

## DEFINITION

- Diagnosis was confirmed by **positive lab test** (e.g., PCR, rapid self-test kit) OR
- **Clinical diagnosis** (suspected diagnosis) was made by doctor (or NP/PA) OR
- **Patient or caregiver suspects COVID-19** based on symptoms consistent with COVID-19 **AND** in the past two weeks had exposure to COVID-19.

### Note to Triager:

- Triagers should use their clinical judgment, but generally will want to use the *COVID-19 - Diagnosed or Suspected* protocol when a patient calls with cough, fever, shortness of breath, or a combination of typical COVID symptoms and there is community spread.
- During the 2022-2023 influenza season, triagers can use the *COVID-19 - Diagnosed or Suspected* protocol when a patient calls with flu-like symptoms. *Exception:* If the patient has flu-like symptoms and lives with someone who has influenza (positive test), the triager should use the *Influenza - Seasonal* protocol.
- In adult patients, the triager should use clinical judgment to decide whether a symptom protocol (e.g., Chest Pain, Fever, Headache) should be used in addition to the *COVID-19 - Diagnosed or Suspected* protocol. Adult patients have multiple factors that make assessment and triage more complex. Adults (and especially older adults) are more likely to have one or more chronic underlying medical conditions. Increased age is also a strong risk factor for severe COVID-19 illness and complications. Further, fever as a marker of important pathology increases significantly with age in adults.
- *Up-to-date on vaccination* means that a person has received all doses in the primary series and got all recommended booster shots. For people with moderately to severely weak immune systems up-to-date means they received all recommended primary shots and boosters. Depending on the person's age and the vaccine given, this group may require an extra primary shot (e.g., third shot) and booster.

**Updated:** September 7, 2022 (version 18)

## TRIAGE ASSESSMENT QUESTIONS

### Call EMS 911 Now

SEVERE difficulty breathing (e.g., struggling for each breath, speaks in single words)

*R/O: respiratory failure, hypoxia. Note: Caller should tell medics about possible COVID-19.*

Difficult to awaken or acting confused (e.g., disoriented, slurred speech)

*R/O: hypoxia, sepsis. Note: Caller should tell medics about possible COVID-19.*

Bluish (or gray) lips or face now

*R/O: cyanosis and need for oxygen. Note: Caller should tell medics about possible COVID-19.*

Shock suspected (e.g., cold/pale/clammy skin, too weak to stand, low BP, rapid pulse)

*R/O: shock. Note: Caller should tell medics about possible COVID-19.*

Sounds like a life-threatening emergency to the triager

*Note: Caller should tell medics about possible COVID-19.*

## See More Appropriate Protocol

[1] Diagnosed or suspected COVID-19 AND [2] symptoms lasting 3 or more weeks

*Go to Protocol: COVID-19 - Persisting Symptoms Follow-up Call (Adult)*

[1] COVID-19 exposure AND [2] no symptoms

*Go to Protocol: COVID-19 - Exposure (Adult)*

COVID-19 vaccine reaction suspected (e.g., fever, headache, muscle aches) occurring 1 to 3 days after getting vaccine

*Go to Protocol: COVID-19 - Vaccine Questions and Reactions (Adult)*

COVID-19 vaccine, questions about

*Go to Protocol: COVID-19 - Vaccine Questions and Reactions (Adult)*

[1] Lives with someone known to have influenza (flu test positive) AND [2] flu-like symptoms (e.g., cough, runny nose, sore throat, SOB; with or without fever)

*Go to Protocol: Influenza - Seasonal (Adult). Note: patient is more likely to have flu than COVID-19 if they are living with someone who tested positive for influenza.*

[1] Adult with possible COVID-19 symptoms AND [2] triager concerned about severity of symptoms or other causes

*Note: First use this protocol. In adult patients triager should then use clinical judgment to decide whether a symptom protocol (e.g., Chest Pain, Fever, Headache) should also be used.*

COVID-19 and breastfeeding, questions about

*Go to Protocol: COVID-19 - Diagnosed or Suspected (Pediatric)*

## Go to ED Now

SEVERE or constant chest pain or pressure (Exception: Mild central chest pain, present only when coughing.)

*R/O: pneumonia, pleurisy. Note: Consider using both this protocol AND the Chest Pain protocol if any concern for cardiac or other more serious cause of chest pain.*

MODERATE difficulty breathing (e.g., speaks in phrases, SOB even at rest, pulse 100-120)

*R/O: pneumonia*

Headache and stiff neck (can't touch chin to chest)

*R/O: meningitis*

Oxygen level (e.g., pulse oximetry) 90 percent or lower

*R/O: hypoxia, infection. Note: Triager should use clinical judgment based on overall patient assessment, and not rely solely on pulse oximetry readings.*

## Go to ED/UCC Now (or to Office with PCP Approval)

Chest pain or pressure (Exception: MILD central chest pain, present only when coughing.)

*R/O: pneumonia, pleurisy, chest discomfort from COVID-19*

Patient sounds very sick or weak to the triager

*Reason: Severe acute illness or serious complication suspected.*

## Discuss With PCP and Callback by Nurse Within 1 Hour

MILD difficulty breathing (e.g., minimal/no SOB at rest, SOB with walking, pulse <100)

*R/O: pneumonia. Note: Not from stuffy nose (e.g., not relieved by cleaning out the nose).*

Fever > 103° F (39.4° C)

*R/O: serious bacterial infection.*

[1] Fever > 101° F (38.3° C) AND [2] over 60 years of age

*R/O: pneumonia*

[1] Fever > 100.0° F (37.8° C) AND [2] bedridden (e.g., CVA, chronic illness, recovering from surgery)

*R/O: pneumonia*

[1] HIGH RISK for severe COVID complications (e.g., weak immune system, age > 64 years, obesity with BMI of 30 or higher, pregnant, chronic lung disease or other chronic medical condition) AND [2] COVID symptoms (e.g., cough, fever) (Exceptions: Already seen by PCP and no new or worsening symptoms.)

*Reason: See HIGH RISK criteria in Background. Monoclonal antibody therapy or COVID-19 specific antivirals may be indicated. Testing for COVID-19 is recommended.*

[1] HIGH RISK patient AND [2] influenza is widespread in the community AND [3] ONE OR MORE respiratory symptoms: cough, sore throat, runny or stuffy nose

*Reason: During an influenza outbreak, treatment with anti-viral influenza medication should be considered for HIGH RISK patients, especially for symptoms present < 48 hours. PCP may wish to phone in a prescription to the pharmacy. Testing for both COVID-19 and influenza may be needed.*

[1] HIGH RISK patient AND [2] influenza exposure within the last 7 days AND [3] ONE OR MORE respiratory symptoms: cough, sore throat, runny or stuffy nose

*Reason: During an influenza outbreak, treatment with anti-viral influenza medication should be considered for HIGH RISK patients, especially for symptoms present < 48 hours. PCP may wish to phone in a prescription to the pharmacy. Testing for both COVID-19 and influenza may be needed.*

Oxygen level (e.g., pulse oximetry) 91 to 94 percent

*Note: Triager should use clinical judgment based on overall patient assessment and not rely solely on pulse oximetry readings.*

## Discuss With PCP and Callback by Nurse Today

[1] COVID-19 infection suspected by caller or triager AND [2] mild symptoms (cough, fever, or others) AND [3] negative COVID-19 rapid test

*Reason: Possible false negative test. PCP may want to order a PCR, which is more accurate.*

Fever present > 3 days (72 hours)

*R/O: bacterial sinusitis, bronchitis, pneumonia*

[1] Fever returns after gone for over 24 hours AND [2] symptoms worse or not improved

*R/O: bacterial sinusitis, bronchitis, pneumonia*

[1] Continuous (nonstop) coughing interferes with work or school AND [2] no improvement using cough treatment per Care Advice

Cough present > 3 weeks

## Home Care

[1] COVID-19 diagnosed by positive lab test (e.g., PCR, rapid self-test kit) AND [2] NO symptoms (e.g., cough, fever, others)

*Reason: Positive recent COVID-19 test confirms diagnosis and patient is asymptomatic.*

[1] COVID-19 diagnosed by positive lab test (e.g., PCR, rapid self-test kit) AND [2] mild symptoms (e.g., cough, fever, others) AND [3] no complications or SOB

*Reason: Positive recent COVID-19 test confirms diagnosis and patient has mild consistent symptoms.*

[1] COVID-19 diagnosed by doctor (or NP/PA) AND [2] mild symptoms (e.g., cough, fever, others) AND [3] no complications or SOB

[1] COVID-19 diagnosed AND [2] has mild nausea, vomiting or diarrhea

*Note: If symptoms are more than mild, consider using an additional protocol (e.g., Diarrhea or Vomiting protocols). Mild diarrhea is defined as 1 to 3 episodes per day. Mild vomiting is defined as 1 to 2 episodes per day.*

[1] COVID-19 infection suspected by caller or triager AND [2] mild symptoms (cough, fever, or others) AND [3] has not gotten tested yet

*Reason: No complications or SOB. COVID-19 testing is recommended (e.g., viral test with nasal swab). Home test kits for COVID-19 are available. Patient can also get tested for COVID-19 by their doctor (or NP/PA), retail clinic, urgent care center, or other clinic.*

COVID-19 Home Isolation, questions about

*Note: How to protect others when you are sick.*

COVID-19 Testing, questions about

COVID-19 Prevention and Healthy Living, questions about

*Note: How to protect you and your family; how to reduce anxiety and stress.*

COVID-19 Disease, questions about

*Note: General information including symptoms, how it is spread, travel, etc.*

## HOME CARE ADVICE

### Treating the Symptoms of COVID-19

- 1. Reassurance and Education - Diagnosed With COVID-19 by Doctor (or NP/PA) and Mild Symptoms:**
  - Your doctor has diagnosed you as having COVID-19 based on your symptoms and COVID-19 testing.
  - If you have not been tested yet for COVID-19, we recommend that you get tested in the next 3 days.
  - For some people, the symptoms of COVID-19 can be mild, especially if you are healthy and under 65 years old.
  - *Here's some care advice to help you and to help prevent others from getting sick.*
- 2. Reassurance and Education - Positive COVID-19 Lab Test and Mild Symptoms:**
  - You had a recent lab test for COVID-19 and it came back positive.
  - A positive result on a PCR or rapid self-test kit is highly accurate for diagnosing COVID-19. It is highly likely that you have COVID-19.
  - From what you have told me, your symptoms are mild. That is reassuring.
  - *Here's some care advice to help you and to help prevent others from getting sick.*

