



## Meeting TENTS

### COVID-19 Basic Information

#### **Meeting TENTS** Global Health

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**Coronavirus history.** COVID-19 is caused by the most recently discovered member of the Coronavirus family, called SARS-CoV-2 (1). Four human coronaviruses (HCoV's 229E, OC43, NL63, and HKU1) are responsible for approximately 30% of common colds, while many of the rest of colds are caused by rhinoviruses, adenoviruses, and a few other viruses. Different viruses from this family may infect humans, animals, or birds. Usually, animal or avian (bird) coronaviruses don't cause human disease. Occasionally humans do get infected by animal or avian coronaviruses, and may even become ill from them, but are unable to spread them to other people. There have now been three examples of animal-derived coronaviruses that have gained the ability to transmit from human to human: severe acute respiratory syndrome coronavirus (SARS-CoV), Middle Eastern respiratory syndrome coronavirus (MERS-CoV), and now SARS-CoV-2. SARS-CoV caused only a single outbreak from 2002-2003. MERS-CoV has been actively transmitted since 2012, and the current SARS-CoV-2 outbreak began in December 2019. While COVID-19 is caused by a newly discovered virus, we can take comfort in the knowledge that researchers understand a lot about these viruses and can use that knowledge to develop treatments and vaccines, although this will take time (probably 1-2 years).

**Symptoms and transmission.** The primary symptoms of COVID-19 include fever, dry cough, and shortness of breath. However, some people infected with SARS-CoV-2 may show few or even no symptoms, yet they might still be able to transmit the virus to others. The people at greatest risk from COVID-19 are the elderly and people with chronic diseases such as COPD, asthma, emphysema, heart disease, and diabetes mellitus. There is little evidence of children becoming severely ill with COVID-19. The virus is transmitted primarily by inhalation of tiny respiratory droplets that are produced when someone coughs or sneezes. The virus can also spread if one's hands are contaminated with these droplets and then used to touch one's eyes, nose, or mouth, or used to shake hands with another person who then touches his or her own face. There is some evidence that the virus can survive on hard surfaces and be transferred to the face by hands that encounter it, although the CDC advises that this is not likely to be the major type of transmission.

**Ocular transmission of COVID-19.** Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has been associated with conjunctival congestion and conjunctivitis after the virus was observed in the ocular secretions of a very small percentage of COVID-19-positive individuals in China [2, 3]. The eye may look red, inflamed and/or watery. Conjunctivitis can occur simultaneously with other symptoms of COVID-19 infection. Although ocular symptoms are uncommon, SARS-CoV-2 viral particles could be transmitted when the virus enters the mucous membranes through respiratory droplet transmission or by touching the eye with unwashed hands.



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**Prevention.** There is no specific treatment for COVID-19 and there is no vaccine to prevent it. The best treatment is not getting it at all. Common sense measures for prevention include keeping one's hands clean, not touching one's face, and maintaining a social distance of at least 6 feet from other people to stay out of range of most infectious droplets. This means no hugging, kissing, or shaking hands. Coughs and sneezes should be covered with a tissue that is then discarded, followed by hand washing! The CDC guidelines recommend washing hands with soap and water for at least 20 seconds, or about the time it takes to sing "Happy Birthday" twice through. In case this becomes too tiresome, a number of other songs have been adapted to fit this time frame, as can be found by a quick internet search. If soap and water are not available, a gelled alcohol product that contains at least 60% alcohol can be substituted, but it is important to maintain the same 20 second contact time and allow hands to air dry. Dirt and grease on the hands can inactivate these products. Surfaces can be cleaned with soap and water or with common household cleansers or wipes. All of these measures will help to reduce transmission. The use of face masks for individuals who are not infected is not recommended since they do not adequately prevent spread of the illness. The use of gloves is also not recommended because people are less likely to wash their hands.

**Social responsibility.** New illnesses can cause fear and panic with unknowns as data emerges daily. While there are aspects of COVID-19 that are unknown, much can be learned from history and similar illnesses. As we continue to learn more, the most important societal responsibility is to NOT panic! We have walked through outbreaks in the past, and this will not be the last. This pandemic is taking place at a time where worldwide travel is easily accessible and social media is a norm. This combination is a platform for information to spread quickly, but sometimes that includes incorrect information that causes hysteria. Do not worry, panic, or spread unreliable information, but please be cautious! Given the data that is available today, over 80% of people who become infected will have little to no symptoms. The concern is not on the health of that population, but rather on how they spread the disease to those at higher risk for severe complications. This virus does not discriminate, so everyone needs to take precautions. It is our individual responsibility to take measures to protect ourselves, those we love, and those we do not even know, if we truly want to stop the spread of this disease together.



## Reference and Links

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CDC: <https://www.cdc.gov/coronavirus/2019-ncov/about/steps-when-sick.html>

Coronavirus and your eyes: <https://www.allaboutvision.com/conditions/coronavirus-and-your-eyes/>

Our World in Data: <https://ourworldindata.org/coronavirus>

University of Tennessee: <https://www.uthsc.edu/coronavirus/index.php>

WHO Research: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/global-research-on-novel-coronavirus-2019-ncov>