

DEFINITION

- Diagnosis was confirmed by **positive lab test** OR
- **Clinical diagnosis** (suspected diagnosis) was made by healthcare provider (HCP) OR
- **Patient or caregiver suspects COVID-19** based on symptoms consistent with COVID-19 and recalls close contact with a person with COVID-19 in past two weeks, or is living in an area of high community spread.

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 2021-2022 influenza season, triagers can use the *COVID-19 - Diagnosed or Suspected* protocol when a patient calls with flu-like symptoms.
- In adult patients 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 by age in adults.
- *Fully vaccinated* means that 2 or more weeks have passed after receiving a one-dose vaccine (e.g., Johnson and Johnson) or the second dose of a two-dose vaccine (e.g., AstraZeneca, Pfizer, Moderna).

This protocol was **last updated** 8/25/2021.

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 to triager: Tell caller to TELL 911 dispatcher and medics about possible COVID-19 exposure.

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

R/O: hypoxia, sepsis. Note to triager: Tell caller to TELL 911 dispatcher and medics about possible COVID-19 exposure.

Bluish (or gray) lips or face now

R/O: cyanosis and need for oxygen. Note to triager: Tell caller to TELL 911 dispatcher and medics about possible COVID-19 exposure.

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

R/O: shock. Note to triager: Tell caller to TELL 911 dispatcher and medics about possible COVID-19 exposure.

Sounds like a life-threatening emergency to the triager

Note to triager: Tell caller to TELL 911 dispatcher and medics about possible COVID-19 exposure.

See More Appropriate Protocol

[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 to Triager: 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 to Triager: Consider using both this protocol AND the Chest Pain protocol if any concern for cardiac or other more serious cause of chest pain. Call ahead to the ED.

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

R/O: pneumonia. Note to triager: Call ahead to the ED.

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

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

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

R/O: pneumonia. Note: not from stuffy nose (e.g., not relieved by cleaning out the nose). Note: Call ahead to location where patient will go for care.

Chest pain or pressure

R/O: pneumonia, pleurisy, chest discomfort from COVID-19. Note: Call ahead to location where patient will go for care.

Patient sounds very sick or weak to the triager

Reason: severe acute illness or serious complication suspected. Note: Call ahead to location where patient will go for care.

Discuss With PCP and Callback by Nurse within 1 Hour

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., nursing home patient, CVA, chronic illness, recovering from surgery)

R/O: pneumonia

HIGH RISK for severe COVID complications (e.g., age > 64 years, obesity with BMI > 25, pregnant, chronic lung disease or other chronic medical condition) (Exception: Already seen by PCP and no new or worsening symptoms.)

Reason: See HIGH RISK criteria in Background. Monoclonal antibody therapy may be indicated for COVID-19 if within 10 days of symptom onset. Testing for both COVID-19 and influenza may be needed.

[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.

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 protocol

Cough present > 3 weeks

Home Care

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

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

[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.

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, questions about

Note: Broad information including symptoms, how it is spread, travel, et al.

HOME CARE ADVICE

Treating the Symptoms When You Have Been Diagnosed With 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 (probably nose swab) 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. General Care Advice for COVID-19 Symptoms:**
 - The treatment is 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.
- 3. Cough Medicines:**
 - **OTC Cough Syrups:** The most common cough suppressant in OTC cough medications is dextromethorphan. Often the letters "DM" appear in the name.
 - **OTC Cough Drops:** Cough drops can help a lot, especially for mild coughs. They reduce coughing by soothing your irritated throat and removing that tickle sensation in the back of the throat. Cough drops also have the advantage of portability - you can carry them with you.
 - **Home Remedy - Hard Candy:** Hard candy works just as well as medicine-flavored OTC 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. Honey should not be given to

infants under one year of age.

4. **Caution - Dextromethorphan:**

- Do not try to completely suppress coughs that produce mucus and phlegm. Remember that coughing is helpful in bringing up mucus from the lungs and preventing pneumonia.
- Research Notes: Dextromethorphan in some research studies has been shown to reduce the frequency and severity of cough in adults (18 years or older) without significant adverse effects. However, other studies suggest that dextromethorphan is no better than placebo at reducing a cough.
- Drug Abuse Potential: It should be noted that dextromethorphan has become a drug of abuse. This problem is seen most often in adolescents. Overdose symptoms can range from giggling and euphoria to hallucinations and coma.
- **Contraindicated:** 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). Do not take dextromethorphan if you are taking venlafaxine (Effexor).