3. **Reassurance and Education - Suspected COVID-19 and Negative Rapid COVID-19 Test:**
  - Positive rapid test results are accurate and can be trusted. Negative rapid test results are usually accurate, but can sometimes be wrong.
  - An error is more likely with tests performed at home. Rapid tests performed at a test site are usually more accurate.
  - Your doctor (or NP/PA) can help you decide if a different test (such as PCR test) is needed. Talk with your doctor about your symptoms. Another option is for you to **repeat the rapid test (self-test) at home.**
  - *Here's some care advice to help you and to help prevent others from getting sick.*
4. **Reassurance and Education - Suspected COVID-19 and Testing Needed:**
  - Most people who get COVID-19 will have mild illness and can recover at home without medical care.
  - You should get tested for COVID-19.
  - *Here's some care advice to help you and to help prevent others from getting sick.*
5. **General Care Advice for COVID-19 Symptoms:**
  - The symptoms are generally treated the same whether you have COVID-19, influenza or some other respiratory virus.
  - *Cough:* Use cough drops.
  - *Feeling dehydrated:* Drink extra liquids. If the air in your home is dry, use a humidifier.
  - *Fever:* For fever over 101 F (38.3 C), take acetaminophen every 4 to 6 hours (Adults 650 mg) OR ibuprofen every 6 to 8 hours (Adults 400 mg). Before taking any medicine, read all the instructions on the package. Do not take aspirin unless your doctor has prescribed it for you.
  - *Muscle aches, headache, and other pains:* Often this comes and goes with the fever. Take acetaminophen every 4 to 6 hours (Adults 650 mg) OR ibuprofen every 6 to 8 hours (Adults 400 mg). Before taking any medicine, read all the instructions on the package.
  - *Sore throat:* Try throat lozenges, hard candy or warm chicken broth.
6. **Cough Medicines:**
  - **Cough Drops:** Over-the-counter cough drops can help a lot, especially for mild coughs. They soothe an irritated throat and remove the tickle sensation in the back of the throat. Cough drops are easy to carry with you.
  - **Cough Syrup with Dextromethorphan:** An over-the-counter cough syrup can help your cough. The most common cough suppressant in over-the-counter cough medicines is dextromethorphan.
  - **Home Remedy - Hard Candy:** Hard candy works just as well as over-the-counter cough drops. People who have diabetes should use sugar-free candy.
  - **Home Remedy - Honey:** This old home remedy has been shown to help decrease coughing at night. The adult dosage is 2 teaspoons (10 ml) at bedtime.
7. **Cough Syrup With Dextromethorphan:**
  - Cough syrups containing the cough suppressant dextromethorphan may help decrease your cough.
  - Cough syrup works best for coughs that keep you awake at night. It can also sometimes help in the late stages of a lung or airway infection when the cough is dry and hacking. Cough syrup can be used along with cough drops.
  - *Examples:* Delsym 12-hour Cough, Robitussin Cough Long-Acting, Triaminic Long-Acting, Vicks DayQuil Cough.
8. **Cough Syrup With Dextromethorphan - Extra Notes and Warnings:**
  - Do not try to completely stop coughs that produce mucus and phlegm.
  - Coughing is helpful. It brings up the mucus from the lungs and helps prevent pneumonia.

- **Research:** Some research studies show that dextromethorphan reduces the frequency and severity of cough in those 18 years and older without significant adverse effects. Other studies suggest that dextromethorphan is no better than placebo at reducing a cough.
  - **Drug Abuse:** It should be noted that dextromethorphan has become a drug of abuse. This problem is seen most often in teenagers. Overdose symptoms can range from giggling and feeling high to hallucinations and coma.
  - **Warning:** Do not take dextromethorphan if you are taking a monoamine oxidase (MAO) inhibitor now or in the past 2 weeks. Examples of MAO inhibitors include isocarboxazid (Marplan), phenelzine (Nardil), selegiline (Eldepryl, Emsam, Zelapar), and tranylcypromine (Parnate).
  - **Warning:** Do not take dextromethorphan if you are taking venlafaxine (Effexor).
  - *Before taking any medicine, read all the instructions on the package.*
9. **Humidifier:**
- If the air is dry, use a humidifier in the bedroom.
  - Dry air makes coughs worse.
10. **Coughing Spells:**
- Drink warm fluids. Inhale warm mist. This can help relax the airway and also loosen up phlegm.
  - Suck on cough drops or hard candy to coat the irritated throat.
11. **Pain and Fever Medicines:**
- For pain or fever relief, take either acetaminophen or ibuprofen.
  - They are over-the-counter (OTC) drugs that help treat both fever and pain. You can buy them at the drugstore.
  - Treat fevers above 101° F (38.3° C). The goal of fever therapy is to bring the fever down to a comfortable level. Remember that fever medicine usually lowers fever 2 degrees F (1 - 1 1/2 degrees C).
  - **Acetaminophen Regular Strength Tylenol:** Take 650 mg (two 325 mg pills) by mouth every 4 to 6 hours as needed. Each Regular Strength Tylenol pill has 325 mg of acetaminophen. The most you should take each day is 3,250 mg (10 pills a day).
  - **Acetaminophen - Extra Strength Tylenol:** Take 1,000 mg (two 500 mg pills) every 8 hours as needed. Each Extra Strength Tylenol pill has 500 mg of acetaminophen. The most you should take each day is 3,000 mg (6 pills a day).
  - **Ibuprofen (e.g., Motrin, Advil):** Take 400 mg (two 200 mg pills) by mouth every 6 hours. The most you should take each day is 1,200 mg (six 200 mg pills), unless your doctor has told you to take more.
12. **Pain and Fever Medicines - Extra Notes and Warnings:**
- Use the lowest amount of medicine that makes your pain or fever better.
  - Acetaminophen is thought to be safer than ibuprofen or naproxen in people over 65 years old. Acetaminophen is in many OTC and prescription medicines. It might be in more than one medicine that you are taking. You need to be careful and not take an overdose. An acetaminophen overdose can hurt the liver.
  - McNeil, the company that makes Tylenol, has different dosage instructions for Tylenol in Canada and the United States. In Canada, the maximum recommended dose per day is 4,000 mg or twelve Regular-Strength (325 mg) pills. In the United States, McNeil recommends a maximum dose of ten Regular-Strength (325 mg) pills.
  - **Caution:** Do not take acetaminophen if you have liver disease.
  - **Caution:** Do not take ibuprofen if you have stomach problems, kidney disease, are pregnant, or have been told by your doctor to avoid this type of anti-inflammatory drug. Do not take ibuprofen for more than 7 days without consulting your doctor.

- *Before taking any medicine, read all the instructions on the package.*
13. **Mild Stomach and Intestinal Symptoms During COVID-19 Illness:**
    - **Mild Nausea or Vomiting:** Sip small amounts (1 tablespoon or 15 ml) of water or half-strength sports drink every 5 minutes. After 4 hours with no vomiting, slowly increase the amount. After no vomiting for 8 hours, slowly add in bland foods - saltine crackers, white bread, rice, mashed potatoes.
    - **Mild Diarrhea:** Drink clear fluids like water, half-strength sports drink or oral rehydration liquid (e.g., Pedialyte). Slowly start bland foods like saltine crackers, white bread, mashed potatoes, noodles, bananas, yogurt, or soup. Slowly return to a normal diet.
    - **Check Your Urine:** It should be light yellow to clear if you are getting enough fluids.
  14. **FAQ - Do I Need Special Medicines to Treat COVID-19?**
    - For healthy people with **mild symptoms**, prescription medicines are usually not needed. People can treat the symptoms at home using over-the-counter medicines for fever, pain, and cough.
    - People with **mild to moderate symptoms and who are at high risk** for severe COVID-19 may sometimes need special prescription medicines as outpatients. There are monoclonal antibodies (e.g., bamlanivimab, casirivimab-imdevimab, sotrovimab) and antiviral medicines (e.g., nirmatrelvir-ritonavir / Paxlovid, molnupiravir).
    - People with **severe COVID-19** will need emergency department treatment and hospitalization. Treatment of hospitalized patients may include oxygen, steroids, antiviral medicine (e.g., remdesivir), and immune system medicines (e.g., baricitinib, tocilizumab).
    - Risk factors for severe COVID-19 complications include a weak immune system, 65 years and older, obesity, pregnant, chronic lung disease, and other chronic medical conditions.
    - This is a complex and changing area of information.
    - Talk with your doctor (or NP/PA) if you have questions.
  15. **FAQ - Is Ivermectin Approved for COVID-19?**
    - **No.** Ivermectin is not an approved drug for treating or preventing COVID-19.
    - Ivermectin is a drug used to treat parasites and lice.
    - Although some people are interested in ivermectin to treat COVID-19, it has NOT been shown to treat or prevent COVID-19.
    - Some people have gotten ivermectin on their own through the internet or animal care suppliers.
    - People have been hospitalized for toxic effects from taking ivermectin on their own (sometimes taking large overdoses).
    - *Do not get or take ivermectin without a prescription from your doctor.* NEVER take medicines made for animals.
  16. **FAQ - Can I Take Ibuprofen (Advil, Motrin) if I Have COVID-19?**
    - Yes.
    - The CDC, WHO, and other experts continue to support the use of ibuprofen (if needed) for patients with COVID-19. They found no scientific evidence that ibuprofen made COVID-19 worse.
  17. **Call Back If:**
    - Fever over 103° F (39.4° C)
    - Fever lasts over 3 days
    - Fever returns after being gone for 24 hours
    - Chest pain or difficulty breathing occurs
    - You become worse

