



# COVID-19 in Children and Teenagers With Liver Disease or Liver Transplant

## Important Information for Patients and Their Families

The American Association for the Study of Liver Diseases (AASLD) is committed to helping you understand coronavirus disease 2019 (COVID-19) infection and prevention in children and teenagers with liver disease or who have had a liver transplant.

### What We Know

Our understanding of COVID-19 in children with liver disease or liver transplant is evolving. When making decisions related to COVID-19 infections or prevention in your child, having up-to-date information is critical.

- Although children do get COVID-19, they usually have milder symptoms than adults. The most common symptoms in children are **fever, cough, vomiting/diarrhea, and body aches**.
- In rare cases, children develop multisystem inflammatory syndrome (MIS-C) after COVID-19 infection. Symptoms include **fever, red eyes and lips, rash, swollen lymph nodes, nausea/vomiting, and diarrhea**. MIS-C can affect a child's heart function and breathing.
- COVID-19 infection and MIS-C can cause liver injury; however, the injury is almost always mild and reversible.
- Children with advanced liver disease (cirrhosis, portal hypertension) may be at a higher risk of severe COVID-19 if they get a COVID-19 infection.
- Children who are on more than one immunosuppressive medicine (after transplant or for autoimmune hepatitis) or those on high doses of immunosuppressants may also be at higher risk.

- Children with liver disease or transplant and other medical conditions, such as chronic lung disease, obesity, diabetes mellitus, and heart disease, are at a higher risk of developing severe illness from COVID-19 and/or more problems from their existing liver disease if they get a COVID-19 infection, with prolonged hospitalization and increased mortality. These children need to take careful precautions to avoid COVID-19 infection. COVID-19 may affect the processes and procedures for screening, diagnosis, and treatment of liver disease.
- Strategies and medications for treating children with COVID-19 and MIS-C are evolving rapidly; however, most children with COVID-19 do not require specific antiviral medications.
- The safety of returning to in-person school depends on several factors, including the severity of your child's liver disease, whether they have any other medical problems, current COVID-19 transmission in your community, and whether your child's school is enforcing measures to prevent transmission (physical distancing, wearing face coverings, handwashing or using a hand sanitizer, isolating COVID-19 cases).  
**Note:** All hand sanitizers are NOT safe and effective. Please follow the Food and Drug Administration's guidance at <https://www.fda.gov/consumers/consumer-updates/safely-using-hand-sanitizer>.
- The COVID-19 pandemic has increased stress and anxiety for many children. Maintaining healthy habits, such as exercising regularly, getting fresh air, eating wholesome foods, and getting regular sleep, remain very important during the pandemic. Your child can still safely play outside, engage in physical activity, and interact virtually with friends. Social interaction is vital to your child's health, too.

## What We Recommend

- Contact your child's medical provider and/or seek medical attention immediately if you think your child or someone in your household may have COVID-19 or MIS-C. Symptoms in adults include any of the following: **fever, chills, drowsiness, cough, congestion or runny nose, difficulty breathing, fatigue, body aches, headache, sore throat, abdominal pain, nausea, vomiting, diarrhea, and loss of sense of taste or smell.** Inform your medical providers that your child has liver disease, as this may impact recommendations for their care.
- If your child is experiencing **difficulty breathing, chest pain or pressure, confusion, inability to wake up or stay awake, bluish lips, face, or toes, or any severe or concerning symptoms,** seek medical attention immediately.
- Continue your child's current treatment for liver disease or liver transplant, including medications, unless

your medical provider recommends that you change this treatment. Stopping or changing medications could cause a flare of your child's liver disease or other health problems. Make sure all prescriptions are up-to-date and you have several months of medications on hand.

- Ask your medical provider if your child is at higher risk than other children for severe COVID-19. Understanding your child's risk is important for making safe decisions about school and other activities.
- Keep your family safe, and help prevent COVID-19 transmission in your community:
  - Practice physical distancing (at least 6 feet), and avoid crowds—especially indoors.
  - Parents and children older than 2 years of age should wear cloth face coverings over their nose, mouth, and chin in public and at school.
  - Frequent handwashing is also very important; however, wearing a face covering and practicing physical distancing appear to be the most effective methods for preventing COVID-19 transmission.

## What You Should Discuss With Your Health Care Provider or Team

- Recommendations for your child's routine health care, including blood tests, x-rays, cancer screenings, endoscopies, and medically necessary treatments, as well as medical visits (telehealth, remote, or special procedures for in-person visits). Minimize routine blood tests and, if possible, schedule blood tests as close to home as possible or at home.
- Changes to your child's liver disease or liver transplant medications (do not change medication dosages or stop medications unless recommended by your child's health care team).
- Your child's prognosis and plans for future treatment.
- Planning for your child's return to school, whether it be in-person, distance learning, or some of both (your provider can help you with questions to ask the school to make sure your child's return is safe and/or they are able to access learning opportunities).
- Staying up-to-date on vaccines, including the flu vaccine this fall/winter, to protect your child from other infections.
- Any new "medicine," "natural" or not, that you are considering (before giving your child the first dose).

## Where to Find More Information

Much is still unknown about the relationship between COVID-19 and liver disease in children and teenagers, and new information is accumulating rapidly. Keep checking back to this website as well as the Centers for Disease Control and Prevention (CDC) and AASLD sites for further updates.

- **COVID-19 and the liver from AASLD:**  
<https://www.aasld.org/about-aasld/covid-19-and-liver>.
- **COVID-19 in children from the CDC:**  
<https://www.cdc.gov/coronavirus/2019-ncov/faq.html#Children>.
- **MIS-C:**  
<https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/children/mis-c.html>.
- **Reported cases of COVID-19 in children with liver disease or liver transplant (see NASPGHAN/SPLIT pediatric registry), updated weekly:**  
<https://naspghan.org/professional-resources/covid-19/>.
- **Talking with children about COVID-19:**  
<https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/talking-with-children.html>.
- **Safe return to school:**  
<https://www.healthychildren.org/English/health-issues/conditions/COVID-19/Pages/Return-to-School-During-COVID-19.aspx>.
- **Safe practices for participating in sports and on teams:**  
<https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/youth-sports.html>.
- **Considerations for return to school in children with liver transplants:**  
<https://pids.org/resources/covid-19-resources/>.
- **Protecting your child and family from COVID-19:**  
<https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/children/protect-children.html>.
- **Mental health and coping during COVID-19:**  
<https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/managing-stress-anxiety.html>.