

# Hepatitis D Quicksheet

January 2025



## Epidemiology and significance

Hepatitis D virus (HDV) is a single-stranded RNA virus that requires the presence of hepatitis B virus (HBV) to replicate. Thus, HDV infection occurs only in individuals who are also infected with HBV. An estimated 42% of individuals with chronic HBV infection in the United States may be coinfecting with HDV.<sup>1</sup>

HDV infection can either occur at the same time as acute HBV infection (known as coinfection), or after an individual has already been infected with chronic HBV (known as superinfection). Most individuals with HBV/HDV coinfection will fully recover, clearing both viruses. In contrast, most individuals with HDV superinfection can experience severe complications, including cirrhosis, hepatocellular carcinoma, end-stage liver disease, and death. HDV superinfection can also accelerate the progression of chronic HBV.

## Symptoms and presentation

The symptoms of HDV infection are indistinguishable from those of HBV infection and can appear 3-7 weeks after initial HDV infection. The risk of severe, acute disease and fulminant hepatitis are higher with HBV/HDV coinfection compared to HBV infection alone.

## Mode of transmission

HDV is transmitted through contact with blood or other bodily fluids of a person with HDV infection, including through sexual contact. Transmission of HDV to an infant during childbirth is possible but appears to be rare.<sup>2</sup>

## Laboratory testing

The most commonly available tests for HDV in the United States are total anti-HDV and HDV RNA. Total anti-HDV becomes detected approximately 2 and 12 weeks after HDV infection in HDV superinfection and HBV/HDV coinfection, respectively, and persists for life. HDV RNA remains present for a patient's duration of infection. Anti-HDV IgM and HDV antigen tests may also be available in some settings but are not considered as reliable as anti-HDV total and HDV RNA tests. These tests may be used in research or academic settings, and these results may also be reported to LHDs.

Recommendations for HDV testing varies by organization.<sup>3,4</sup> Currently, the American Association for the Study of Liver Diseases (AASLD) recommends screening for HDV infection based on laboratory results and potential risk factors. HDV testing is available at several commercial laboratories.<sup>4</sup>

## Case Definition

HDV infection is reportable in California by both healthcare providers and laboratories.<sup>5,6</sup> As of 2025, there is a standardized CSTE case definition for surveillance. For the purpose of reporting, the following case definition should be used.\*

### Confirmed

- Detection of HDV RNA by nucleic acid test (qualitative, quantitative, or genotype testing).

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### **Probable**

- Total antibody to hepatitis D (total anti-HDV) is reactive.

\*Note there are no clinical criteria included in the case definition. Documentation of hepatitis B infection is not required for a case to be classified as probable or confirmed.

### **Prevention**

For individuals not infected with HBV, the primary ways to prevent HDV infection are immunization against HBV and avoiding exposure to both viruses by avoiding exposure to blood and bodily fluids, including not sharing needles and using barrier methods with sexual activity. Individuals with HBV infection can limit potential exposure to HDV by avoiding exposure to blood and bodily fluids, including not sharing needles and using barrier methods with sexual activity.

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<sup>1</sup> Patel, E. U., Thio, C. L., et al. (2019) Prevalence of hepatitis B and hepatitis D virus infections in the United States, 2011-2016. *Clinical Infectious Diseases*.

<sup>2</sup> Sellier, P. O., Maylin, S. et al. (2018) Hepatitis B virus-hepatitis D virus mother-to-child co- transmission: a retrospective study in a developed country. *Liver International*, 38(4).

<sup>3</sup> Terrault, Norah A.<sup>1</sup>; Lok, Anna S.F.<sup>2</sup>; McMahon, Brian J.<sup>3</sup>; Chang, Kyong-Mi<sup>4</sup>; Hwang, Jessica P.<sup>5</sup>; Jonas, Maureen M.<sup>6</sup>; Brown, Robert S. Jr.<sup>7</sup>; Bzowej, Natalie H.<sup>8</sup>; Wong, John B.<sup>9</sup>. Update on prevention, diagnosis, and treatment of chronic hepatitis B: AASLD 2018 hepatitis B guidance. *Hepatology* 67(4):p 1560-1599, April 2018. | DOI: 10.1002/hep.29800

<sup>4</sup> Testing and Diagnosis. Hepatitis B Foundation. <https://www.hepb.org/research-and-programs/hepdeltaconnect/testing-and-diagnosis/>

<sup>5</sup> Title 17, California Code of Regulations (CCR) §2500, §2593, §2641.5- 2643.20, and §2800-2812 Reportable Diseases and Conditions (August 2022)  
<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/ReportableDiseases.pdf>

<sup>6</sup> Title 17, California Code of Regulations (CCR), Section 2505 REPORTABLE CONDITIONS: NOTIFICATION BY LABORATORIES TO PUBLIC HEALTH (March 2024)  
<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/LabReportableDiseases.pdf>