



# Multisystem Inflammatory Syndrome

# For Parents: Multisystem Inflammatory Syndrome in Children (MIS-C) Associated with COVID-19

### What we know about MIS-C

Multisystem inflammatory syndrome in children (MIS-C) is a rare condition associated with SARS-CoV-2 (the virus that causes COVID-19), which usually occurs 2-6 weeks after a child is infected with SARS-CoV-2. The child's SARS-CoV-2 infection may be very mild or have no symptoms at all and may go unrecognized. MIS-C causes different body parts to become inflamed, including the heart, lungs, kidneys, brain, skin, eyes, or gastrointestinal tract. MIS-C can be serious, even deadly, but most children who are diagnosed with this condition get better with medical care.

CDC is still learning the underlying reasons why some children get MIS-C after SARS-CoV-2 infection and others do not. Most children who get MIS-C are previously healthy and do not have any underlying medical conditions. Of those children who do have an underlying condition, obesity is most common.

CDC is working with state, local, and territorial health departments; U.S. and international scientists; healthcare providers; and other partners to continue to monitor and learn more about MIS-C.

### How to Protect Your Child from MIS-C

The best way to prevent MIS-C is to protect against getting SARS-CoV-2 infection, including staying up to date with COVID-19 vaccines and other prevention actions. See How to Protect Yourself and Others and Stay Up to Date with COVID-19 Vaccines for more details.

### What to Do If You Think Your Child is Sick with MIS-C

Contact your child's doctor, nurse, or clinic right away if your child is showing symptoms of MIS-C:

- Ongoing fever PLUS more than one of the following:
  - Stomach pain
  - Bloodshot eyes
  - Diarrhea
  - Dizziness or lightheadedness (signs of low blood pressure)
  - Skin rash

Vomiting

Be aware that not all children will have all the same symptoms.



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### When to Seek Emergency Care

If someone is showing any of these signs, seek emergency medical care immediately:

- Trouble breathing
- Persistent pain or pressure in the chest
- New confusion
- Inability to wake or stay awake
- Pale, gray, or blue-colored skin, lips, or nail beds, depending on skin tone

This list does not include all possible symptoms. Please call a medical provider for any other symptoms that are severe or concerning to you.

**Call 911 or call ahead to your local emergency facility:** Notify the operator that you are seeking care for someone who has or may have COVID-19.

## How doctors will care for your child

Doctors may do certain tests to look for inflammation or other signs of disease. These tests might include:

- Blood tests
- Chest x-ray
- Heart ultrasound (echocardiogram)
- Abdominal ultrasound

Because MIS-C symptoms are similar to many other diseases your doctor may look for other sources of your child's illness such as:

- Bacterial infection
- Viral infection
- Kawasaki Disease

Doctors may provide supportive care for symptoms (medicine, or fluids, or both, to make your child feel better) and may use various medicines to treat inflammation (for example, steroids or intravenous immunoglobulin [IVIG], or both). Some children will need to be treated in the pediatric intensive care unit (PICU). Most children with MIS-C are seen by specialists such as infectious diseases and cardiologist (heart) doctors.

Parents or caregivers who have concerns about their child's health, including concerns about COVID-19 or MIS-C, should call a pediatrician or other healthcare provider immediately. Healthcare providers can follow CDC recommendations to keep children and their parents or caregivers safe if an in-person visit is needed.

## After a MIS-C Diagnosis

Current data show that most children with an MIS-C diagnosis recover quickly and there is no lasting damage to their health. Your child may stay in the hospital for a few days for treatment, and doctors may repeat blood tests to make sure your child is responding well to treatment. If your child has heart inflammation, they may have several heart ultrasounds (echocardiograms) to monitor their heart health. When your child leaves the hospital, their healthcare provider may prescribe medications including steroids and aspirin. The steroids are given to reduce inflammation. The aspirin is to protect their heart while healing from the inflammation. Note that aspirin or aspirin-containing products should not be given to children to treat a viral infection unless instructed by a healthcare provider because of the risk of Reye's syndrome, a very serious but rare illness that can harm the liver and brain. Aspirin would be used specifically after MIS-C diagnosis as recommended by your child's doctor. Your child should have close follow-up with their primary care doctor and will likely have follow up in a specialty clinic (for example, with the pediatric cardiologist [heart doctor]). Most children who have had an MIS-C diagnosis can go on to receive COVID-19 vaccination after they have recovered from MIS-C to protect them from getting COVID-19 again. Talk to your healthcare provider about COVID-19 vaccination. See COVID-19 vaccination and MIS-C for more information.

#### **Additional Resources**

- MIS-C Data
- Information for Healthcare Providers about Multisystem Inflammatory Syndrome in Children (MIS-C)
- MIS-C: Healthcare Providers Talking with Families
- COVID-19 Vaccination and MIS-C
- Kawasaki Disease

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