

## COVID-Related Disease in Children Remains a Concern

The omicron variant is loosening its grip on the United States, as COVID-19 cases continue their sharp decline. Mask mandates are lifting and hospitals are getting a much needed respite from near-capacity inpatient cases. Despite this positive trend, however, health care experts want parents of recently COVID-positive kids to watch for symptoms of an inflammatory syndrome that can manifest weeks after infection.

The shock-like syndrome, dubbed "multisystem inflammatory syndrome in children" (MIS-C) by the Centers for Disease Control and Prevention (CDC), mimics a relatively rare inflammatory illness called Kawasaki disease. MIS-C comes with fever, red eyes, swelling of hands and feet, abdominal pain, and other symptoms.

"It looks a little bit like Kawasaki disease or sometimes like Staphylococcal toxic shock syndrome or Staph scalded skin syndrome. Some of these children tested positive for coronavirus or tested positive for antibodies to the virus, indicating previous exposure," explained Dr. Barry Gray, a pediatric infectious disease specialist at OSF HealthCare Children's Hospital of Illinois.

MIS-C affects blood vessels and organs, and involves a "hyper response" of the child's immune system to the virus. Though most patients eventually recover, the syndrome can be deadly. As of January 31, 2022, more than 6,800 U.S. cases of MIS-C have been reported to the [CDC](#) – including 59 deaths.

While more research is needed, early data shows that vaccination status could also impact a child's risk of MIS-C. A recent Epic Research [study](#) showed that 98% of MIS-C patients were unvaccinated. The CDC is working to learn more about why some children and adolescents develop MIS-C after having COVID-19 while others do not.

Lori Grooms is the director of Infection Prevention for OSF HealthCare. She says the seemingly ambiguous nature of the syndrome makes it difficult to determine who is at risk.

"We just haven't figured out exactly who's going to have extreme effects," said Grooms. "The MIS-C that we've seen in kids, the multi-inflammatory syndrome complications that we've seen, we haven't figured out yet which child is going to get it, so we don't know which child to exactly protect."

Despite the rarity of the disease, parents should remain aware of signs and symptoms, as early detection can prevent serious illness. Dr. Gray urges parents to call their pediatrician right away if their child shows symptoms including persistent fever, rash, abdominal pain, vomiting and diarrhea.

Additionally, if a child is showing any emergency warning signs including trouble breathing, persistent pain or pressure in the chest, new confusion, inability to wake or stay awake, bluish lips or face, severe abdominal pain, or other concerning signs, parents should seek emergency care right away.

"They may have skin rash, they may come in with shock and low blood pressure. It may affect their kidneys. The major effect is on the arteries, where there's inflammation, and that's one of the things that is in common with Kawasaki disease, which is an arteritis, but we don't know the cause," explained Dr. Gray.

Parents are encouraged to keep an eye out for these symptoms, however Dr. Gray assures that MIS-C is still rare, and parents shouldn't panic.

"It is very rare, and we would be looking at those children who are much sicker than others," said Dr. Gray. "The vast majority of kids don't make it to the hospital, let alone to the intensive care unit. So we're talking about a very small group of a very small group to begin with."

Both Dr. Gray and Grooms agree - the best thing you can do for your family is to continue following public health recommendations about vaccinations, physical distancing, and hand washing, to avoid contracting COVID-19 in the first place.