PERSPECTIVES

Comparing Coronavirus Disease (COVID-19) and Influenza

By the Water Quality & Health Council
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> **In a nutshell...**
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> This article provides a comparison of the coronavirus disease (COVID-19) and influenza including how the diseases spread and affect human populations. Many of the steps people can take to avoid these illnesses are similar and are outlined here.

Coronavirus disease (COVID-19) is expanding globally while influenza activity remains widespread in nearly every state. In this article, we compare these two viral diseases and the steps that everyone can take to reduce their risk of getting sick. Naturally, as we learn more about the new coronavirus, information and recommendations are subject to change.

How Are the New Coronavirus and Influenza Virus Transmitted?

Both the new coronavirus and influenza virus are transmitted through droplets in the coughs and sneezes of those infected and by touching surfaces contaminated with these droplets. But there are some important differences between the two diseases. Table 1 below outlines these differences, from incubation time to mortality rate.

This man is correct in covering his sneeze, as both the influenza virus and the new coronavirus are transmitted via respiratory droplets. He should wash his hands thoroughly after discarding the soiled tissue.

Table 1: A Comparison of Coronavirus Disease (COVID-19) and Influenza

	Coronavirus (COVID-19 Virus)	Influenza
Incubation time (time from infection to symptoms)	2 days - 2 weeks	1 - 4 days
Symptoms	Similar to influenza but many cases (over 80%) are mild to the point where people who are infected may not realize they have COVID-19, potentially leading to their spreading the illness	Fever, coughing, sore throat, congestion, muscle and body aches, headaches, fatigue; vomiting and diarrhea are possible, especially in children
Ease of spread	Relative spread greater than influenza	Relative spread less than COVID-19
Age groups most vulnerable to complications	A new study (see article) from the Chinese Centers for Disease Control and Prevention of 44,000 COVID-19 cases in China found the sick, elderly, and medical staff are most at risk of serious complications; serious complications in children are seen as *not* common at this time.	Children younger than 5 years, adults older than 65, pregnant women, people with medical conditions
Antivirals (drugs that treat symptoms of disease; not cures)	None available yet for the new coronavirus, but potential antiviral drugs include remdesivir (an experimental drug currently undergoing clinical trial) and chloroquine phosphate (an old drug used to treat malaria that shows promise for treating COVID-19-associated pneumonia)	According to CDC, these prescription drugs are most effective when administered within two days of getting sick: Oseltamivir phosphate (Tamiflu®) Zanamivir (Relenza®) Peramivir (Rapivab®) Baloxavir (Xofluza®)
Mortality rate (percentage of people who die after being infected)	1% - 3.4% (meaning between 100 and 340 deaths per 10,000); up to 25 times more deadly than the seasonal flu[1]	0.13% (since 2010; meaning 13 deaths per 10,000 infected)

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[1] Estimates of mortality remain speculative as of early March 2020.

The table below compares the precautions available to help avoid influenza and COVID-19.

Table 2: A Comparison of Steps to Help Avoid COVID-19 and Influenza

	Coronavirus (COVID-19 Virus)	Influenza
Get vaccinated	X Researchers are working on a COVID-19 virus vaccine, but none is available yet; it is expected that a vaccine may take from many months to two years to develop	√ It is best to be vaccinated against influenza early in the flu season, but it is not too late anytime during flu season to get your "flu shot"
Wash hands frequently and thoroughly or use a hand sanitizer with at least 60% alcohol	√	√
Disinfect frequently touched surfaces	√ The CDC has issued interim surface disinfection guidance for COVID-19 virus that includes applying a solution of 1/3 cup bleach in 1 gallon of water (or 4 teaspoons of bleach per quart of water) to surfaces that have first been cleaned using a detergent or soap and water	√ Mix ¼ cup regular chlorine bleach in one gallon of water (1 part bleach to 64 parts water) and apply to previously cleaned surfaces; let air dry
Cover coughs and sneezes	√	√
Social distancing: Avoid contact with sick people and stay home if you are sick; follow public health authorities' direction on avoiding mass gatherings and heeding quarantine measures	√	√
Exercise daily, maintain a healthy diet, and get adequate sleep	√	√

Knowledge is Power

Understanding the coronavirus and influenza virus can help us stay healthy while these viruses are circulating through the population. For example, if the coronavirus begins to be widely transmitted in the U.S., in the continued absence of a vaccine, people, especially the elderly and chronically ill, may wish to limit face-to-face contact with others. That's because we know that the sick and the elderly are most vulnerable to complications from COVID-19. Public health officials and healthcare providers will provide helpful guidance in the event of widespread virus transmission. Meanwhile, we can all take the recommended common-sense steps to help avoid viral illness, whether influenza, COVID-19, or other viral diseases.

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