

Multisystem Inflammatory Syndrome in Children (MIS-C) Associated with COVID

Children and adolescents can develop a severe inflammatory syndrome thought to follow exposure to COVID which has features similar to Kawasaki Disease and/or Toxic Shock Syndrome (TSS).

Children and adolescents can present in a wide variety of ways and ranging severity, including fever and shock.

Vigilance for this uncommon but serious disease is critically important.

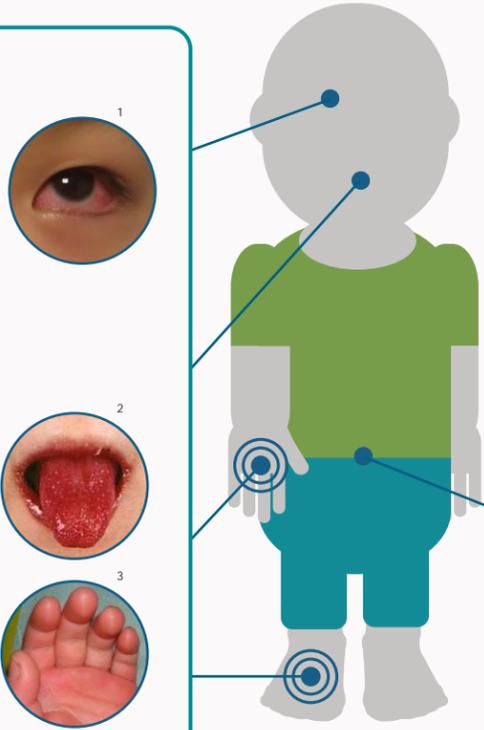
Note: Patient may not have known COVID exposure or positive COVID testing.

Criteria of MIS-C:

 Children and adolescents 0-19 years of age with **fever \geq 3 days**

AND

Two of the following five:

<p>Kawasaki-like symptoms</p> <p>Bilateral non-purulent conjunctivitis</p> <p>or</p> <p>Rash (any type except blisters)</p> <p>or</p> <p>Muco-cutaneous inflammation of mouth (cracked red lips) and hands and/or feet (puffy hands/feet)</p> 	<p>Acute Gastrointestinal Problems</p> <p>Includes vomiting and abdominal pain.</p> <p>Note: Abdominal pain can be severe</p> 	<p>Hypotension or shock</p>  <p>Features of myocardial dysfunction, pericarditis, valvulitis or coronary abnormalities (such as elevated troponins)</p>  <p>Evidence of coagulopathy (by PT, PTT, elevated d-Dimers)</p> 
--	---	---

AND

Elevated markers of inflammation (e.g. CRP and others)

AND

No other obvious microbial cause of inflammation, including bacterial sepsis, staphylococcal or streptococcal shock syndromes.

Note: Full pediatric cardiac and laboratory evaluation is available only at ACH/Stollery

 **For any child or adolescent who appears to meet the criteria above, consult Stollery/Alberta Children's Hospital via RAAPID North/South (Consult even if patient is clinically well but MIS-C suspected)**

While awaiting disposition decision, continue to provide supportive care and watch for adverse response to fluid resuscitation. **Do not delay anti-microbial therapy because of suspected MIS-C.**

¹Phend, C. (May 08, 2020) Kawasaki Disease From COVID-19 in Kids: How Common? Medpage Today, Retrieved from: <https://www.medpagetoday.com/infectiousdisease/covid19/86393>

²Yeter D, Deth R, Kuo HC. Mercury promotes catecholamines which potentiate mercurial autoimmunity and vasodilation: implications for inositol 1,4,5-triphosphate 3-kinase C susceptibility in Kawasaki syndrome. Korean Circ J. 2013;43(9):581-591.

³Rodriguez, T. (May 16, 2017) Kawasaki Disease: Updated AHA Guidelines. The Cardiology Advisor. Retrieved from: <https://www.thecardiologyadvisor.com/home/topics/pediatric-cardiology/kawasaki-disease-updated-aha-guidelines/>