

The CDC study, covering 2017–22, questions any explanations that involve the pandemic. The team picked through data from health-care records, organ-transplant records and laboratory testing of stool samples for adenovirus. In the end, the researchers found no recent increase in the number of paediatric hepatitis cases, transplants or adenovirus-positive stool samples¹.

Hidden diagnoses

But Waisbourd-Zinman says that a simple analysis of electronic health records might not reveal the true rates of unexplained hepatitis in children. She attempted a similar study in Israel, she says, but quickly found that she had to dig through health records manually to find buried diagnoses. For example, one case of hepatitis turned out to be the result of medication used during a kidney transplant; another was an infection with a known hepatitis-causing virus. These causes were not coded as such in the records, and a cursory examination would have lumped them with unexplained cases. That noise makes it hard to pick out the truly unexplained cases, she says. “It’s just impossible to see an increase,” she says. “It’s so heterogeneous.”

In April, researchers also determined that rates of unexplained hepatitis in children in mainland Europe were not above the baseline for that region⁴. But Kelly, who consulted on that analysis, notes that it was also limited: as in the United States, Europe’s health-care data are fragmented, she says, and the European survey included only specialist hospitals.

Some countries, including Israel and the United Kingdom, have now asked physicians to report cases of paediatric hepatitis that are not explained by known causes to public-health

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authorities. This, plus the studies that have been launched to pin down the cause of the condition, could shed light on the handful of mysterious paediatric liver inflammation cases that appeared each year – whether or not they are linked to COVID-19 – says Kelly.

“There might be something special about those children that makes them susceptible,” she says. “One of the positive aspects of this is that we might find out what that is.”

1. Kambhampati, A. K. et al. *Morb. Mortal. Wkly Rep.* **71**, 797–802 (2022).
2. Cates, J. et al. *Morb. Mortal. Wkly Rep.* <http://doi.org/10.15585/mmwr.mm7126e1> (2022).
3. Cooper, S. et al. *J. Pediatr. Gastroenterol. Nutr.* <https://doi.org/10.1097/MPG.0000000000003521> (2022).
4. de Kleine, R. H. et al. *Euro. Surveill.* **27**, pii=2200369 (2022).

RARE ‘TRIPLE’ LA NIÑA CLIMATE EVENT LOOKS LIKELY

Meteorologists warn of a third year of the cooling event, which increases the risk of floods and droughts.

By Nicola Jones

An ongoing La Niña event that has contributed to flooding in eastern Australia and exacerbated droughts in the United States and East Africa could persist into 2023, according to the latest forecasts. The occurrence of two consecutive La Niña winters in the Northern Hemisphere is common, but having three in a row is relatively rare. A ‘triple dip’ La Niña – lasting three years in a row – has happened only twice since 1950.

More La Niña events would increase the chance of flooding in southeast Asia, boost the risk of droughts and wildfires in the southwestern United States, and create a different pattern of hurricanes, cyclones and monsoons across the Pacific and Atlantic oceans, as well as give rise to other regional changes.

La Niña and its counterpart, El Niño, are phases of the El Niño–Southern Oscillation (ENSO) that occur every two to seven years, with neutral years in between. During El Niño events, the usual Pacific winds that blow east to west along the Equator weaken or reverse, causing warm water to gush into the eastern Pacific Ocean, increasing the amount of rain in the region. During La Niña, those winds strengthen, warm water shifts west and the eastern Pacific becomes cooler and drier.

The impacts are far reaching. “The tropical Pacific is huge. If you shift its rainfall, it has a ripple effect on the rest of the world,” says Michelle L’Heureux, a physical scientist at the National Oceanic and Atmospheric Administration (NOAA) Center for Weather and Climate Prediction in College Park, Maryland. During La Niña years, the ocean absorbs heat into its depths, so global air temperatures tend to be cooler.

Cold snap

The current La Niña started around September 2020 and has been mild-to-moderate most of the time since then. As of April 2022, it intensified, leading to a cold snap over the eastern equatorial Pacific Ocean not seen at that time of year since 1950.

The latest forecast from the World Meteorological Organization, issued on 10 June, gives a 50–60% chance of La Niña persisting until July or September. This will probably increase Atlantic hurricane activity, which



La Niña contributed to flooding in eastern Australia earlier this year.

buffets eastern North America until November, and decrease the Pacific hurricane season, which mainly affects Mexico. NOAA’s climate prediction centre has forecast a 51% chance of La Niña in early 2023.

The weird thing about it, says L’Heureux, is that this prolonged La Niña, unlike previous triple dips, hasn’t come after a strong El Niño, which tends to build up a lot of ocean heat that takes a year or two to dissipate (T. Wakiri and M. Watanabe *Sci. Rep.* **11**, 17465; 2021). “I keep wondering, where’s the dynamics for this?” says L’Heureux.

Climate correlation

This particularly long La Niña is probably just a random blip in the climate, scientists say.

But the big questions that remain are whether climate change is altering the ENSO, and whether La Niña conditions will become more common in future. Some researchers are warning that climate change could make La Niña-like conditions more likely in future. “We are stacking the odds higher for these triple events coming along,” says Matthew England, a physical oceanographer at the University of New South Wales in Sydney, Australia.

England and others are now working to reconcile discrepancies between climate data and the output of major climate models – efforts that could clarify what is in store for the planet.