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## Covid-19: UK studies find gastrointestinal symptoms are common in children

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Gastrointestinal symptoms are common in children infected with SARS-CoV-2 and should trigger tests for the virus, researchers have said.

A prospective study of 992 healthy children (median age 10.1 years) of healthcare workers from across the UK found that 68 (6.9%) tested positive for SARS-CoV-2 antibodies.<sup>1</sup> Half of the children testing positive reported no symptoms, but for those that did the commonest were fever (21 of 68, 31%); gastrointestinal symptoms, including diarrhoea, vomiting, and abdominal cramps (13 of 68, 19%); and headache (12 of 68, 18%).

Latest findings from the Covid-19 Symptom Study app,<sup>2</sup> which was launched in late March to track people's symptoms, also show that gastrointestinal symptoms occur frequently in children with positive swab tests.<sup>3</sup>

Tom Waterfield, lead author of the antibodies study, told *The BMJ*, "Based on our findings I think that gastrointestinal symptoms should be added to the current list—high temperature, cough, and loss or change in sense of smell or taste—that trigger testing for coronavirus." He added, "Diarrhoea and vomiting in children should trigger a test."

Modelling showed that gastrointestinal symptoms were significantly associated with the presence of SARS-CoV-2 antibodies, in addition to known household contact with confirmed SARS-CoV-2, fatigue, and changes in sense of smell or taste.

"Although diarrhoea and vomiting may not be on the official covid-19 testing strategy, we need to be cautious in children with these symptoms," said Waterfield, senior lecturer at Queen's University Belfast and paediatric emergency medicine physician at the Royal Belfast Hospital for Sick Children. "They need to have had 48 hours clear of gastrointestinal symptoms before they go back to school to help reduce the potential spread of the virus."

Tim Spector, the study lead and professor of genetic epidemiology at King's College London, said, "Looking at data from 250 000 children we found those with a positive swab test have a different range of symptoms to adults. Cough and shortness of breath are much less frequent and gastrointestinal problems, especially loss of appetite, more frequent. Fever is still a feature, as in adults."

He said that the study confirmed the need to add a wider range of symptoms to those listed for covid-19. "Around 50% of children did not have the three core adult symptoms (high temperature, cough, and loss or change in sense of smell or taste) and may present with a wide range of non-specific symptoms, such as malaise and loss of appetite, although skin rash affected one in six," he said. "The key is for parents to keep children at home with these non-specific signs until they feel better, until tests get more rapid and accessible."

Spector is asking parents to start logging information for their children on the app, which invites users to report regularly on their health. He added that the team is adding school specific features to help provide data on infection rates related to schools.

1 Waterfield T, Watson C, Moore R, et al. Seroprevalence of SARS-CoV-2 antibodies in children: a prospective multicentre cohort study. medRxiv 2020.08.31.20183095 [Preprint]. 2 September 2020. [www.medrxiv.org/content/10.1101/2020.08.31.20183095v1](http://www.medrxiv.org/content/10.1101/2020.08.31.20183095v1).

2 Covid Symptom Study. <https://covid.joinzoe.com/data>.

3 Mayor S. Covid-19: Researchers launch app to track spread of symptoms in the UK. *BMJ* 2020;368:m1263. doi: 10.1136/bmj.m1263 pmid: 32220898