5. **Use a Humidifier:**

- If the air in your home is dry, use a cool-mist humidifier.
- *Reason:* dry air makes coughs worse.

6. **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.

7. **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.

8. **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.*

9. **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 for 8 hours. 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, ½ 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.

10. **Note to Triager - Ibuprofen Concerns:**

- Discuss only if caller brings up concerns about ibuprofen.

- **Response:** 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 to support the claim that ibuprofen made COVID-19 worse.

11. **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:**

- 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.

- In the Summer and Fall of 2021 the **Delta variant** has become the most common COVID-19 variant.

- 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 daily. 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:**

- *Here are the main risk factors for getting sick with COVID-19.*

- **Close contact with a person** who tested positive for COVID-19 AND contact occurred while they were ill. Close contact means being within 6 feet (2 meters) for a total of 15 minutes or more in a 24-hour period. This includes living with someone infected with COVID-19.

- Living in or travel to an area where there is **high community spread** of COVID-19.
 - **International travel:** The CDC (<https://www.cdc.gov/coronavirus/2019-ncov/travelers>) has the most up-to-date list of where COVID-19 outbreaks are occurring.
 - **Not being fully vaccinated.**
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 only 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.
 - Avoid closed spaces (indoors) when possible and all crowds (even outdoors).
 - Limit close contact with people outside your family unit.
 - 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. **How to Protect Others - When You Are Sick With COVID-19:**
- **Stay Home a Minimum of 10 Days:** Home isolation is needed for at least 10 days after the symptoms started. 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.
 - **Cover the Cough:** Cough and sneeze into your shirt sleeve or inner elbow. Don't cough into your hand or the air. If available, cough into a tissue and throw it into a trash can.
 - **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.
 - **Wear a Mask:** Wear a facemask when around others. Always wear a facemask (if available) if you have to leave your home (such as going to a medical facility).
 - **Call First if Medical Care Needed:** Call ahead to get approval and careful directions.
7. **How to Protect Others - When You Test Positive for COVID but Have No Symptoms:**
- **Stay Home a Minimum of 10 Days:** Home isolation is needed for at least 10 days after the date of the positive test. 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.
 - **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.

- **Wear a Mask:** Wear a facemask when around others. Always wear a facemask if you have to leave your home (such as going to a medical facility).
- **Call First if Medical Care Needed:** Call ahead to get approval and careful 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. **Symptomatic patients** should get a test within 3 days. Asymptomatic **unvaccinated people** with a close contact COVID-19 exposure should get the viral test should get tested immediately. If the test is negative, then testing should be repeated 5 to 7 days after exposure. **Vaccinated people** with an exposure should get the viral test 3 to 5 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. We do not know yet if having antibodies to the virus can protect someone from getting infected with the virus again, or how long that protection might last. 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 Delta 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 are in an area of high COVID-19 spread or if you have a weak immune system.
- **People Who Are Well (Not Sick With COVID-19) Should Wear Masks If:**
 - ... you are in an indoor public space (such as a church or a grocery store).
 - ... you are in a crowded outdoor setting (e.g., concert, music festival, rally).
 - ... you are 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/diy-cloth-face-coverings.html>.

11. **COVID-19 - Going to the ER or Urgent Care Center:**
 - If you or your child needs to be seen for an urgent medical problem, do not hesitate to go.
 - ERs and urgent care centers are safe places. They are well equipped to protect you against the virus.
 - For non-urgent conditions, call us (your healthcare provider's office) first.