## COVID-19 General Information

- 1. COVID-19 (Coronavirus Disease 2019) - Pandemic:**
  - COVID-19 became a global pandemic in early 2020.
  - In the Summer and Fall of 2021 the **Delta variant** was the most common COVID-19 variant. Starting in the winter of 2021 and into 2022, **Omicron** has become the most common variant.
  - The *Centers for Disease Control and Prevention* (CDC) is considered the source of truth for this guideline. This continues to be a changing situation and guidance from the CDC is updated frequently. See <https://www.cdc.gov/coronavirus/2019-nCoV/index.html>.
- 2. COVID-19 - Symptoms:**
  - COVID-19 most often causes a respiratory illness.
  - *The most common symptoms are:* cough, fever, and shortness of breath.
  - *Other less common symptoms are:* chills, fatigue, headache, loss of smell or taste, muscle pain, and sore throat.
  - Some people may have minimal symptoms or even have no symptoms (asymptomatic).
- 3. COVID-19 - Exposure Risk Factors:**
  - The following **risk factors** increase the chance of getting sick with COVID-19 after an exposure.
  - **How Close?** The closer you are to someone with COVID-19, the greater the chance of catching it. Being within 6 feet (2 meters) of an infected person increases the risk. Being in a crowded place also increases the risk.
  - **How Long?** Longer exposure time increases a person's risk of getting COVID-19. An exposure of 15 minutes or more is more likely to result in spread.
  - **Where - Indoors or Outdoors?** Being outside reduces the risk because there is better air movement.
  - **Did the Infected Person Have Symptoms?** If the person was sick with such symptoms as cough, fever, or trouble breathing, it increases the exposed person's risk of getting COVID-19.
  - **Who Was Wearing Masks?** Wearing a well-fitting mask can decrease a person's risk of getting COVID-19. If both the infected and exposed person were wearing well-fitting masks, the risk of spread is low. If only one was masked, the risk is moderate. If neither was masked, the risk is higher.
- 4. COVID-19 - How It Is Spread:**
  - *COVID-19 is spread from person to person.*
  - **Respiratory Droplets:** The virus spreads from respiratory droplets that are produced when a person coughs, sneezes, shouts, or sings. The infected droplets can then be inhaled by a nearby person or land on the surface of their face or eyes. Droplets fall quickly to the floor or ground. This is **how most COVID is spread**.
  - **Surfaces:** Most infected people also have respiratory secretions on their hands. These secretions get transferred to healthy people on doorknobs, faucet handles, etc. The virus then gets transferred to healthy people when they touch their face or rub their eyes. This is a **less common cause** of spread.
  - **Aerosols:** Aerosols are tiny, invisible particles that can float in the air for 1 to 2 hours and travel more than 6 feet (2 meters). They occur in a closed room with poor ventilation. Aerosols are a **rare cause** of COVID-19 spread.
- 5. COVID-19 - How to Protect Your Family and Yourself From Getting Sick:**
  - **Get the COVID-19 vaccine.** It is your best protection against this serious infection.
  - Avoid close contact with people known to have COVID-19.
  - Try to stay at least 6 feet (2 meters) away from anyone who is coughing.
  - Wash hands often with soap and water. Alcohol-based hand cleaners are also effective.



- Avoid touching the eyes, nose or mouth. Germs on the hands can spread this way.
  - Do not share eating utensils (e.g., spoon, fork).
6. **COVID-19 - How to Protect Others - When You Are Sick With COVID-19:**
- **Stay Home a Minimum of 5 Days:** People with **mild COVID-19** can **stop home isolation after 5 days** if (1) fever has been gone for 24 hours (without using fever medicine) AND (2) symptoms are better. Continue to wear a well-fitted mask for a full 10 days when around others.
  - **Wear a Mask for 10 Days:** Wear a well-fitted mask for 10 full days any time you are around others inside your home or in public. Do not go to places where you are unable to wear a mask.
  - **Avoid Travel:** Avoid travel for 10 days after you tested positive for COVID-19.
  - **Wash Hands Often:** Wash hands often with soap and water. After coughing or sneezing are important times. If soap and water are not available, use an alcohol-based hand sanitizer with at least 60% alcohol, covering all surfaces of your hands and rubbing them together until they feel dry. Avoid touching your eyes, nose, and mouth with unwashed hands.
  - **Call Ahead if Medical Care Is Needed:** If you have a medical appointment, call your doctor's office and tell them you have or may have COVID-19. This will help the office protect themselves and other patients. They will give you directions.
  - **Notes:** Isolation time at home depends on how severe the COVID-19 symptoms are and if the person has a weak immune system. Day 0 is the day symptoms began. People who are moderately to severely ill with COVID-19, or who have a weak immune system will need to stay home (isolate) for at least 10 days. Talk to your doctor (or NP/PA) before ending isolation.
7. **COVID-19 - How to Protect Others - When You Test Positive for COVID but Have No Symptoms:**
- **Stay Home a Minimum of 5 Days:** Home isolation is needed for at least 5 days after the date of the positive test. Stay home from school or work if you are sick. Do **Not** go to religious services, child care centers, shopping, or other public places. Do **Not** use public transportation (e.g., bus, taxis, ride-sharing). Do **Not** allow any visitors to your home. Leave the house only if you need to seek urgent medical care.
  - **Wear a Mask for 10 Days:** Wear a well-fitted mask for 10 full days any time you are around others inside your home or in public. Do not go to places where you are unable to wear a mask.
  - **Avoid Travel:** Avoid travel for 10 days after you tested positive for COVID-19.
  - **Wash Hands Often:** Wash hands often with soap and water. After coughing or sneezing are important times. If soap and water are not available, use an alcohol-based hand sanitizer with at least 60% alcohol, covering all surfaces of your hands and rubbing them together until they feel dry. Avoid touching your eyes, nose, and mouth with unwashed hands.
  - **Call Ahead if Medical Care Is Needed:** If you have a medical appointment, call your doctor's office and tell them you have COVID-19. This will help the office protect themselves and other patients. They will give you directions.
8. **COVID-19 - Travel Guidelines:**
- The Centers for Disease Control and Prevention (CDC) maintains a website with the latest recommendations regarding travel and your health.
  - Currently the CDC recommends against travel to many geographic areas with widespread and ongoing spread of COVID-19. See current list at <https://wwwnc.cdc.gov/travel/>.
  - *CDC Travel Health Website:* <https://wwwnc.cdc.gov/travel/>.
  - *CDC Travel FAQs:* <https://www.cdc.gov/coronavirus/2019-ncov/travelers/faqs.html>.
9. **COVID-19 - What Types of Tests Are Available?**
- There are two types of tests available for COVID-19: viral tests and antibody tests.
  - **Test for Current Infection - Viral Test:** A viral test tells you if you have the COVID-19 infection right now. A viral test is done with either a nasal swab or a saliva sample. If you have **symptoms** of COVID-19 you should **test immediately**. If you were **exposed** to COVID-19 and have no symptoms, you should **test 5 to 7 days after exposure**.

- **Test for Past Infection - Antibody Test:** An antibody test tells you if you have had COVID-19 before. Sometimes an antibody test may turn positive after a person has been vaccinated against COVID-19. This test is done with a blood sample. An antibody test may not be able to show if you have a current infection, because it can take 1 to 3 weeks for your body to make antibodies to the infection. If an antibody test is needed, it is usually performed 2 to 3 weeks after the start of the infection.
- Some test results come back right away or within hours. Some tests may take longer (1 to 3 days) depending on the type of test.

10. **COVID-19 - Face Masks for Prevention:**

- Face masks are important for reducing the spread of COVID-19. They also reduce the spread of influenza (flu). People with COVID-19 can have no symptoms, but still spread the virus.
- Because of the Omicron variant (and other possible future variants) recommendations for wearing masks are pretty much the same for people who are vaccinated or unvaccinated. Mask wearing is even more important if you have a weak immune system.
- **People Who Are Well (Not Sick With COVID-19) Should Wear Masks If:**
  - ... Masks are recommended by your local health department.
  - ... You are in an indoor public space or crowded outdoor event in an area of high community spread.
  - ... You want extra protection (e.g., people at risk for severe disease). Those at risk for severe disease should talk to their doctor (or NP, PA) about how to stay safe.
  - ... You want extra protection while traveling on a plane, bus, train, or other form of public transportation or in transportation hubs such as airports and stations.
  - ... You must be around someone who has symptoms of COVID-19 or has tested positive for COVID-19.
- **People Who Are Sick With COVID-19 Should Wear Masks If:**
  - ... You are around other people or animals (such as pets).
- **Exceptions:**
  - ... Face mask or covering is optional if outdoors and you can avoid being within 6 feet (2 meters) of other people. Some examples are an outdoor walk or run.
  - ... Face coverings also are not recommended for children under 2 years.
- **How to Select and Use a Face Mask:** Make sure your mask fits well (without gaps) and fully covers your nose and mouth. More information on how to select and use a mask is available at: <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/types-of-masks.html>.

11. **COVID-19 - Going to the ED or Urgent Care Center During the COVID-19 Pandemic:**

- If you or your child needs to be seen for an urgent medical problem, do not hesitate to go.
- Emergency Departments and urgent care centers are safe places. They are well equipped to protect you against the virus.
- For non-urgent conditions, talk to your doctor (or NP/PA) first.

12. **COVID-19 - Some Other Facts:**

- **Incubation Period:** Average 5 days (range 2 to 14 days) after coming in contact with a person who has COVID-19 virus.
- **No Symptoms, but Infected (Asymptomatic):** Approximately 30% of infected patients may have no symptoms.
- **Mild Infections:** About 80% of those with symptoms have a mild illness, much like a normal flu or a bad cold. The symptoms usually last 2 weeks.
- **Severe Infections:** About 20% of those with symptoms develop trouble breathing from viral pneumonia. Many of these need to be admitted to the hospital. People with complications generally recover in 3 to 6 weeks. Severe infections are much less common in people who are vaccinated.
- **Death Rate:** The adult death rate is approximately 1% to 3%. The death rate is lower in

children and younger adults. It is higher in older adults. The risk of death is much lower in people who are vaccinated.

- **Prevention - Vaccine:** Several vaccines have been approved and released for use in the United States and Canada. The COVID-19 vaccine and booster will reduce the chance of you getting COVID-19. If you get COVID-19, the COVID-19 vaccine will decrease the chance of you becoming severely sick or needing to be hospitalized.

- **Prevention - Medicine:** The malaria drug chloroquine was studied and found not to be helpful for this disease. It also had cardiac side effects. Evusheld (Tixagevimab and cilgavimab) is a medicine to prevent COVID-19. It may be recommended for those with moderately to severely weak immune systems or those with a history of severe allergic reactions to the COVID-19 vaccine. For those that catch COVID-19, there are monoclonal antibody and antiviral medicines that may be recommended for outpatients at risk for severe disease. Remember, social distancing and wearing masks have been proven to help prevent COVID-19!

13. **FAQ - What Is the Difference Between a Booster and an Extra Primary Vaccine Dose?**

- **Booster:** Everyone 5 years and older should get a booster shot (vaccination). Booster shots are especially important for groups at higher risk.

- ... Recommendations for the timing and total number of vaccine shots depend on what type of COVID-19 vaccine a person initially got, a person's age, and whether a person is healthy or has a weak immune system. Either the Pfizer or the Moderna mRNA vaccines can be used as a booster.

