



CDC updates guidance for adenovirus testing of children with hepatitis

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The Centers for Disease Control and Prevention (CDC) has [updated its guidance](#) for testing children with acute hepatitis for adenovirus.

As of May 5, the CDC was investigating 109 cases of children with acute hepatitis of unknown cause in 24 states and one territory since October 2021. More than 90% have been hospitalized, and 14% have received liver transplants. The majority have fully recovered, but five children have died. While more than half had a confirmed adenovirus infection, it is unclear whether the virus is the cause.

The CDC recommends clinicians follow standard practice for evaluating and managing patients with hepatitis and consider adenovirus testing if the cause is unknown. They should report cases to their state public health authorities and to the CDC and submit the following specimens:

- blood specimen (whole blood, plasma or serum) collected in purple top ethylenediaminetetraacetic acid tube; whole blood is preferred;
- respiratory specimen (nasopharyngeal swab, sputum or bronchioalveolar lavage);
- stool specimen or rectal swab; a stool specimen is preferred; and
- liver tissue, if a biopsy was clinically indicated, or if tissue from native liver explant or autopsy is available:
 - formalin-fixed, paraffin embedded liver tissue, and
 - fresh liver tissue, frozen on dry ice or liquid nitrogen immediately or as soon as possible, and stored at -70 degrees Celsius or colder.

Nucleic acid amplification testing such as polymerase chain reaction (PCR) is preferred, according to the guidance. Testing whole blood by PCR is preferred over testing plasma by PCR. Clinical specimens should be tested locally when possible.

In April, the CDC issued a [health advisory](#) regarding nine pediatric hepatitis cases of unknown etiology in Alabama from October 2021 through February 2022. None had documentation of a previous COVID-19 infection or COVID-19 vaccine. All were positive for adenovirus.

As the CDC began looking for more pediatric hepatitis cases with unknown cause, the number under investigation nationwide rose to 109. So far, the case count is not above the norm unlike in the United Kingdom, but last week officials called it “[an evolving situation.](#)”

Pediatric hepatitis cases of unknown cause have been reported in Alabama, Arizona, California, Colorado, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Louisiana, Michigan, Minnesota, Missouri, Nebraska, New York, North Carolina, North Dakota, Ohio, Pennsylvania, Puerto Rico, Tennessee, Texas, Washington and Wisconsin.

More than half the cases have been among children with an adenovirus infection, most commonly adenovirus type 41, which tends to cause gastrointestinal illness but has not been linked to hepatitis in otherwise healthy children. The CDC is looking into whether the virus caused hepatitis as well as other possibilities like an immune reaction to adenovirus, an environmental exposure, medications, other infections including SARS-CoV-2 or the result of expanded surveillance.

Parents and caregivers should watch their children for symptoms of hepatitis, including vomiting, dark urine, light-colored stool and yellowing of the skin, and contact their health care provider with concerns. Families can help protect children from infections by staying up to date on vaccines, washing their hands, avoiding people who are sick and covering coughs and sneezes.

Resources

- [The CDC will hold a webinar on adenovirus testing of children with hepatitis at 2 p.m. Eastern on May 19.](#)
- [CDC guidance for testing children with acute hepatitis of unknown etiology](#)
- [Information from *Red Book Online* about hepatitis cases that may be linked to adenoviral infection](#)
- [Information for parents from HealthyChildren.org on adenovirus infections](#)