12. **Other COVID-19 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.
 - **Treatment:** Treatment is supportive. Oxygen and IV fluids are used for hospitalized patients. On May 1, 2020 the U.S. Food and Drug Administration (FDA) granted temporary emergency use authorization (EUA) for the investigational antiviral remdesivir to treat COVID-19. Doctors can use this drug to treat patients who are hospitalized with COVID-19 who are severely ill. More research is needed to determine how well this drug works and for which patients.
 - **Prevention - Vaccine:** Several vaccines have been approved and released for use in the United States and Canada. Additional vaccines are in development. The COVID-19 vaccine 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. A monoclonal antibody therapy (REGEN-COV; casirivimab-imdevimab) has become recently (August 2021) available in the U.S. through an emergency use authorization (EUA) for asymptomatic people at high risk for severe disease who have had a close contact exposure. *Remember, social distancing and wearing masks have been proven to help prevent COVID-19!*

13. **Call Back If:**
 - You have more questions

COVID-19 Home Isolation and Protecting Others

1. **How to Protect Others - When You Are Sick With COVID-19:**
 - **Stay Home a Minimum of 10 Days:** Home isolation is needed for at least 10 days after the symptoms started. 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.
 - **Cover the Cough:** Cough and sneeze into your shirt sleeve or inner elbow. Don't cough into your hand or the air. If available, cough into a tissue and throw it into a trash can.
 - **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.

- **Wear a Mask:** Wear a facemask when around others. Always wear a facemask (if available) if you have to leave your home (such as going to a medical facility).

- **Call First if Medical Care Needed:** Call ahead to get approval and careful directions.

2. **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.

3. **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.

4. **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.

5. **Call Ahead Before Visiting Your Healthcare Provider (Doctor, NP, PA):**

- Call ahead: If you have a medical appointment, call your doctor's office or emergency department, and tell them you have or may have COVID-19.

- This will help the office protect themselves and other patients.

- Wear a facemask.

6. **Stopping Home Isolation - Talk to Your Healthcare Provider:**

- *Talk to your healthcare provider.*

- The decision to stop home isolation **if you are sick with COVID-19** should be made by your healthcare provider in consultation with the local health departments.

- Local decisions depend on local circumstances.

7. **Stopping Home Isolation - Must Meet All 3 Requirements (CDC):**

- Fever gone for at least 24 hours off fever-reducing medicines **AND**

- Cough and other symptoms must be improved **AND**

- Symptoms started more than 10 days ago.

- *If unsure if it is safe for you to leave isolation, check the CDC website or call your healthcare provider.*

8. **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.

- Avoid closed spaces (indoors) when possible and all crowds (even outdoors).

- Limit close contact with people outside your family unit.

- 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 - 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 Delta 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 are in an area of high COVID-19 spread or if you have a weak immune system.
 - **People Who Are Well (Not Sick With COVID-19) Should Wear Masks If:**
 - ... you are in an indoor public space (such as a church or a grocery store).
 - ... you are in a crowded outdoor setting (e.g., concert, music festival, rally).
 - ... you are 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/diy-cloth-face-coverings.html>.
3. **Keep Your Mind Positive:**
- **Live in the Present:** Live in the present, not the future. The future is where your needless worries live.
 - **Think Positive:** Use a mantra to reduce your fears, such as "I am strong". Stay positive.
 - **Get Outdoors:** Take daily walks. Go to a park if you have one. Being in nature is good for your immune system.
 - **Stay in Touch With Your Friends and Family:** Use regular phone calls and video chats to stay in touch with those you love. Schedule virtual video dinners with friends and family!
4. **Keep Your Body Strong:**
- Get your body 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.
5. **Ask for Help:**
- If you feel so sad or worried that you cannot function, reach out to your health care provider, local mental health center, or national helpline.
 - **Canada:** In Canada, crisis and mental health support is available at: <https://www.canada.ca/en/public-health/services/mental-health-services/mental-health-get-help.html>.

• **United States - SAMHSA:** 1-800-662-HELP (4357). Website: www.samhsa.gov/find-help/national-helpline.

6. **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.

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

- **Stay Home a Minimum of 10 Days:** Home isolation is needed for at least 10 days after the symptoms started. 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.
- **Cover the Cough:** Cough and sneeze into your shirt sleeve or inner elbow. Don't cough into your hand or the air. If available, cough into a tissue and throw it into a trash can.
- **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.
- **Wear a Mask:** Wear a facemask when around others. Always wear a facemask (if available) if you have to leave your home (such as going to a medical facility).
- **Call First if Medical Care Needed:** Call ahead to get approval and careful directions.