- ... For **U.S. information** and the most up-to-date criteria, see the CDC website at:

- <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/booster-shot.html>.

- ... In **Canada** see <https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19/vaccines.html>.

- **Extra Vaccine Dose For Those with Weak Immune Systems:** People with moderately to severely weak immune systems are at higher risk of severe COVID-19 infection. They also may not respond as well to the standard vaccine series. They should get an extra dose as part of their primary vaccine series (recommended in those 5 years and older).

- ... Timing of the extra dose depends on which COVID-19 vaccine the person initially got.

- ... Besides the extra primary dose they should also get all recommended booster shots.

- ... For **U.S. information** and the most up-to-date criteria, see the CDC website at <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/recommendations/immuno.html>.

- ... In **Canada** see <https://www.canada.ca/en/public-health/services/publications/healthy-living/canadian-immunization-guide-part-4-active-vaccines/page-26-covid-19-vaccine.html#a6.4>.

14. **FAQ - What Masks Are Best to Protect Against COVID-19?**

- There are many types of face masks. Some provide more protection against COVID-19 than others.

- However, it is important to remember **any face mask is better than no face mask**. Also, any mask you use should fit well (snuggly against the face with no gaps) and should be clean and dry.

- ... **Cloth masks** made with several layers of finely woven fabric provide good protection. A single fabric layer is not enough.

- ... Disposable **surgical masks** (procedure masks) provide better protection than cloth masks.

- ... Respirator masks such as the **KN95** and NIOSH-approved **N95 masks** provide the best protection. These are most often used by healthcare workers.

- The CDC recommends that "you wear the most protective mask you can that fits well and that you will wear consistently."

- You can find more information on the CDC website: <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/types-of-masks.html>.

15. **FAQ - Do I Need Special Medicines to Treat COVID-19?**

- For healthy people with **mild symptoms**, prescription medicines are usually not needed.

People can treat the symptoms at home using over-the-counter medicines for fever, pain, and cough.

- People with **mild to moderate symptoms and who are at high risk** for severe COVID-19 may sometimes need special prescription medicines as outpatients. There are monoclonal antibodies (e.g., bamlanivimab, casirivimab-imdevimab, sotrovimab) and antiviral medicines (e.g., nirmatrelvir-ritonavir / Paxlovid, molnupiravir).
- People with **severe COVID-19** will need emergency department treatment and hospitalization. Treatment of hospitalized patients may include oxygen, steroids, antiviral medicine (e.g., remdesivir), and immune system medicines (e.g., baricitinib, tocilizumab).
- Risk factors for severe COVID-19 complications include a weak immune system, 65 years and older, obesity, pregnant, chronic lung disease, and other chronic medical conditions.
- This is a complex and changing area of information.
- Talk with your doctor (or NP/PA) if you have questions.

16. **FAQ - Is Ivermectin Approved for COVID-19?**

- **No.** Ivermectin is not an approved drug for treating or preventing COVID-19.
- Ivermectin is a drug used to treat parasites and lice.
- Although some people are interested in ivermectin to treat COVID-19, it has NOT been shown to treat or prevent COVID-19.
- Some people have gotten ivermectin on their own through the internet or animal care suppliers.
- People have been hospitalized for toxic effects from taking ivermectin on their own (sometimes taking large overdoses).
- *Do not get or take ivermectin without a prescription from your doctor.* NEVER take medicines made for animals.

17. **Call Back If:**

- You have more questions

**COVID-19 Home Isolation and Protecting Others**

1. **COVID-19 - How to Protect Others - When You Are Sick With COVID-19:**

- **Stay Home a Minimum of 5 Days:** People with **mild COVID-19** can **stop home isolation after 5 days** if (1) fever has been gone for 24 hours (without using fever medicine) AND (2) symptoms are better. Continue to wear a well-fitted mask for a full 10 days when around others.
- **Wear a Mask for 10 Days:** Wear a well-fitted mask for 10 full days any time you are around others inside your home or in public. Do not go to places where you are unable to wear a mask.
- **Avoid Travel:** Avoid travel for 10 days after you tested positive for COVID-19.
- **Wash Hands Often:** Wash hands often with soap and water. After coughing or sneezing are important times. If soap and water are not available, use an alcohol-based hand sanitizer with at least 60% alcohol, covering all surfaces of your hands and rubbing them together until they feel dry. Avoid touching your eyes, nose, and mouth with unwashed hands.
- **Call Ahead if Medical Care Is Needed:** If you have a medical appointment, call your doctor's office and tell them you have or may have COVID-19. This will help the office protect themselves and other patients. They will give you directions.
- *Notes:* Isolation time at home depends on how severe the COVID-19 symptoms are and if the person has a weak immune system. Day 0 is the day symptoms began. People who are moderately to severely ill with COVID-19, or who have a weak immune system will need to stay home (isolate) for at least 10 days. Talk to your doctor (or NP/PA) before ending isolation.

2. **COVID-19 - How to Protect Others - When You Test Positive for COVID but Have No Symptoms:**

- **Stay Home a Minimum of 5 Days:** Home isolation is needed for at least 5 days after the date of the positive test. Stay home from school or work if you are sick. Do **Not** go to religious

services, child care centers, shopping, or other public places. Do **Not** use public transportation (e.g., bus, taxis, ride-sharing). Do **Not** allow any visitors to your home. Leave the house only if you need to seek urgent medical care.

- **Wear a Mask for 10 Days:** Wear a well-fitted mask for 10 full days any time you are around others inside your home or in public. Do not go to places where you are unable to wear a mask.
- **Avoid Travel:** Avoid travel for 10 days after you tested positive for COVID-19.
- **Wash Hands Often:** Wash hands often with soap and water. After coughing or sneezing are important times. If soap and water are not available, use an alcohol-based hand sanitizer with at least 60% alcohol, covering all surfaces of your hands and rubbing them together until they feel dry. Avoid touching your eyes, nose, and mouth with unwashed hands.
- **Call Ahead if Medical Care Is Needed:** If you have a medical appointment, call your doctor's office and tell them you have COVID-19. This will help the office protect themselves and other patients. They will give you directions.

3. **Clean Your Hands Often:**

- **Wash Hands:** Wash your hands often with soap and water for at least 20 seconds. This is especially important after blowing your nose, coughing, or sneezing; going to the bathroom; and before eating or preparing food.
- **Use Hand Sanitizer:** If soap and water are not available, use an alcohol-based hand sanitizer with at least 60% alcohol, covering all surfaces of your hands and rubbing them together until they feel dry.
- Avoid touching your eyes, nose, and mouth with unwashed hands.

4. **Clean "High Touch" Surfaces Every Day:**

- Clean high-touch surfaces in your isolation area ("sick room" and bathroom) every day.
- High-touch surfaces include phones, remote controls, counters, tabletops, doorknobs, bathroom fixtures, toilets, keyboards, tablets, and bedside tables.

5. **Stay Away From Others in Your Home:**

- If possible, stay in a specific "sick room" and away from other people in your home.
- Use a separate bathroom, if available.

6. **Call Ahead Before Visiting Your Doctor (or NP/PA):**

- *Call ahead:* If you have a medical appointment, call your doctor's office and tell them you have or may have COVID-19.
- This will help the office protect themselves and other patients.
- Wear a facemask.

7. **FAQ - When Can I Stop Home Isolation If I Test Positive for COVID-19 but Have No Symptoms?**

- You can **stop home isolation after 5 days**.
- Wear a well-fitted **mask for 10 full days** any time you are around others inside your home or in public. Do not go to places where you are unable to wear a mask.

8. **FAQ - When Can I Stop Home Isolation If I Am Sick With COVID-19?**

- Isolation time at home depends on how severe the COVID-19 symptoms and if the person has a weak immune system. Day 0 is the day symptoms began.
- People with **mild COVID-19** can **stop home isolation after 5 days** if (1) fever has been gone for 24 hours (without using fever medicine) AND (2) symptoms are better. Continue to wear a well-fitted mask for a full 10 days when around others.
- *Notes:* People who are moderately to severely ill with COVID-19, or who have a weak immune system will need to stay home (isolate) for at least 10 days. Talk your doctor (or NP/PA) before ending isolation.

9. **FAQ - What Masks Are Best to Protect Against COVID-19?**
- There are many types of face masks. Some provide more protection against COVID-19 than others.
  - However, it is important to remember **any face mask is better than no face mask**. Also, any mask you use should fit well (snuggly against the face with no gaps) and should be clean and dry.
  - ... **Cloth masks** made with several layers of finely woven fabric provide good protection. A single fabric layer is not enough.
  - ... Disposable **surgical masks** (procedure masks) provide better protection than cloth masks.
  - ... Respirator masks such as the **KN95** and NIOSH-approved **N95 masks** provide the best protection. These are most often used by healthcare workers.
  - The CDC recommends that "you wear the most protective mask you can that fits well and that you will wear consistently."
  - You can find more information on the CDC website: <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/types-of-masks.html>.
10. **Call Back If:**
- You have more questions

## COVID-19 Prevention and Healthy Living

1. **COVID-19 - How to Protect Your Family and Yourself From Getting Sick:**
  - **Get the COVID-19 vaccine.** It is your best protection against this serious infection.
  - Avoid close contact with people known to have COVID-19.
  - Try to stay at least 6 feet (2 meters) away from anyone who is coughing.
  - Wash hands often with soap and water. Alcohol-based hand cleaners are also effective.
  - Avoid touching the eyes, nose or mouth. Germs on the hands can spread this way.
  - Do not share eating utensils (e.g., spoon, fork).
2. **COVID-19 - How to Protect Others - When You Are Sick With COVID-19:**
  - **Stay Home a Minimum of 5 Days:** People with **mild COVID-19** can **stop home isolation after 5 days** if (1) fever has been gone for 24 hours (without using fever medicine) AND (2) symptoms are better. Continue to wear a well-fitted mask for a full 10 days when around others.
  - **Wear a Mask for 10 Days:** Wear a well-fitted mask for 10 full days any time you are around others inside your home or in public. Do not go to places where you are unable to wear a mask.
  - **Avoid Travel:** Avoid travel for 10 days after you tested positive for COVID-19.
  - **Wash Hands Often:** Wash hands often with soap and water. After coughing or sneezing are important times. If soap and water are not available, use an alcohol-based hand sanitizer with at least 60% alcohol, covering all surfaces of your hands and rubbing them together until they feel dry. Avoid touching your eyes, nose, and mouth with unwashed hands.
  - **Call Ahead if Medical Care Is Needed:** If you have a medical appointment, call your doctor's office and tell them you have or may have COVID-19. This will help the office protect themselves and other patients. They will give you directions.
  - *Notes:* Isolation time at home depends on how severe the COVID-19 symptoms are and if the person has a weak immune system. Day 0 is the day symptoms began. People who are moderately to severely ill with COVID-19, or who have a weak immune system will need to stay home (isolate) for at least 10 days. Talk to your doctor (or NP/PA) before ending isolation.
3. **COVID-19 - How to Protect Others - When You Test Positive for COVID but Have No Symptoms:**
  - **Stay Home a Minimum of 5 Days:** Home isolation is needed for at least 5 days after the date of the positive test. Stay home from school or work if you are sick. Do **Not** go to religious services, child care centers, shopping, or other public places. Do **Not** use public transportation (e.g., bus, taxis, ride-sharing). Do **Not** allow any visitors to your home. Leave the house only if

you need to seek urgent medical care.

