

Antibody Testing at Ciao Corona Schools



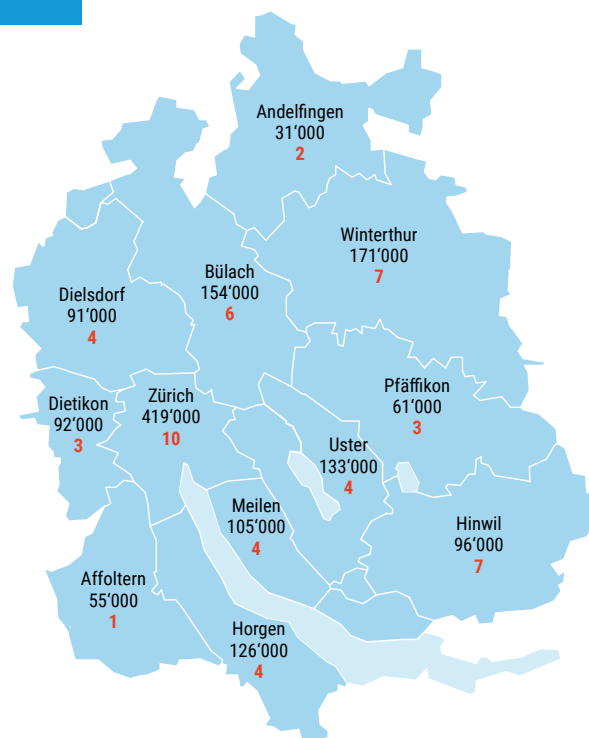
The Ciao Corona study, initiated by researchers at the University of Zurich, investigates the development of antibodies against the new coronavirus (=immunity) in schoolchildren using a longitudinal study design. Detailed information about the study: ciao-corona.ch

Canton of Zurich ▶

Total population in the districts and number of participating schools (red) within a district.

Participants & collaborators

- 55 Schools
- 275 classes
- 2'831 School children (age 6-16 y.)
- 757 Lower grades (1-3)
- 880 Middle grades (4-6)
- 915 Upper grades (7-9)



Clustering of seropositive school children in classes

There were only few clusters of seropositive school children in classes. In 7 (red) out of 130 classes (blue) ≥ 3 schoolchildren had coronavirus antibodies.

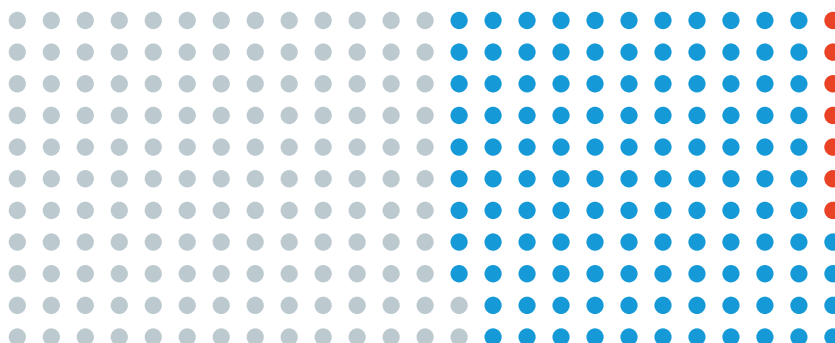
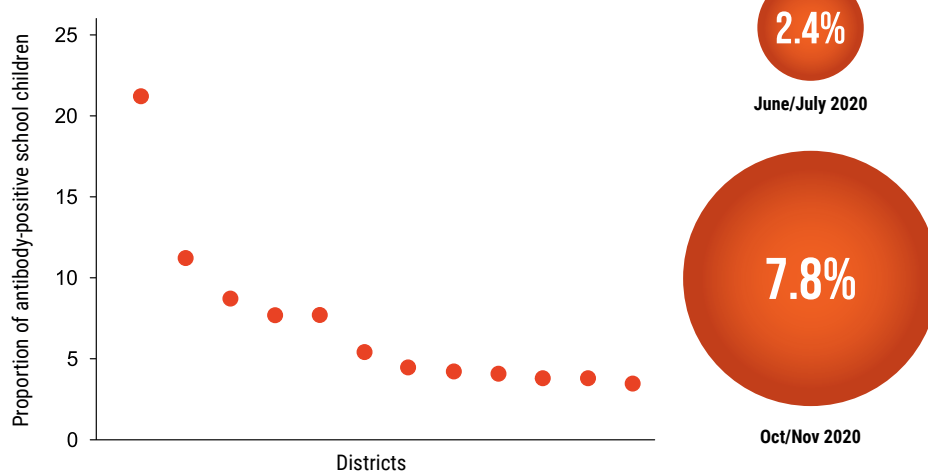


Figure: Overview of 275 participating classes in the canton of Zurich, Switzerland
grey: low participation rate, blue: high participation rate

Positive antibodies among schoolchildren

High variation of antibody-positive school children among districts (4 to 21%). Significant increase in antibody-positive schoolchildren between summer and autumn 2020.



Details about symptoms:

Neither in summer nor fall, there was a difference in self-reported symptoms between children who were seropositive or seronegative.

Factsheet of Acute Testing in Ciao Corona Schools



Who has been tested?

- 14 Schools
- 67 Classes
- 641 School children (age 6-16 years)
- 66 Teachers

When were the tests done?

Testing took place at selected schools in early December 2020. The tests were repeated after one week (week 1, week 2).

What has been tested?

Acute virus detection by PCR test and rapid antigen test

◀ Rapid antigen test

A rapid antigen test is used to detect an acute viral infection. A result is available within 15-20 minutes.



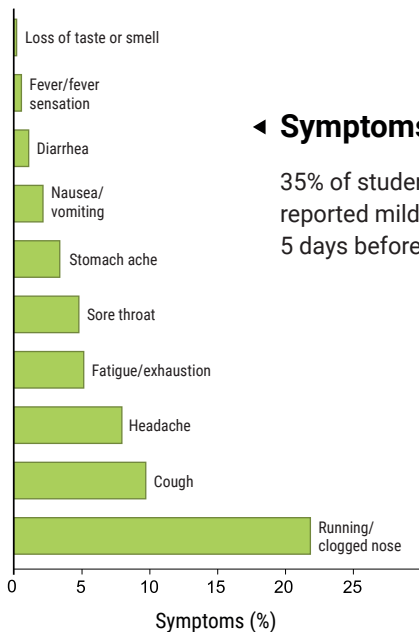
PCR Test ▶

Polymerase chain reaction (PCR) is used to amplify the genetic material of viruses and examine it for an active viral infection. The samples are examined in a specialized laboratory. A result is available within 1-2 days.



◀ Symptoms

35% of students and 8% of teachers reported mild symptoms in the last 5 days before the first examination.

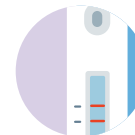


Test results



PCR test

Week 1	Week 2
1 positive	0 positive



Antigen rapid test

Week 1	Week 2
9 positive	0 positive



On test repetition, all tests were negative.

Conclusion

Acute corona case numbers in the schools were minimal despite a high population affected during the 2nd wave. Despite this, there was no increase in acute viral infections in the investigated schools. The measures taken by the schools and the guidelines issued by the cantonal health authorities seem to make sense.

The false positive rapid antigen tests are in line with expectations. Positive rapid antigen tests should always be confirmed by PCR. More experience is needed before these rapid antigen tests can be used in schools.