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

- **Stay Home a Minimum of 10 Days:** Home isolation is needed for at least 10 days after the date of the positive test. 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.
- **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.
- **Wear a Mask:** Wear a facemask when around others. Always wear a facemask if you have to leave your home (such as going to a medical facility).
- **Call First if Medical Care Needed:** Call ahead to get approval and careful directions.

9. **Call Back If:**

- You have more questions

COVID-19 Testing and Test Results

1. **Note to Triager - 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 now available in some drugstores (such as CVS or Walgreens).
- *What about a standing order?* As testing becomes more widely available, 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:** All people who have symptoms of COVID-19 should get tested **within 3 days** of becoming ill.
 - **Close Contact Exposure:** All people who have had close contact, within 6 feet (2 meters) for a total of 15 minutes or more in a 24-hour period, with someone confirmed to have COVID-19. This includes all people who live with someone confirmed to have COVID-19. **Unvaccinated** or partially vaccinated people should get tested immediately. If the test is negative, then testing should be repeated **5 to 7 days** after exposure. **Vaccinated** people get tested **3 to 5 days** after exposure.
 - **Unvaccinated and Crowded Events:** The CDC recommends that unvaccinated or partially vaccinated people who have taken part in crowded indoor or outdoor events (e.g., concerts, festivals, rallies, weddings) should get tested immediately. If the test is negative, then testing should be repeated **5 to 7 days** after exposure.
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 now available in some drugstores (such as CVS, Walgreens).
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. **Symptomatic patients** should get a test within 3 days. Asymptomatic **unvaccinated people** with a close contact COVID-19 exposure should get the viral test should get tested immediately. If the test is negative, then testing should be repeated 5 to 7 days after exposure. **Vaccinated people** with an exposure should get the viral test 3 to 5 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. We do not know yet if having antibodies to the virus can protect someone from getting infected with the virus again, or how long that protection might last. 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 most likely have an active COVID-19 infection and *can spread the infection to others*.
 - A **negative viral test** means that you likely did NOT have an active COVID-19 infection at the time the test was done.
 - **Note:** All tests can sometimes have a false (wrong) result. Some reasons for this include how the sample was collected, how long into the illness it was taken, and the type of test done. That is why it is important to discuss your results with your health care provider. The COVID-19 vaccine does NOT affect the results of the viral test.
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.
 - It is not yet known if antibodies protect you from getting COVID-19 again.
 - 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 healthcare provider (HCP) 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 HCP. 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. *Reason:* A test may be incorrectly negative; for example, if a person gets the test too soon after exposure. Further, if a person is exposed again or develops symptoms suggestive of COVID-19, then repeat viral testing should be performed.
 - **Positive Viral Test:** After a positive test, repeat tests are generally not recommended for 90 days (3 months). *Reason:* Even after it is safe to stop isolation (usually 10 days), tests may stay positive. Further, re-infection appears to be rare during the initial 90 days after symptom onset of the preceding infection. 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 health care provider.
9. **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 Delta 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 are in an area of high COVID-19 spread or if you have a weak immune system.
 - **People Who Are Well (Not Sick With COVID-19) Should Wear Masks If:**
 - ... you are in an indoor public space (such as a church or a grocery store).
 - ... you are in a crowded outdoor setting (e.g., concert, music festival, rally).
 - ... you are 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/diy-cloth-face-coverings.html>.

10. **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.
- In the Summer and Fall of 2021 the **Delta variant** became the most common COVID-19 variant.
- COVID-19 vaccination is recommended for all people aged 12 years and older, including people who are pregnant, breastfeeding, trying to get pregnant now, or might become pregnant in the future.
- 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 daily. 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.

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** has become the most common COVID-19 variant:

- The Delta variant spreads much faster than other variants.
- It may cause more severe illness and more hospitalizations.

The COVID-19 vaccines help protect against the delta variant.

- Infection with COVID-19 Delta variant 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 can occur in a closed room with poor ventilation. Aerosols are a **rare cause** of COVID-19 spread.

Exposure Risk Factors

Risk factors for getting sick with COVID-19 are:

- **Close contact with a person** who tested positive for COVID-19 AND contact occurred while they were ill. Close contact is defined as being within 6 feet (2 meters) of an infected person for a total of 15 minutes or more in a 24-hour period. This includes **living with someone** infected with COVID-19.
- **Living in or travel from a city** or area where there is community spread of COVID-19. This carries a lower risk compared to close contact if one follows physical distancing recommendations.

