

Common viruses trigger most cases of intussusception in children, finds study

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Viral infections trigger more cases of intussusception, the common cause of bowel blockages in young children, than previously thought, according to a new study.

The research, led by Murdoch Children's Research Institute (MCRI) and published in *Clinical Infectious Diseases*, found during the COVID-19 lockdowns hospital admissions for intussusception, a medical emergency involving obstruction of the intestine, among young children significantly decreased. The paper is titled "Exploring the infectious contribution to intussusception causality using the effects of COVID-19 lockdowns in Australia: An ecological study."

For the study, 12 years of data were analyzed across Victoria, NSW and Queensland. A total of 5,589 intussusception cases were recorded between January, 2010 and April, 2022. Of those, 3,179 were children under the age of two.

During the [lockdown](#) periods, Victoria and NSW experienced a decline in hospital admissions for intussusception among children under two by 62.7% and 40.1%, respectively. The rate of intussusception cases has now returned to normal levels.

MCRI and Monash University researcher Dr. Ben Townley said the magnitude of the decline supported that common respiratory diseases such as colds, the flu and [respiratory syncytial virus](#) (RSV), were behind a significant proportion of intussusception cases.

"Reductions in intussusception hospital admissions were seen in all age groups; however, most occurred in children less than two years of age," he said.

"Intussusception is the leading cause of acute bowel obstruction in infants and young children and without prompt diagnosis and management, can be fatal.

"Countries with prolonged COVID-19 lockdowns and suppression strategies saw reductions in common respiratory viruses, which

influenced the drop in intussusception admissions."

Victoria experienced the greatest lockdown duration, with Melbourne having six lockdown periods, for a total of 263 days. Greater Sydney had 159 days and Brisbane had 18 days in lockdown.

MCRI Professor Jim Buttery said the decrease in intussusception cases was greater than expected given previous research into the causes of the condition.

"Our analysis found common viruses play a larger role than previously recognized in triggering intussusception," he said. Infectious triggers were thought to comprise only a minority, about 30%, of cases."

Professor Buttery said the findings raised the possibility that emerging vaccines like the new RSV vaccines may help prevent intussusception.

"When a new vaccine against common childhood respiratory viruses is introduced, we may find there are some unexpected benefits, like protecting more children from intussusception," he said. "We last saw this in 2007, when introducing the [rotavirus vaccine](#) against gastroenteritis, also reduced febrile convulsions in [young children](#)."

Researchers from Sydney Children's Hospital Network, University of Melbourne and Queensland Health also contributed to the findings.

More information: Benjamin Townley et al, Exploring the infectious contribution to intussusception causality using the effects of COVID-19 lockdowns in Australia: An ecological study, *Clinical Infectious Diseases* (2024). [DOI: 10.1093/cid/ciae084](https://doi.org/10.1093/cid/ciae084)

Provided by Murdoch Children's Research Institute

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