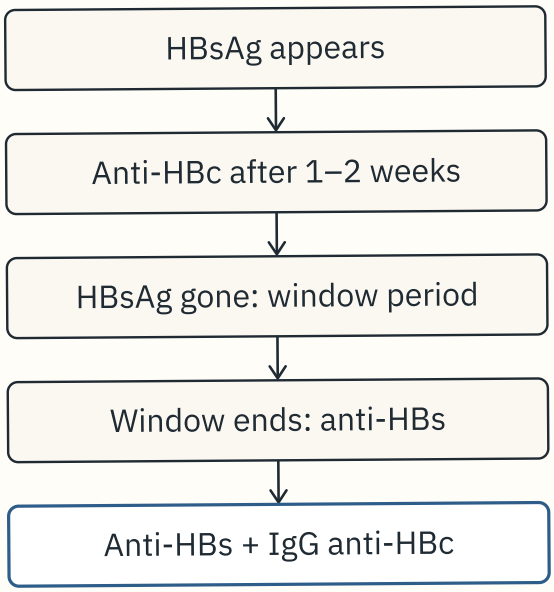
Hepatitis B panel

Acute, chronic, recovered or vaccinated



Step by step

1. HBsAg: current infection; beyond 6 months = chronic.
2. Anti-HBs: immunity (10 mIU/mL or more after vaccination).
3. IgM anti-HBc: recent; IgG anti-HBc: usually past.
4. HBeAg: replication and high infectivity.

Pattern	Markers
Never infected	All negative
Vaccinated	Anti-HBs alone
Recovered	Anti-HBs + IgG anti-HBc
Chronic	HBsAg + IgG anti-HBc
Acute	HBsAg + IgM anti-HBc

Five typical patterns

Vaccine rule

Vaccine = surface antigen only

So vaccinated = anti-HBs alone, never core antibody

Exam traps

- Anti-HBs alone is vaccination; adding IgG anti-HBc means recovery.
- In the window period HBsAg has gone and anti-HBs has not appeared; anti-HBc with positive IgM may be the only evidence of infection.
- IgG anti-HBc is also present in chronic infection.

Hepatitis B serology: reading the panel

Video, written lesson, practice question and sources: medservatory.com/usmle-step-1/microbiology/hepatitis-b-serology

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