

## The CoV-2019 Spares Most Kids

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The latest figure from China for the outbreak of COVID-19 started last December, suggests that persons under the age of 18 **do not seem more immune** to the virus, and will contract the pathogen the same as adults, but they are less likely to fall seriously ill. This resilience has been seen in Chickenpox, also a viral infection. Therefore, individuals with mild or no symptoms are likely gone undetected, rendering the true rate of COVID-19 in children not established. The pattern of sparing kids also seen during outbreaks of SARS and MERS.

For most infections, the victims' immune system purges the pathogens without much collateral damage to healthy cells. But, in case of persons with innate immature immune systems, or weakened or worn out immune systems would not exercise enough response, allowing invasive destruction. However, certain

cases of COVID-19 appeared seriously ill, resulting from immunological hyperactivity, the so-called cytokine storm.

Another hypothesis, "The Trojan horse-like phenomenon", in which the immune system inadvertently helps a virus infect healthy cells by antibody-dependent enhancement (ADE), might occur in cases of coronaviruses the same as cases infected with dengue virus and Zika virus. Likewise, the ADE may help to explain why the COVID-19 is more deadly in adults, whose immune system flares up more drastically to an infection.

Another explanation, why the disease affects more acutely in adults and in more men than women, is that the SARS-CoV-2 starts infection by grabbing on to a protein receptor, the angiotensin-converting enzyme 2 (ACE2), on the surfaces of cells throughout the body, especially in the lungs and small intestine. Children and females

could compensate for the bad exercise because the kids possess less developed protein and females have two copies of the X chromosome to compensate for the bad variant.

Now, on the fact that most kids with mild or no symptoms can still spread the virus to others, may be an important factor in causing the pandemic to propagate. It is therefore important in restricting kids' interaction with vulnerable persons, like grandparents.

### Documents used for editing the present synopsis

1. Wu KJ. The coronavirus spares most kids. These theories may help explain why. National Geographic; March 25, 2020. From: <https://www.nationalgeographic.com/science/2020/03/coronavirus-spare-most-kids-these-theories-may-help-explain-why/> Accessed 20/3/2020.
2. Bovornkitti S, Sunthorntham S. About coronaviruses and precision medicine. *Thammasat Med J* 2020; 20: in print.