- **Wear a Mask for 10 Days:** Wear a well-fitted mask for 10 full days any time you are around others inside your home or in public. Do not go to places where you are unable to wear a mask.
- **Avoid Travel:** Avoid travel for 10 days after you tested positive for COVID-19.
- **Wash Hands Often:** Wash hands often with soap and water. After coughing or sneezing are important times. If soap and water are not available, use an alcohol-based hand sanitizer with at least 60% alcohol, covering all surfaces of your hands and rubbing them together until they feel dry. Avoid touching your eyes, nose, and mouth with unwashed hands.
- **Call Ahead if Medical Care Is Needed:** If you have a medical appointment, call your doctor's office and tell them you have COVID-19. This will help the office protect themselves and other patients. They will give you directions.

#### 4. **COVID-19 - Face Masks for Prevention:**

- Face masks are important for reducing the spread of COVID-19. They also reduce the spread of influenza (flu). People with COVID-19 can have no symptoms, but still spread the virus.
- Because of the Omicron variant (and other possible future variants) recommendations for wearing masks are pretty much the same for people who are vaccinated or unvaccinated. Mask wearing is even more important if you have a weak immune system.
- **People Who Are Well (Not Sick With COVID-19) Should Wear Masks If:**
  - ... Masks are recommended by your local health department.
  - ... You are in an indoor public space or crowded outdoor event in an area of high community spread.
  - ... You want extra protection (e.g., people at risk for severe disease). Those at risk for severe disease should talk to their doctor (or NP, PA) about how to stay safe.
  - ... You want extra protection while traveling on a plane, bus, train, or other form of public transportation or in transportation hubs such as airports and stations.
  - ... You must be around someone who has symptoms of COVID-19 or has tested positive for COVID-19.
- **People Who Are Sick With COVID-19 Should Wear Masks If:**
  - ... You are around other people or animals (such as pets).
- **Exceptions:**
  - ... Face mask or covering is optional if outdoors and you can avoid being within 6 feet (2 meters) of other people. Some examples are an outdoor walk or run.
  - ... Face coverings also are not recommended for children under 2 years.
- **How to Select and Use a Face Mask:** Make sure your mask fits well (without gaps) and fully covers your nose and mouth. More information on how to select and use a mask is available at: <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/types-of-masks.html>.

#### 5. **FAQ - What Masks Are Best to Protect Against COVID-19?**

- There are many types of face masks. Some provide more protection against COVID-19 than others.
- However, it is important to remember **any face mask is better than no face mask**. Also, any mask you use should fit well (snuggly against the face with no gaps) and should be clean and dry.
- ... **Cloth masks** made with several layers of finely woven fabric provide good protection. A single fabric layer is not enough.
- ... Disposable **surgical masks** (procedure masks) provide better protection than cloth masks.
- ... Respirator masks such as the **KN95** and NIOSH-approved **N95 masks** provide the best protection. These are most often used by healthcare workers.
- The CDC recommends that "you wear the most protective mask you can that fits well and that you will wear consistently."
- You can find more information on the CDC website: <https://www.cdc.gov/coronavirus/2019->

[ncov/prevent-getting-sick/types-of-masks.html](https://www.cdc.gov/ncov/prevent-getting-sick/types-of-masks.html).

6. **Keep Your Body Strong:**
  - Keep your body strong, healthy, and ready to fight the COVID-19 virus.
  - Get enough sleep.
  - Stay physically active. Walk or exercise every day. Take the stairs.
  - Stay well hydrated.
  - Eat healthy meals. Avoid overeating to deal with your fears.
  - Avoid the over-use of anti-fever medicines. Fever helps fight infections and ramps up your immune system.
7. **Get a Flu Shot (Influenza Vaccine):**
  - Protect yourself and your family from influenza by getting your annual flu shot (influenza vaccination).
  - All adults should get a flu shot every year. This year is more important than ever. *Reason:* Getting COVID-19 while you also have or are recovering from the flu may increase the chances of getting severe symptoms.
8. **Call Back If:**
  - You have more questions

## COVID-19 Testing and Test Results

1. **Note to Triage - COVID-19 Testing:**
  - **For questions about testing**, it is often best to **direct the patient to their doctor** (or NP/PA), during office hours. Their doctor is the best resource for up-to-date information on testing. *Testing in a lab requires a doctor's order (as with all medical tests).*
  - Many clinics, retail clinics (such as CVS, Walgreens), and urgent care centers perform testing.
  - Testing is also available at some local and state public health departments.
  - **Self-tests** (such as Abbot BinaxNow) for use at home are available in some drugstores or online (such as Amazon, CVS, or Walgreens).
  - *What about a standing order?* Call centers should talk with their medical leadership about triagers being able to use a standing order for testing.
2. **COVID-19 - Who Needs Testing?**
  - **Symptoms:** If you have symptoms of COVID-19 you should **test immediately**.
  - **Exposure and No Symptoms:** If you were exposed to COVID-19 you should **test 5 to 7 days after exposure**. *Exception:* People that have had a positive viral test for COVID-19 in last 30 days.
  - **Visiting Someone at High Risk for Severe COVID-19:** If you are visiting someone who is at high risk (e.g., older, weak immune system) for having a severe COVID-19 infection, you should **test before** you see them. This is especially important if you are in a community or place with higher COVID-19 spread.
3. **COVID-19 - Where to Go for Testing?**
  - Your doctor (or NP/PA) can order a COVID-19 test for you.
  - Many clinics, retail clinics (such as CVS, Walgreens), and urgent care centers perform testing.
  - Testing is also available at some local and state public health departments.
  - **Self-tests** (such as Abbot BinaxNOW) for use at home are available in some drugstores (such as CVS, Walgreens). You can also buy them on the internet (such as Amazon, CVS, Walgreens). In the U.S. free self-tests are available at *COVIDtests.GOV*. Negative self-tests need to be repeated.
4. **COVID-19 - What Types of Tests Are Available?**



- There are two types of tests available for COVID-19: viral tests and antibody tests.
  - **Test for Current Infection - Viral Test:** A viral test tells you if you have the COVID-19 infection right now. A viral test is done with either a nasal swab or a saliva sample. If you have **symptoms** of COVID-19 you should **test immediately**. If you were **exposed** to COVID-19 and have no symptoms, you should **test 5 to 7 days after exposure**.
  - **Test for Past Infection - Antibody Test:** An antibody test tells you if you have had COVID-19 before. Sometimes an antibody test may turn positive after a person has been vaccinated against COVID-19. This test is done with a blood sample. An antibody test may not be able to show if you have a current infection, because it can take 1 to 3 weeks for your body to make antibodies to the infection. If an antibody test is needed, it is usually performed 2 to 3 weeks after the start of the infection.
  - Some test results come back right away or within hours. Some tests may take longer (1 to 3 days) depending on the type of test.
5. **Understanding Viral Test Results:**
- Viral tests look for part of the virus (RNA or proteins) in the test sample. Since this test looks for actual parts of the virus, it can tell you if you are *currently infected* (active infection) and at risk of spreading the disease. A viral test is done using a nasal (nose) swab or saliva (spit).
  - A **positive viral test** means that you have COVID-19 infection and *can spread the infection to others*.
  - A **negative viral test** means that you probably do not have COVID-19, at the time the test was done. However, tests can sometimes have a false negative result. A repeat test is sometimes needed. Negative at home self-tests should be repeated.
  - ... If you **have symptoms**, you should repeat a negative at home test 2 days (48 hours) later (total of 2 tests).
  - ... If you **were exposed and have no symptoms**, you should repeat the at home test 2 days later. If that second test is negative, repeat it again in another 2 days (total of 3 tests).
  - *Notes:* The COVID-19 vaccine does NOT affect the results of the viral test. Some reasons for a false negative test result include: how the sample was collected, how long into the illness it was taken, type of test done, and test accuracy.
  - *Talk to your doctor (or NP/PA) if you have questions about your test results.*
6. **Understanding Antibody Test Results:**
- Antibody tests (also called serology tests) are done on blood samples.
  - COVID-19 antibody tests look for antibodies to the virus that causes COVID-19. Antibodies begin to form during an infection but can last as long as a lifetime. Therefore, an antibody test cannot tell the difference between an active infection and one you had sometime in the past.
  - A **positive antibody test** means that you most likely *have been*, or *are now*, infected with COVID-19. Sometimes an antibody test may turn positive after a person has been vaccinated against COVID-19. However, an antibody test is NOT a reliable way to determine if the vaccine worked for you.
  - A **negative antibody test** means that you likely *never had* COVID-19 OR you *have not yet* formed antibodies to COVID-19.
7. **Understanding Viral and Antibody Testing Together:**
- In some cases, your doctor (or NP/PA) may want to perform both antibody testing and viral testing together. The best source of information on understanding the test results will come from your doctor. Here is some information on how the two results can be used together.
  - **Both Tests Are Positive:** You most likely have an *active infection* and can spread COVID-19 to others.
  - **Both Tests Are Negative:** You likely do NOT have COVID-19 and likely never had a COVID-19 infection.
  - **Viral Test Is Positive and Antibody Test Is Negative:** You most likely have an *active infection* and can spread COVID-19 to others. You have not yet developed antibodies to your

active COVID-19 infection.

- **Viral Test Is Negative and Antibody Test Is Positive:** You likely do NOT have an active COVID-19 infection. You most likely had COVID-19 sometime in the past (or received the COVID-19 vaccine).

