains) of HBV that do not make e-antigen. In areas where these strains of HBV are common (in the Middle East and Asia), testing for HBeAg is not very useful. In these cases, a negative HBeAg result does not necessarily mean that the antigen is not present or that the person is not infectious; it may be that the person is infected with a strain that does not make the e-antigen.



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