Community spread is now occurring in most of the US, especially in cities.

• **International Travel:** The CDC (<https://www.cdc.gov/coronavirus/2019-ncov/travelers>) has the most up-to-date list of where COVID-19 outbreaks are occurring.

Reducing Exposure Risk - Going Out in Public

The risk of COVID-19 spread increases with how closely a person interacts with others, how many people there are, and the longer the interaction.

A person should bring the following with them whenever they go out:

- A cloth face-covering or other face mask that snugly fits over the mouth and nose
- Hand sanitizer with at least 60% alcohol

According to the CDC, if you are fully vaccinated, you can participate in many of the activities that you did before the pandemic:

- "To maximize protection from the Delta variant and prevent possibly spreading it to others, wear a mask indoors in public if you are in an area of substantial or high transmission.
- Wearing a mask is most important if you have a weakened immune system or if, because of your age or an underlying medical condition, you are at increased risk for severe disease, or if someone in your household has a weakened immune system, is at increased risk for severe disease, or is unvaccinated. If this applies to you or your household, you might choose to wear a mask regardless of the level of transmission in your area."

The CDC provides additional instructions and information at: <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/going-out.html>.

Reducing Exposure Risk - Travel

- Avoid all non-essential travel.
- If you must travel, go to the CDC website for updates on travel advisories: <https://www.cdc.gov/coronavirus/2019-ncov/travelers>.

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.

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. We do not know yet if having antibodies to the virus can protect someone from getting infected with the COVID-19 virus again, or how long that protection might last. 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.

The results usually come back in 1 to 3 days, but may take longer depending on testing kit or testing site availability.

Who should get tested? When should testing be performed?

- All people who have **symptoms of COVID-19**. Should get tested **within 3 days** of becoming ill.
- All people who have had **close contact**, within 6 feet (2 meters) for a total of 15 minutes or more in a 24-hour period, with someone confirmed to have COVID-19. This includes all people who **live with someone** confirmed to have COVID-19. Unvaccinated people should get tested immediately. If the test is negative, then testing should be repeated **5 to 7 days** after exposure. Vaccinated people get tested **about 3 to 5 days** after exposure.
- The CDC recommends that unvaccinated people who have taken part in **crowded indoor or outdoor events** (e.g., concerts, festivals, rallies, weddings) should get tested immediately. If the test is negative, then testing should be repeated **5 to 7 days** after exposure.

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.

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)
- Overweight (BMI from 25 to 30) or obesity (BMI of 30 or higher)
- Pregnancy
- Sickle cell disease
- Smoking
- Solid organ transplant
- Stroke or cerebrovascular disease
- Weak immune system

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.

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!

Treatment

Treatment is supportive. Oxygen and IV fluids are used for hospitalized patients. Other treatments used in **hospitalized patients** include:

- Antiviral medicine *remdesivir*, under an emergency use authorization (EUA)
- Combination of *remdesivir* and *baricitinib*, under an emergency use authorization (EUA)
- *Steroid* medications

The following monoclonal antibody therapies are available through an emergency use authorization (EUA) for select **outpatients** at high risk for severe disease:

- Bamlanivimab
- Bamlanivimab-etesevimab
- Casirivimab-imdevimab

Prevention

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

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.

A monoclonal antibody therapy (REGEN-COV; casirivimab-imdevimab) has become recently (August 2021) available in the U.S. through an emergency use authorization (EUA) for asymptomatic people at high risk for severe disease who have had a close contact exposure.

Vaccination

COVID-19 vaccination is recommended for all people aged 12 years and older, including people who are pregnant, breastfeeding, trying to get pregnant now, or might become pregnant in the future.

Source: CDC 08.11.2021

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

- *AstraZeneca (Oxford)*: Approved for use in Canada in February 2021. For people 18 years and older. 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 people 18 years and older. More information available at: <https://www.jnj.com/coronavirus>.
- *Moderna*: Approved for use in Canada and US, December 2020. For people 18 years and older. More information available at: <https://www.modernatx.com/cove-study>.
- Novavax.
- *Pfizer (BioNTech)*: Approved for use in Canada and US, December 2020. For people 12 years and older. More information available at: <https://www.cvdvaccine.com/>.