#### 8. Repeating a COVID-19 Viral Test:

- **Negative Viral Test:** A repeat test is sometimes needed after a negative viral test. A test can sometimes have a false negative result.

- ... If you **have symptoms**, you should repeat a negative at home test 2 days (48 hours) later (total of 2 tests).

- ... If you **were exposed and have no symptoms**, you should repeat the at home test 2 days later. If that second test is negative, repeat it again in another 2 days (total of 3 tests).

- ... *Notes:* The COVID-19 vaccine does NOT affect the results of the viral test. Some reasons for a false negative test result include: how the sample was collected, how long into the illness it was taken, type of test done, and test accuracy.

- **Positive Viral Test:** After a positive test, repeat tests are generally not recommended for 30 days (1 month). *Reason:* The test may stay positive for a few weeks. Further, getting infected again appears to be rare during the first 30 to 90 days afterwards. However, if you have new symptoms of COVID-19 within 14 days of exposure to someone with COVID-19, you should self-isolate and call your doctor (or NP/PA).

- *Talk to your doctor (or NP/PA) if you have questions about your test results.*

#### 9. Call Back If:

- You have more questions

## FIRST AID

N/A

## BACKGROUND INFORMATION

### Key Points

- An outbreak of this infection began in China in December 2019.
- The first patient in the United States occurred on January 21, 2020.
- Four patients were confirmed in Canada on January 31, 2020.
- The *World Health Organization* (WHO) declared COVID-19 a global public health emergency on January 30, 2020 and then a pandemic on March 11, 2020.
- COVID-19 vaccination is recommended for all people age 6 months and older, including people who are pregnant, breastfeeding, trying to get pregnant now, or might become pregnant in the future. Everyone 5 years and older should get a COVID-19 booster shot (vaccination).
- The *Centers for Disease Control and Prevention* (CDC) is considered the source of truth for this guideline. This continues to be a rapidly changing situation and guidance from the CDC is being updated frequently. See <https://www.cdc.gov/coronavirus/2019-nCoV/index.html>.

### Symptoms

The COVID-19 coronavirus most often causes a lower respiratory tract illness. More common symptoms are:

- Anorexia (40-84%)
- Chills (16-28%)

- **Cough** (59-82%)
- Fatigue (44-70%)
- **Fever** (83-99%)
- Loss of smell or taste (40-50%)
- Muscle pain (11-35%)
- **Shortness of breath or difficulty breathing** (31-40%)

Other symptoms may include:

- Diarrhea (2-5%)
- Headache (5-14%)
- Nausea or Vomiting (1-10%)
- Runny or Stuffy Nose (4%)
- Sore Throat (5%)
- Sputum production (14-34%)

Having two or more of any of these symptoms increases the likelihood that a person may have COVID-19.

Over 30% of infected adult patients have no symptoms (asymptomatic). Children and teens are even more likely to have no symptoms.

Symptoms can be different for the different COVID-19 variants. The symptoms of the Omicron variant seem to be milder for most people (especially if vaccinated) and similar to the common cold.

### **Cause**

It is caused by a novel (new) coronavirus (COVID-19).

Viruses change through mutation. New variants of the COVID-19 virus are expected to appear and spread.

In the Summer and Fall of 2021 the **Delta variant** was the most common COVID-19 variant. Starting in the winter of 2021 and into 2022, **Omicron** has become the most common variant.

The COVID-19 vaccines help protect against the delta and omicron variants.

- Infection with COVID-19 occurs less often in people who are vaccinated.
- When it happens, it is called a "breakthrough" infection.
- The risk of serious illness and hospitalization is much lower than if a person was not vaccinated.
- Current evidence suggests that vaccinated people who become infected with COVID-19 can spread the virus to others.

### **How It Is Spread (Transmission)**

COVID-19 is spread from person to person.

- **Respiratory Droplets:** The virus spreads from respiratory droplets that are produced when a person coughs, sneezes, shouts, or sings. The infected droplets can then be inhaled by a nearby person or land on the surface of their face or eyes. Droplets fall quickly to the floor or ground. This is **how most COVID is spread**.
- **Surfaces:** Most infected people also have respiratory secretions on their hands. These secretions get transferred to healthy people on doorknobs, faucet handles, etc. The virus then gets transferred to

healthy people when they touch their face or rub their eyes. This is a **less common cause** of spread.

- **Aerosols:** Aerosols are tiny, invisible particles that can float in the air for 1 to 2 hours and travel more than 6 feet (2 meters). They occur in a closed room with poor ventilation. Aerosols are a **rare cause** of COVID-19 spread.

The following **risk factors** increase the chance of getting sick with COVID-19 after an exposure:

- **How Close?** The closer a person is to someone with COVID-19, the greater the chance of catching it. Being within 6 feet (2 meters) of an infected person increases the risk. Being in a crowded place also increases the risk.

- **How Long?** Longer exposure time increases a person's risk of getting COVID-19. An exposure of 15 minutes or more is more likely to result in spread.

- **Where - Indoors or Outdoors?** Being outside reduces the risk because there is better air movement.

- **Did the Infected Person Have Symptoms?** If the person was sick with such symptoms as cough, fever, or trouble breathing, it increases the exposed person's risk of getting COVID-19.

- **Who Was Wearing Masks?** Wearing a well-fitting mask can decrease a person's risk of getting COVID-19. If both the infected and exposed person were wearing well-fitting masks, the risk of spread is low. If only one was masked, the risk is moderate. If neither was masked, the risk is higher.

### **Incubation Period**

The incubation period averages 5 days (range 2 to 14 days) after coming in contact with the secretions of a person who has COVID-19.

### **Complications**

Complications include pneumonia, hypoxia, ARDS, respiratory failure, and death.

People with the following medical problems or conditions are at **HIGH RISK** of complications.

- **Age:** The risk for severe illness from COVID-19 increases with age, with older adults at highest risk.
- Cancer
- Chronic kidney disease
- Chronic lung disease (e.g., COPD, cystic fibrosis, moderate-severe asthma, pulmonary hypertension)
- Dementia and other neurologic conditions
- Diabetes
- Down syndrome
- Heart disease (e.g., coronary artery disease, heart failure)
- HIV infection
- Liver disease (especially cirrhosis)
- Mental health disorders (e.g., depression, schizophrenia)
- Obesity (BMI of 30 or higher)
- Pregnancy
- Sickle cell disease
- Smoking
- Solid organ transplant
- Stroke or cerebrovascular disease
- Substance use disorder (e.g., alcohol, opioids)
- Weak immune system

For complete list of high risk conditions see CDC website at <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html>.

The adult death rate for COVID-19 is approximately 1% to 3%. The death rate is lower in children and younger adults. It is higher in older adults. It is much lower in vaccinated people.

People with O negative blood type may have a slightly lower risk of COVID-19 infection and severe COVID-19 illness. More research on this is needed. People with O negative blood type should still continue to wear a mask, social distance, and get vaccinated!

## Diagnosis and Testing

There are two types of tests for COVID-19: viral tests and antibody tests.

- **Test for Current Infection - Viral Test:** A viral test tells us if a person has the COVID-19 infection right now. A viral test is done with either a nasal swab or a saliva sample.
- **Test for Past Infection - Antibody Test:** An antibody test tells us if a person had COVID-19 before. This test is done with a blood sample. An antibody test may not be able to show a current infection, because it can take 1 to 3 weeks for the body to make antibodies to the infection. Sometimes an antibody test may turn positive after a person has been vaccinated against COVID-19. However, an antibody test is NOT a reliable way to determine if the vaccine worked.

Rapid home viral tests (self-tests such as BinaxNOW) provide results in minutes. Results from tests performed in a lab usually take several hours to a couple days.

*Who should get tested? When should testing be performed?*

- **Symptoms:** People who have symptoms of COVID-19 should get **tested immediately**.
- **Exposure and No Symptoms:** People who were exposed to COVID-19 should **test 5 to 7 days after exposure**. *Exception:* People that have had a positive test for COVID-19 in last 30 days. The test may stay positive for a few weeks after having COVID-19.
- **Visiting Someone at High Risk for Severe COVID-19:** If you are visiting someone who is at high risk (e.g., older, weak immune system) for having a severe COVID-19 infection, you should **test before** you see them. This is especially important if you are in a community or place with higher COVID-19 spread.

*What does a positive or negative test mean?*

- A **positive viral test** means that a person has COVID-19 infection and *can spread the infection to others*.
- A **negative viral test** means that the person probably does NOT have COVID-19, at the time the test was done. However, tests can sometimes have a false negative result. A repeat test is sometimes needed. Negative at home self-tests should be repeated per the FDA.
- ... For those with symptoms, repeat a negative at home test 2 days (48 hours) later (total of 2 tests).
- ... For those exposed but who have no symptoms, repeat the at home test 2 days later. If that second test is negative, repeat it again in another 2 days (total of 3 tests).
- *Notes:* The COVID-19 vaccine does NOT affect the results of the viral test. Some reasons for a false negative test result include: how the sample was collected, how long into the illness it was taken, the type of test done, and test accuracy.

For questions about testing, it is often best to direct the patient to their doctor (or NP/PA) during office hours. Their doctor is the best resource for up-to-date information on testing.

## Pulse Oximetry

A pulse oximeter measures the amount of oxygen in the blood. It also measures the pulse rate. A pulse oximeter consists of two parts.

- There is a monitor containing the batteries and display, and
- The probe that senses the pulse and oxygen level. The probe can be placed on the finger, toe, or the ear.

Here are some important tips on correctly using a pulse oximeter.

- Use the index or middle finger. Try not to use the toes or ear lobes.
- Remove nail polish from the finger on which pulse oximetry is being performed.
- Warm the hand prior to measurement.
- Perform the pulse oximetry indoors. Avoid bright light.
- Perform the pulse oximetry while at rest, and during quiet breathing.
- Observe readings for 30 to 60 seconds. Identify the most common value. Only use readings that have a strong and regular pulse signal.
- Measure and record values two to three times per day.

Here is how to interpret oxygen level values.

- **95 - 100%:** Normal oxygen level.
- **91 - 94%:** Mildly low oxygen level for most people. It may be normal for some patients with COPD.
- **86 - 90%:** Moderately low oxygen level. Moderate hypoxia. Oxygen needed.
- **85% or lower:** Severely low oxygen level. Severe hypoxia. Oxygen needed.

The **Oxygen Monitoring and Hypoxia** guideline has more comprehensive information and triage decision support.

## Treatment

For healthy people with **mild symptoms**, prescription medicines are usually not needed. People can treat the symptoms at home using over-the-counter medicines for fever, pain, and cough.

