

Vascular changes persist after multisystem inflammatory syndrome in children, research finds

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Multisystem inflammatory syndrome in children (MIS-C) may be associated with an increased risk for future cardiovascular complications due to significant persistent vascular alterations, according to a research

letter [published](#) online Jan. 16 in *JAMA Pediatrics*.

Julie Boever, from Ludwig Maximilian University of Munich, and colleagues conducted a case-control study of 17 [patients](#) with MIS-C and 17 matched controls with a median follow-up of 114.5 days.

The researchers found that during the acute phase, patients with MIS-C showed significantly damaged microcirculation, including lower median microvascular flow index (2.36 versus 2.80), total [vessel](#) density (16.14 versus 19.61 mm/mm²), and proportion of perfused [vessels](#) (12.31 versus 18.10 percent) compared with controls.

There was alteration of vessel diameter distribution with significant capillary rarefaction. Even without ongoing inflammation, impaired microcirculatory parameters persisted during follow-up. These findings persisted when adjusting for age, body mass index, and sex. In MIS-C, the augmentation index was significantly increased only during follow-up (median, -7.05 versus -18.01).

"This study emphasizes the importance of understanding the vascular impact of MIS-C during the acute phase and follow-up period to provide appropriate medical care and interventions," the authors write.

More information: Julie Boever et al, Long-Term Microvascular Changes in Multisystem Inflammatory Syndrome in Children, *JAMA Pediatrics* (2024). [DOI: 10.1001/jamapediatrics.2023.6022](https://doi.org/10.1001/jamapediatrics.2023.6022)

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