COVID-19 Infection versus Influenza (Flu) and Other Respiratory Illnesses

SARS-CoV-2 is the virus that causes the COVID-19 infection. You can be ill with more than one virus at the same time. As the SARS-CoV-2 virus pandemic continues, influenza and other respiratory infections can also be present in the community. Respiratory infections may present with similar symptoms and all can spread from person to person. It is hard to tell which virus or bacteria is causing a person's illness based on symptoms alone. At times testing is needed to see which virus(es) or bacteria are present. These tests usually involve getting a nose and/or throat swab sample, as most of these viruses are present in large amounts in the back of the nose and throat. There is still a lot to learn about the COVID-19 infection and research is ongoing.

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You can be ill with more than one virus at the same time. When multiple viruses are present the risk of developing severe disease increases. Severe disease usually involves difficulty breathing and getting oxygen into your body. Risk factors for severe illness are shown in the table.

How are COVID-19 and other respiratory viruses spread?

These viruses spread from person-to-person, mainly by people who are in close contact with one another (within about 6 feet). They are spread mainly by droplets made when people with the illness (COVID-19 or flu) cough, sneeze, talk, or sing. These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.

You can be infected by physical human contact (such as shaking hands) or by touching a surface or object that has virus on it and then touching your mouth, nose, or possibly eyes.

Illnesses caused COVID-19 or other respiratory viruses such as influenza can range in severity from no symptoms (asymptomatic) to severe. Some people may be able to spread the viruses before they develop symptoms. COVID-19 can spread for 5-7 days, and sometimes longer, before the onset of symptoms.

What can I do to avoid COVID-19 and other viral respiratory infections?

As of May 6, 2021, there are three newly approved vaccines for SARS-CoV-2 (the virus that causes COVID-19). COVID vaccine supplies are limited but increasing. The states control who is eligible and where vaccines are given.

The influenza vaccine covers Flu A and B strains expected in each year's flu season. Getting a flu vaccine each year can help protect you and reduce your risk of severe illness. For more information on Influenza (the 'flu') and the Influenza vaccine, see www.thoracic.org/patients.

Basic measures to avoid exposure can help not only prevent COVID-19 but also most respiratory infections.

- Follow the 6-foot (bicycle) rule for physical distancing.
- Wash your hands with soap and water for 20 seconds (or use a hand sanitizer with at least 60% alcohol).
- Wear an appropriate mask (covering both nose and mouth) whenever you are around other people as indicated by CDC.
- Avoid contact with ill people.
- Keep surfaces you touch clean and disinfected.
- Avoid smoking and vaping exposure.

For more information about face coverings/masks see www.thoracic.org/patients.

How can I tell the difference between COVID-19 and other infections if I get sick?

It can be hard to tell them apart by symptoms. The table shows how other infections compare to COVID-19 based on currently available information. There are many similarities. Some differences are marked in **bold type**.

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COVID-19 versus Flu

	COVID-19	Influenza 'Flu' and Other Respiratory Viruses	Comments
Signs and Symptoms	▪ Fever/chills ▪ **Dry cough** ▪ Sore throat ▪ Nasal congestion ▪ Tiredness ▪ Muscle/body aches ▪ Headaches ▪ **New loss of taste/smell** ▪ GI symptoms—Diarrhea, nausea or vomiting Breathing problems such as shortness of breath or chest pain or tightness May also have **low oxygen** without symptoms (asymptomatic)	▪ Fever/chills ▪ **Cough** ▪ Sore throat ▪ Nasal Congestion ▪ Tiredness ▪ Muscle/body aches ▪ **Usually no loss of taste** ▪ Less likely to have GI symptoms (except children) ▪ Breathing problems—not as likely but can occur with pneumonia	▪ COVID-19 is more likely to result in hospitalization and death (especially high-risk groups such as the elderly, and people with heart and lung conditions, diabetes, and obesity) ▪ GI symptoms more common common in children with COVID-19 ▪ More children have severe illness with flu than with COVID-19 ▪ Children often do not have fever with COVID-19
		Other Respiratory Viruses: ▪ Mainly nose and sinus symptoms ▪ Cough from throat or postnasal drainage ▪ No or low-grade fever ▪ Some can go into the lungs or lower airways to cause breathing problems like Respiratory Synticial Virus (RSV) causing bronchiolitis (a wheezing airway illness) or pneumonia	
Onset of Illness	Gradual—2-14 days after exposure	Usually more rapid—1-4 days after exposure	
Contagiousness	Highly contagious—for 10 days or longer. Can even be contagious while asymptomatic (no symptoms)	Flu—Highly contagious—usually for 5-7 days Other Respiratory Viruses: contagious as well	People with weakened immunity can remain contagious longer in either infection
High Risk Groups	▪ Older adults ▪ People with certain underlying medical conditions including heart and lung conditions, diabetes and obesity ▪ Pregnant people	▪ **Young children** ▪ Older adults ▪ People with certain underlying medical conditions including heart and lung conditions and weakened immune systems ▪ Pregnant people	
Complications	▪ Pneumonia ▪ Respiratory failure ▪ Acute respiratory distress syndrome (i.e. fluid in lungs) ▪ Sepsis ▪ Cardiac injury (e.g. heart attacks and stroke) ▪ Multiple-organ failure (respiratory failure, kidney failure, shock) ▪ Worsening of chronic medical conditions ▪ Inflammation of the heart, brain or muscle tissues ▪ Secondary bacterial infections **Blood clots in the veins and arteries of the lungs, heart, legs or brain** **Multisystem Inflammatory Syndrome in Children (MIS-C)**	▪ Flu: Pneumonia ▪ Respiratory failure ▪ Acute respiratory distress syndrome (i.e. fluid in lungs) ▪ Sepsis ▪ Cardiac injury (e.g. heart attacks and stroke) ▪ Multiple-organ failure (respiratory failure, kidney failure, shock) ▪ Worsening of chronic medical conditions ▪ Inflammation of the heart, brain or muscle tissues ▪ Secondary bacterial infections Other Respiratory Viruses: less common but can have similar complications	

