



Media Release

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Post-Lockdown: No Clustering of Coronavirus Infections in Zurich Schools prior to Summer Break

The University of Zurich tested 2,500 schoolchildren in the Canton of Zurich to determine if they were infected during the period between the onset of the novel coronavirus and early June 2020. The preliminary results show that in the first stage of testing prior to the summer break, there was no clustering of coronavirus infections in schools in the Canton of Zurich. Moreover, children presenting typical COVID-19 symptoms did not test positive for antibodies more frequently than children without such symptoms did.

The first stage of testing from mid-June through mid-July 2020 in a study that included antibody detection being conducted by the University of Zurich found that 2.8% of the 2,500 schoolchildren tested, or an average of 28 children out of 1,000, display antibodies against the novel SARS-CoV-2 coronavirus. The seroprevalence rate varied between 1.0% and 4.5% depending on the municipality and school. This means that the percentage of SARS-CoV-2 seropositive children was similar to the percentage of seropositive subjects in a sample of randomly selected adults from the same region in July 2020. Furthermore, the researchers found no differences between genders, as the infection rates among girls and boys are the same.

The first stage of testing also revealed that symptoms among schoolchildren do not constitute evidence of a SARS-CoV-2 coronavirus infection. "Over the period examined, 73% of the schoolchildren exhibited possible COVID-19 symptoms, but children who tested negative for SARS-CoV-2 presented such symptoms just as frequently as those who tested positive," says University of Zurich epidemiologist Susi Kriemler, who is heading the study.

Infection transmission more likely in the family

This first stage of testing detected no clustering of SARS-CoV-2 seropositive cases within schools and classes. Per 100 classes, there were 67 without a single infection case, 29 with one infection case, three with two infection cases, and one with three infection cases. These preliminary findings support the current hypothesis that children rarely get infected at school and are likelier to contract the coronavirus in their private surroundings, in the family setting for example.

However, Milo Puhan, the director of the Epidemiology, Biostatistics and Prevention Institute at UZH and the initiator of the study, advises caution in interpreting the results: "Due to the lockdown, the children physically attended school for only a relatively brief two-month period between the onset of the novel coronavirus and the first stage of testing. During this acute phase, they arguably more likely were exposed to the virus in the family setting. We have to wait for the next testing stages before we can make reliable statements." Further testing of children is scheduled in autumn 2020 and spring 2021. Parents and school staff will be examined again in spring 2021. All of these testing stages will show whether and how SARS-CoV-2 is spreading in schools and within families.



Younger children infected just as often

The percentage of SARS-CoV-2 seropositive schoolchildren among 6 to 9-year-olds was a bit higher than among 9 to 13-year-olds and 12 to 16-year-olds. The difference, however, is statistically not significant: the average seroprevalence rate was 3.5% among first and second-grade students (ranging from 1.6% to 5.9% across schools), 2.5% among fourth and fifth-graders (1.1% to 4.5%), and 1.5% among seventh and eighth-graders (0.5% to 3.0%). Study leader Kriemler explains that younger children in particular have close physical contact with their parents and other adult relatives and family friends and may thus, contrary to prevailing current opinion, get infected just as often as older children.

Ciao Corona study and testing procedure

The Ciao Corona study being conducted by the University of Zurich employs long-term monitoring of antibody development to investigate how SARS-CoV-2 spreads among schoolchildren. The study's researchers are examining to what extent school structures and precautionary measures are affecting the transmission of contagion, whether post-infection protection against a subsequent SARS-CoV-2 infection exists and, if it does, how long it lasts. The researchers expect to gain new insights into SARS-CoV-2 symptoms in children and to ascertain whether schoolchildren infect each other or whether virus transmission to them occurs more frequently through adults (school personnel or parents).

The study tests venous blood and/or saliva samples from more than 2,500 schoolchildren and youths aged 6 to 16 years at 55 randomly selected schools in the Canton of Zurich for antibodies in three stages: in June/July 2020, in October/November 2020 and in March/April 2021. In addition, via online questionnaires, the tested subjects answer questions about symptoms, state of health, precautionary behavior, lifestyle and quality of life every two months. Participation in the study is voluntary. In autumn 2020 and spring 2021, the parents of the tested children and the personnel at the selected schools will also be tested. www.ciao-corona.ch

Corona Immunitas: A Switzerland-wide research program by the Swiss School of Public Health

Ciao Corona is part of the Corona Immunitas research program being conducted throughout Switzerland by the Swiss School of Public Health (SSPH+). Corona Immunitas is a scientific program aimed at determining the SARS-CoV-2 immunity of Switzerland's population. The program delivers reliable epidemiological data as a basis for devising appropriate and effective measures to protect the population and makes a major contribution to averting further waves of infection and a renewed lockdown. www.corona-immunitas.ch | www.sspplus.ch

Download for pictures: <https://www.ciao-corona.ch/medieninfo> (Grafik/Bilder/Preprint Ciao Corona Baseline Children June 20).

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