

# SARS-CoV-2 viral-specific antibody response profiles vary with age

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(HealthDay)—Severe acute respiratory syndrome coronavirus 2 (SARS-

CoV-2) viral-specific antibody response profiles are distinct in different age groups, according to a study published online March 22 in *JAMA Network Open*.

He S. Yang, Ph.D., from Weill Cornell Medicine in New York City, and colleagues examined the correlation of age with the quantity and quality of SARS-CoV-2 antibody response in a cross-sectional study using 31,426 SARS-CoV-2 antibody test results from 1,194 pediatric and 30,232 adult patients. Semiquantitative immunoglobulin (Ig)G levels were compared between 85 pediatric and 3,648 [adult patients](#). In addition, SARS-CoV-2 antibody profiles were performed on sera from 126 patients (1 to 24 years).

The researchers found that seroprevalence was similar in pediatric and adult patient populations (16.5 and 18.6 percent, respectively). In the pediatric population, the SARS-CoV-2 IgG level showed a negative correlation with age, while adults had a moderate but positive correlation with age. The lowest IgG levels were seen for patients aged 19 to 30 years. Negative correlations with age were seen for IgG, total antibody (TAb) level, surrogate neutralizing antibody (SNAbs) activity, and antibody binding avidity in the subset aged 1 to 24 years. Compared with adolescents and [young adults](#), children exhibited higher median IgG levels, TAb levels, and SNAbs activity; compared with young adults, adolescents exhibited higher median TAb levels, IgG levels, and SNAbs activity. Compared with young adults, children had higher antibody binding avidity, but the difference was not significant.

"Our data could partly explain the overall lower rate of symptoms and cases of severe disease in children infected with SARS-CoV-2," the authors write.

One author disclosed financial ties to the pharmaceutical, medical device, and health care industries.

**More information:** [Abstract/Full Text](#)

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