	COVID-19	Influenza 'Flu' and Other Respiratory Viruses	Comments
Recovery time	Varies—Few days to weeks or months, in some patients	Varies—Few days to less than 2 weeks	Unless complications develop
Treatment (in addition to supportive measures)	No FDA approved treatments—several treatments are under FDA emergency use authorization including remdesivir (antiviral agent) monoclonal antibodies, and convalescent plasma (from people who have had COVID-19 infection) in hospitalized patients. Dexamethasone (a steroid) is used in some cases and has an FDA compounding waiver	Influenza: anti-viral prescription drugs Other Respiratory Viruses: no specific treatment available	
Prevention (in addition to basic measures to avoid exposure)	**There are three vaccines that have now been approved under FDA Emergency Use Authorization Authority—other vaccines are being developed and tested.**	**Flu: Yearly Influenza vaccine (FDA licensed)** Other Respiratory Viruses: no vaccines available	Immunization against influenza can help protect you against the flu RSV prophylaxis (palivizumab) is reserved for selective high risk infants

COVID-19 versus Bacterial Respiratory Lower Infection

	COVID-19	Common Bacterial Bronchitis or Pneumonia	Comments
Symptoms	▪ Shortness of breath ▪ Fever ▪ Fatigue/tiredness ▪ Chest pain ▪ **Cough—usually dry**	▪ Shortness of breath ▪ Fever ▪ Fatigue/tiredness ▪ Chest pain ▪ **Cough—often wet with phlegm/mucus**	
Onset of illness	Gradual 2-14 days after exposure	Varies—often more rapid 1-4 days	
Contagiousness	Highly contagious	Varies but can be contagious	
Risk Groups	▪ Older adults ▪ People with certain underlying medical conditions	▪ **Young Children** ▪ Older adults ▪ People with certain underlying medical conditions	COVID-19 or Influenza can damage the lung making it more prone to a bacterial pneumonia
Treatment (in addition to supportive measures)	See above	Antibiotics that target likely bacteria	
Prevention (in addition to basic measures to avoid exposure)	See above	Childhood immunizations Pneumococcal pneumonia vaccine for children and high risk groups*	

*For more information about pneumococcal pneumonia vaccines see www.thoracic.org/patients

What about allergy and asthma symptoms?

Some symptoms like nasal congestion or runny nose can occur with allergies or an upper respiratory infection. Many people have allergies that may lead to nasal, eye and/or airway symptoms (asthma). Common allergens include different pollens (grasses, trees, weeds) and molds that can be at higher levels at certain times such as the spring and fall months. Usually sneezing and itchy nose and eyes occur with allergies rather than infection. If you know that, you have allergies and have had similar symptoms in the past, treat your symptoms. If you have fever or worsening symptoms, you need to consider infection. Some people can get a bacterial sinus infection because of the inflammation triggered by allergies and will have fever, sinus pain or headache and colored nasal mucus discharge. Usually with COVID-19 there is no sinus pain.

People who have asthma can have symptoms with exposure to irritant triggers such as tobacco smoke, vaping, or air pollution. Allergies can trigger asthma attacks for people who are sensitive to them. Infections

can also trigger asthma problems and people with asthma are considered higher risk for serious illness. An asthma attack or symptoms caused by allergy triggers or irritants do not cause fever. Often with virus infections, other people around you may have been sick as well. Follow your asthma action plan and take quick relief bronchodilators such as albuterol if you have symptoms. If you are not responding or getting worse, seek medical care for your asthma and see if you need viral testing. Some patients with COVID-19 and with influenza can get post infectious bronchospasm that can lead to wheezing and asthma-like symptoms.

What should I do if I am getting sick?

If you are not sure whether you have a COVID-19 or other respiratory infection, you should take actions to try to prevent infecting other people. Wear a mask, stay away from others as much as possible, and wash your hands often. Do not delay getting medical care if you are getting worse, but call ahead to see how to best be seen and treated.

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℞ *Action Steps*

✔ If you are elgible, get a COVID-19 vaccine.
✔ Avoid exposure to respiratory infections with physical distancing, good handwashing and masks.
✔ If you are elgible, get a COVID-19 vaccine.
✔ Monitor your health daily—watch for symptoms and take your temperature if you have any symptoms.
✔ If you are getting sick, take steps to protect others and take care of yourself.
✔ If you have fever or are getting worse, check with your healthcare provider.
✔ Quit smoking or vaping. Both are known to increase susceptibility to respiratory illnesses from COVID-19 and also increase severity of illness.

Healthcare Provider's Contact Number:

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Resources

American Thoracic Society
- www.thoracic.org/patients
  – COVID-19 Vaccines
  – Face Coverings in a Pandemic
  – How Vaccines Work
  – Influenza (Flu)
  – Monoclonal Antibody Therapy for COVID-19 Infection
  – Pneumococcal Pneumonia Vaccine

US Center for Disease Control (CDC)
- https://www.cdc.gov/flu/symptoms/flu-vs-covid19.htm#table
- https://www.cdc.gov/coronavirus/2019-ncov/vaccines/8-things.html

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