People with **mild to moderate symptoms and who are at high risk** for severe COVID-19 may sometimes need special prescription medicines as outpatients. There are monoclonal antibodies (e.g., bamlanivimab, casirivimab-imdevimab, sotrovimab) and antiviral medicines (e.g., nirmatrelvir-ritonavir / Paxlovid, molnupiravir).

People with **severe COVID-19** will need emergency department treatment and hospitalization. Treatment of hospitalized patients may include oxygen, steroids, antiviral medicine (e.g., remdesivir), and immune system medicines (e.g., baricitinib, tocilizumab).

This is a complex and changing area of information. Patients should talk with their doctor (or NP/PA) if they have questions.

## Prevention

Social distancing and wearing well-fitting **masks** have been proven to help prevent COVID-19.

### Prevention - Vaccines

COVID-19 **vaccines** are safe and effective. They reduce the chance of getting COVID-19. If a vaccinated person becomes infected, the chance of severe illness and hospitalization are less.

COVID-19 vaccination is recommended for all people age 6 months and older, including people who are pregnant, breastfeeding, trying to get pregnant now, or might become pregnant in the future.

Several COVID-19 vaccines have been approved for use in Canada and the United States:

- *AstraZeneca (Oxford)*: Approved for use in Canada in February 2021. More information available at: <https://www.astrazeneca.com/covid-19.html>.
- *Johnson & Johnson (Janssen)*: Approved for use in the US in February 2021. Single shot for the primary series. More information available at: <https://www.jnj.com/coronavirus>.
- *Medicago (Covifenz)*: Approved for use in Canada in February 2022.
- *Moderna*: Approved for use in Canada and US, December 2020. Approved in the US. More information available at: <https://www.modernatx.com/cove-study>.
- *Novavax (Nuvaxovid)*: Approved for use in the US in July 2022. Approved in Canada.
- *Pfizer (BioNTech)*: Approved for use in Canada and US, December 2020. More information available at: <https://www.cvdvaccine.com/>.

Everyone 5 years and older should get one or more **booster vaccine shots**. Booster shots are especially important for groups at higher risk. Recommendations for the timing and total number of booster shots depend on what type of COVID-19 vaccine a person initially got, a person's age, and whether a person is healthy or has a weak immune system. Either the **Pfizer** or the **Moderna** mRNA vaccines can be used as a booster.

Up-to-date on vaccination means that a person has received all doses in the primary series and got all recommended booster shots. For people with moderately to severely weak immune systems up-to-date means they received all recommended primary shots and boosters. Depending on the person's age and the vaccine given, this group may require an extra primary shot (e.g., third shot) and booster.

For U.S. information and the most up-to-date criteria, see the CDC website at <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/stay-up-to-date.html>. In Canada see <https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19/vaccines.html>.

### Prevention - Monoclonal Antibodies

Evusheld (tixagevimab and cilgavimab) are **monoclonal antibodies** used to prevent COVID-19 in those with moderate to severely weak immune systems. It is used before a person is exposed to COVID-19 (pre-exposure prophylaxis). Evusheld may also be recommended in those that cannot get the vaccine because of a severe allergy.

### What to Do After Exposure to COVID-19?

- Start wearing a mask immediately and continue wearing the mask for 10 days (day 0 is the last day of the exposure).
- The person should not go places that they cannot wear a well-fitted mask.
- Watch for any symptoms of a COVID-19 infection.
- If symptoms occur or the person tests positive, they should isolate at home immediately.
- The person should get tested at least 5 full days from the exposure. Negative at home antigen tests need to be repeated 2 days later. If that second test is negative, it should be repeated again in another 2 days (total of 3 tests).

*Note:* Those that had a previous positive test for COVID-19 within the last 30 days do not need to test unless they develop symptoms.

### How to Protect Others When a Person has COVID-19?

If a person has **no symptoms**, but tested positive:

- Home isolation can end after 5 full days. Day 0 is the day the test was performed.
- Continue to wear a well-fitted mask for a full 10 days when around others.
- If symptoms of COVID-19 occur, start isolation again with day 0 being the day that symptoms began.

If a person **has symptoms** (feels sick):

- Isolation time at home depends on how severe the COVID-19 symptoms are and if the person has a weak immune system.
- Day 0 is the day symptoms began.
- **Mild COVID-19:** Home isolation can end 5 days after symptoms started if (1) fever has been gone for 24 hours (without using fever medicine) AND (2) symptoms are better. Continue to wear a well-fitted mask for a full 10 days when around others.
- **Moderate COVID-19 (e.g., breathing difficulty):** Home isolation is needed for at least 10 days.
- **Severe COVID-19 (e.g., hospitalized for COVID-19) or if the person has a moderate to severely weak immune system:** Home isolation is needed for at least 10 days. Isolation may be needed for 20 days or longer. The patient should talk to their doctor before ending home isolation.

### Can Animals Get COVID-19?

The main way COVID-19 spreads is from person to person. There is low risk of getting COVID-19 from a pet or other animal.

- It is possible for animals to catch COVID-19 from people. A few pets have tested positive for COVID-19 (including cats and dogs).
- The CDC recommends treating pets like other family members when trying to avoid spreading COVID-19. Do not let pets have close contact with other people or animals outside your household. A sick person should self-isolate and avoid contact with both people and pets.
- Call your vet if your pet gets sick or you have other questions.
- The CDC has more information on COVID-19 and animals at: <https://www.cdc.gov/coronavirus/2019-ncov/animals/pets-other-animals.html>.

### Are There Other Types of Coronaviruses That Can Cause Illness in Humans?

*Common coronaviruses* can cause colds and upper respiratory symptoms. These can be identified in currently available commercial respiratory testing panels (human coronaviruses HKU1, OC43, 229E, and OC43). These coronaviruses are completely different than the novel coronavirus addressed in this guideline.

Two other coronaviruses that previously have caused serious outbreaks are:

- *MERS-CoV*: Middle East Respiratory Syndrome (MERS)
- *SARS-CoV*: Severe Acute Respiratory Syndrome (SARS)

### Internet Resources

- *Canada.CA*: COVID-19. Available at <https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19.html>.
- *COVIDtests.GOV*: Every home in the U.S. is eligible to order 4 free at-home COVID-19 tests. Orders will usually ship in 7-12 days. <https://www.covidtests.gov/>.



- *National Institutes of Health (NIH)*: Treatment Guidelines. <https://www.covid19treatmentguidelines.nih.gov/>.
- *Public Health Agency of Canada*: <https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19.html>.
- *U.S. Centers for Disease Control and Prevention (CDC)*: Coronavirus. <https://www.cdc.gov/coronavirus/>.
- *U.S. Federal Drug Administration*: FDA Authorizes Pharmacists to Prescribe Paxlovid with Certain Limitations. Available at <https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-fda-authorizes-pharmacists-prescribe-paxlovid-certain-limitations>.
- *U.S. Department of Health and Human Services - CombatCOVID*: What Are Oral Antivirals? Available at <https://combatcovid.hhs.gov/what-are-oral-antivirals>.
- *World Health Organization (WHO)*: Coronavirus. <https://www.who.int/health-topics/coronavirus>.

## Expert Reviewers

- Jessica Cataldi, MD, Pediatric Infectious Diseases and Epidemiology, Children's Hospital Colorado, Aurora, Colorado.
- Lisa M. Koonin, DrPH, MN, MPH; Founder, Health Preparedness Partners; Pandemic preparedness specialist.
- The Author and Editorial Team are extremely grateful for this subject matter expertise and critical review.

## REFERENCES

1. Abuelgasim H, Albury C, Lee J. Effectiveness of honey for symptomatic relief in upper respiratory tract infections: a systematic review and meta-analysis *BMJ Evid Based Med*. 2020;bmjebm-2020-111336.
2. ACOG Committee. ACOG Committee Opinion No. 753: Assessment and Treatment of Pregnant Women With Suspected or Confirmed Influenza. *Obstet Gynecol*. 2018 Oct;132(4):e169-e173.
3. Baeck M, Herman A. COVID toes: where do we stand with the current evidence? *Int J Infect Dis*. 2021 Jan;102:53-55.
4. Bender JK, Brandl M, Höhle M, Buchholz U, Zeitmann N. Analysis of asymptomatic and presymptomatic transmission in SARS-CoV-2 outbreak, Germany, 2020. *Emerg Infect Dis*. 2021 Apr [2/23/2021]. Early release. Available at: [https://wwwnc.cdc.gov/eid/article/27/4/20-4576\\_article](https://wwwnc.cdc.gov/eid/article/27/4/20-4576_article).
5. Berlin DA, Gulick RM, Martinez FJ. Severe Covid-19. *N Engl J Med*. 2020 Dec 17;383(25):2451-2460.
6. Bonow RO, Fonarow GC, O'Gara PT, Yancy CW. Association of Coronavirus Disease 2019 (COVID-19) With Myocardial Injury and Mortality. *JAMA Cardiol*. Published online March 27, 2020.
7. Caturegli G, Materi J, Howard BM, Caturegli P. Clinical Validity of Serum Antibodies to SARS-CoV-2: A Case-Control Study. *Ann Intern Med*. 2020 Oct 20;173(8):614-622.
8. CDC COVID-19 Response Team. Severe Outcomes Among Patients with Coronavirus Disease 2019 (COVID-19) - United States. February 12 - March 16, 2020. *MMWR Morb Mortal Wkly Rep*. ePub: 18 March 2020.