There are other COVID-19 vaccines still in development.

Quarantine vs. Isolation

The term **quarantine** means to keep someone who might have been exposed to COVID-19 away from others. Quarantine helps prevent the spread of COVID-19 because a person with COVID-19 can spread the virus before they get sick. Also, some people can get COVID-19 and have no symptoms.

How long should a person quarantine after being exposed to COVID-19? The best and safest approach is to stay at home and quarantine for 14 days. In December 2020, the CDC outlined two new optional strategies for determining quarantine duration for asymptomatic people after COVID-19 exposure:

- *Option 1:* Quarantine for only 10 days (without COVID-19 viral testing).
- *Option 2:* Get a negative viral COVID-19 test on day 5 to 7 after exposure and quarantine for only 7 days.
- With either option, continue to watch for symptoms and wear a mask for 14 days after the exposure.

The term **isolation** means to keep someone who is infected with COVID-19 away from others. Isolation helps prevent the spread of COVID-19 to people.

How long should a person isolate after getting infected with COVID-19? A person must meet all 3 of these requirements to end the isolation period:

- Fever gone for at least 24 hours off fever-reducing medicines **AND**
- Cough and other symptoms must be improved **AND**
- Symptoms started more than 10 days ago.

Notes: Those that are severely ill with COVID-19 or have a weak immune system may need to isolate for longer than 10 days. *If unsure if it is safe for you to leave isolation, check the CDC website or call your healthcare provider.*

Other Coronaviruses 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)

Animals and 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>.

Internet Resources

- *Centers for Disease Control and Prevention (CDC):* Coronavirus. <https://www.cdc.gov/coronavirus/>.
- *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>.
- *World Health Organization (WHO):* Coronavirus. <https://www.who.int/health-topics/coronavirus>.

Expert Reviewer

- 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. 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.
4. Berlin DA, Gulick RM, Martinez FJ. Severe Covid-19. *N Engl J Med*. 2020 Dec 17;383(25):2451-2460.
5. Blagev DP, Harris D, Dunn AC, Guidry DW, Grissom CK, Lanspa MJ. Clinical presentation, treatment, and short-term outcomes of lung injury associated with e-cigarettes or vaping: a prospective observational cohort study. *Lancet*. 2019 Dec 7;394(10214):2073-2083.
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, Youngpairaj 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. Gandhi RT, Lynch JB, Del Rio C. Mild or Moderate Covid-19. *N Engl J Med*. 2020 Oct 29;383(18):1757-1766.
19. 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.
20. 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.
21. Guan WJ, Ni ZY, Hu Y, et al. Characteristics of Coronavirus Disease 2019 in China. *N Engl J Med*. 2020;382(18):1708-1720.
22. 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.
23. 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).
24. Hui DS. Epidemic and Emerging Coronaviruses (Severe Acute Respiratory Syndrome and Middle East Respiratory Syndrome). *Clin Chest Med*. 2017 Mar;38(1):71-86.
25. 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.
26. 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.
27. 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.

28. 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].
29. 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].
30. 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.
31. 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.
32. 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.
33. Pascarella G, Strumia A, Piliago 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.
34. Paules CI, Marston HD, Fauci AS. Coronavirus Infections - More Than Just the Common Cold. *JAMA*, Published online January 23, 2020.
35. 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.
36. 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.
37. 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.
38. 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].
39. Rothberg MB, Haessler SD, Brown RB. Complications of viral influenza. *Am J Med*. 2008 Apr;121(4):258-64.
40. 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.
41. Song Z, Xu Y, et.al. From SARS to MERS, thrusting coronaviruses into the spotlight. *Viruses*. 2019 Jan 14;11(1).
42. 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.

43. 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.
44. 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.
45. 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].
46. 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.
47. 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:	2000-2021, LaGrange Medical Software, Inc. All rights reserved.
Company:	Schmitt-Thompson Clinical Content
Content Set:	Office Hours Telehealth Triage Protocols Adult
Version Year:	2021
Last Revised:	8/25/2021
Last Reviewed:	8/25/2021