9. Centers for Disease Control and Prevention (CDC). February 12 - March 28, 2020. Preliminary Estimates of the Prevalence of Selected Underlying Health Conditions Among Patients with Coronavirus Disease 2019 - United States. *MMWR Morb Mortal Wkly Rep.* ePub: 31 March 2020.
10. Cortegiani A, Ingoglia G, Ippolito M, Giarratano A, Einav S. A systematic review on the efficacy and safety of chloroquine for the treatment of COVID-19. *J Crit Care.* 2020 Mar 10. pii: S0883-9441(20)30390-7. doi: 10.1016/j.jcrc.2020.03.005. [Epub ahead of print].
11. Deeks JJ, Dinnes J, Takwoingi Y, et al. Cochrane COVID-19 Diagnostic Test Accuracy Group. Antibody tests for identification of current and past infection with SARS-CoV-2. *Cochrane Database Syst Rev.* 2020 Jun 25;6(6):CD013652. Cochrane COVID-19 Diagnostic Test Accuracy Group.
12. Deutsch A, Blasiak R, Keyes A, Wu J, Marmon S, Asrani F, Moy J, Russo M, McLellan BN. COVID toes: Phenomenon or epiphenomenon? *J Am Acad Dermatol.* 2020 Nov;83(5):e347-e348.
13. Dinnes J, Deeks JJ, Adriano A, et al. Cochrane COVID-19 Diagnostic Test Accuracy Group. Rapid, point-of-care antigen and molecular-based tests for diagnosis of SARS-CoV-2 infection. *Cochrane Database Syst Rev.* 2020 Aug 26;8:CD013705.
14. Ebell MH, Lundgren J, Youngpairoj S. How long does a cough last? Comparing patients' expectations with data from a systematic review of the literature. *Ann Fam Med.* 2013 Jan;11(1):5-13.
15. Eccles R. Understanding the symptoms of the common cold and influenza. *Lancet Infect Dis.* 2005 Nov;5(11):718-25.
16. Ettman CK, Abdalla SM, Cohen GH, Sampson L, Vivier PM, Galea S. Prevalence of Depression Symptoms in US Adults Before and During the COVID-19 Pandemic. *JAMA Netw Open.* 2020 Sep 1;3(9):e2019686.
17. Fosbøl EL, Butt JH, Østergaard L, et al. Association of Angiotensin-Converting Enzyme Inhibitor or Angiotensin Receptor Blocker Use With COVID-19 Diagnosis and Mortality. *JAMA.* 2020 Jul 14;324(2):168-177.
18. Freedman MS, Ault K, Bernstein H. Advisory Committee on Immunization Practices Recommended Immunization Schedule for Adults Aged 19 Years or Older - United States, 2021. *MMWR Morb Mortal Wkly Rep.* 2021 Feb 12;70(6):193-196.
19. Gandhi RT, Lynch JB, Del Rio C. Mild or Moderate Covid-19. *N Engl J Med.* 2020 Oct 29;383(18):1757-1766.
20. Gibani MM, Toumazou C, Sohbaty M, et al. Assessing a novel, lab-free, point-of-care test for SARS-CoV-2 (CovidNudge): a diagnostic accuracy study. *Lancet Microbe.* 2020 Sep 17.
21. Grohskopf LA, Alyanak E, Broder KR, et al. Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices - United States, 2020-21 Influenza Season. *MMWR Recomm Rep.* 2020;69(8):1-24. Published 2020 Aug 21.
22. Guan WJ, Ni ZY, Hu Y, et al. Characteristics of Coronavirus Disease 2019 in China. *N Engl J Med.* 2020;382(18):1708-1720.

23. Hansen CH, Michlmayr D, Gubbels SM, Mølbak K, Ethelberg S. Assessment of protection against reinfection with SARS-CoV-2 among 4 million PCR-tested individuals in Denmark in 2020: a population-level observational study. *Lancet*. 2021 Mar 27;397(10280):1204-1212.
24. Huang C, Wang Y, et.al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet* published online. January 24, 2020. [https://doi.org/10.1016/S0140-6736\(20\)30183-5](https://doi.org/10.1016/S0140-6736(20)30183-5).
25. Hui DS. Epidemic and Emerging Coronaviruses (Severe Acute Respiratory Syndrome and Middle East Respiratory Syndrome). *Clin Chest Med*. 2017 Mar;38(1):71-86.
26. Jayk Bernal A, Gomes da Silva MM, Musungaie DB, et.al. MOVE-OUT Study Group. Molnupiravir for Oral Treatment of Covid-19 in Nonhospitalized Patients. *N Engl J Med*. 2021 Dec 16:NEJMoa2116044.
27. Jiang F, Deng L, Zhang L, Cai Y, Cheung CW, Xia Z. Review of the Clinical Characteristics of Coronavirus Disease 2019 (COVID-19). *J Gen Intern Med*. 2020;35(5):1545-1549.
28. Lai CKC, Lam W. Laboratory testing for the diagnosis of COVID-19. *Biochem Biophys Res Commun*. 2021 Jan 29;538:226-230.
29. Lauer SA, Grantz KH, Bi Q, et al. The Incubation Period of Coronavirus Disease 2019 (COVID-19) From Publicly Reported Confirmed Cases: Estimation and Application. *Ann Intern Med*. 2020;172(9):577-582.
30. Lee Y, Min P, Lee S, Kim SW. Prevalence and Duration of Acute Loss of Smell or Taste in COVID-19 Patients. *J Korean Med Sci*. 2020 May 11;35(18):e174.
31. Li Q, Zhou L, Zhou M, Chen Z, et.al. Preliminary Report: Epidemiology of the Avian Influenza A (H7N9) Outbreak in China. *N Engl J Med*. 2013 Apr 24. [Epub ahead of print].
32. Ludvigsson JF. Systematic review of COVID-19 in children show milder cases and a better prognosis than adults. *Acta Paediatr*. 2020 Mar 23. doi: 10.1111/apa.15270. [Epub ahead of print].
33. Metz TD, Clifton RG, Hughes BL, et.al. National Institute of Child Health and Human Development Maternal-Fetal Medicine Units (MFMU) Network. Association of SARS-CoV-2 Infection With Serious Maternal Morbidity and Mortality From Obstetric Complications. *JAMA*. 2022 Feb 7.
34. Mizumoto K, Kagaya K, Zarebski A, Chowell G. Estimating the asymptomatic proportion of coronavirus disease 2019 (COVID-19) cases on board the Diamond Princess cruise ship, Yokohama, Japan, 2020. *Euro Surveill*. 2020;25(10):2000180.
35. Oliver SE, Gargano JW, Marin M, et.al. The Advisory Committee on Immunization Practices' Interim Recommendation for Use of Moderna COVID-19 Vaccine - United States, December 2020. *MMWR Morb Mortal Wkly Rep*. 2021 Jan 1;69(5152):1653-1656.
36. Oliver SE, Gargano JW, Marin M, et.al. The Advisory Committee on Immunization Practices' Interim Recommendation for Use of Pfizer-BioNTech COVID-19 Vaccine - United States, December 2020. *MMWR Morb Mortal Wkly Rep*. 2020 Dec 18;69(50):1922-1924.
37. Pascarella G, Strumia A, Piliengo C, et al. COVID-19 diagnosis and management: a comprehensive review [published online ahead of print, 2020 Apr 29]. *J Intern Med*. 2020;10.1111/joim.13091.

38. Paules CI, Marston HD, Fauci AS. Coronavirus Infections - More Than Just the Common Cold. *JAMA*, Published online January 23, 2020.
39. Phelan D, Kim JH, Chung EH. A Game Plan for the Resumption of Sport and Exercise After Coronavirus Disease 2019 (COVID-19) Infection. *JAMA Cardiol*. 2020 May 13.
40. Pollock NR, Jacobs JR, Tran K, et.al. Performance and Implementation Evaluation of the Abbott BinaxNOW Rapid Antigen Test in a High-Throughput Drive-Through Community Testing Site in Massachusetts. *J Clin Microbiol*. 2021 Apr 20;59(5):e00083-21.
41. Pringle JC, et.al. COVID-19 in a Correctional Facility Employee Following Multiple Brief Exposures to Persons with COVID-19 - Vermont, July-August 2020. *MMWR* October 21, 2020 / 69. Early Release.
42. Radonovich LJ Jr, Simberkoff MS3, Bessesen MT, et.al. N95 Respirators vs Medical Masks for Preventing Influenza Among Health Care Personnel: A Randomized Clinical Trial. *JAMA*. 2019 Sep 3;322(9):824-833.
43. Rasmussen SA, Smulian JC, Lednicky JA, Wen TS, Jamieson DJ. Coronavirus Disease 2019 (COVID-19) and Pregnancy: What obstetricians need to know. *Am J Obstet Gynecol*. 2020 Feb 24. pii: S0002-9378(20)30197-6. doi: 10.1016/j.ajog.2020.02.017. [Epub ahead of print].
44. Rothberg MB, Haessler SD, Brown RB. Complications of viral influenza. *Am J Med*. 2008 Apr;121(4):258-64.
45. Rothman RE, Irvin CB, Moran GJ, et.al. Public Health Committee of the American College of Emergency Physicians. Respiratory hygiene in the emergency department. *Ann Emerg Med*. 2006;48(5):570-82.
46. Song Z, Xu Y, et.al. From SARS to MERS, thrusting coronaviruses into the spotlight. *Viruses*. 2019 Jan 14;11(1).
47. Struyf T, Deeks JJ, Dinnes J, Takwoingi Y, et.al. Cochrane COVID-19 Diagnostic Test Accuracy Group. Signs and symptoms to determine if a patient presenting in primary care or hospital outpatient settings has COVID-19 disease. *Cochrane Database Syst Rev*. 2020 Jul 7;7(7):CD013665.
48. Uyeki TM, Bernstein HH, Bradley JS, et.al. Clinical Practice Guidelines by the Infectious Diseases Society of America: 2018 Update on Diagnosis, Treatment, etc. of Seasonal Influenza. *Clin Infect Dis*. 2019 Mar 5;68(6):895-902.
49. Wang H, Feng Z, Shu Y, Yu H, et.al. Probable limited person-to-person transmission of highly pathogenic avian influenza A (H5N1) virus in China. *Lancet*. 2008 Apr 26;371(9622):1427-34.
50. Wang W, Xu Y, Gao R, Lu R, Han K, Wu G, Tan W. Detection of SARS-CoV-2 in Different Types of Clinical Specimens. *JAMA*. 2020 Mar 11. doi: 10.1001/jama.2020.3786. [Epub ahead of print].
51. Wang X, Ferro EG, Zhou G, Hashimoto D, Bhatt DL. Association Between Universal Masking in a Health Care System and SARS-CoV-2 Positivity Among Health Care Workers. *JAMA*. 2020 Jul 14;324(7):703-4.
52. Yu IT, Li Y, Wong TW, et al. Evidence of airborne transmission of the severe acute respiratory syndrome virus. *N Engl J Med*. 2004;350(17):1731-1739.

## AUTHOR AND COPYRIGHT

**Author:** David A. Thompson, MD, FACEP  
**Copyright:** 2000-2022, LaGrange Medical Software, Inc. All rights reserved.  
**Company:** Schmitt-Thompson Clinical Content  
**Content Set:** Office Hours Telehealth Triage Protocols | Adult  
**Version Year:** 2022  
**Last Revised:** 9/7/2022  
**Last Reviewed:** 9/7/2022