
COVID-19 - Exposure

Office Hours Telephone Triage Protocols | Pediatric | 2021

DEFINITION

- Exposed (close contact) to a person who has been diagnosed (confirmed by testing) or suspected to have COVID-19
- Person is well and has NO COVID-19 associated symptoms (cough, fever, shortness of breath or others). For symptomatic suspected COVID-19 patients, use the COVID-19 Diagnosed or Suspected protocol.
- Also included: Questions about COVID-19
- **Updated:** May 25, 2021

CONTACT (EXPOSURE) to COVID-19 Definition: Higher Risk

- **Household Close Contact.** Lives with a person who has positive test for COVID-19. This carries the highest risk of transmitting the infection.
- **Other Close Contact.** Close contact includes kissing, hugging or sharing eating and drinking utensils. It also includes close conversations. Direct contact with secretions of a person with COVID-19 is also close contact. Includes being in the same childcare room, classroom or carpool. These exposures are usually lower risk than living with an infected person.

NOT CLOSE CONTACT - Low Risk Exposure:

- Walking by a person who has COVID-19 carries no risk.
- Being outdoors and observing safe distancing (greater than 6 feet). Outdoor contacts are much safer than indoor contacts.
- Being in the same school, workplace, place of worship or building as ONE person with COVID-19 carries a small risk. This risk increases once multiple people in that setting develop COVID-19.

TRIAGE ASSESSMENT QUESTIONS

See More Appropriate Protocol

- [1] Symptoms of COVID-19 (cough, SOB or others) AND [2] lab test positive OR diagnosed by HCP
Go to Protocol: COVID-19 - Diagnosed or Suspected (Pediatric)
- [1] Symptoms of COVID-19 (cough, SOB or others) AND [2] recent household exposure to known influenza (flu test positive)
Go to Protocol: Influenza (Flu) - Seasonal (Pediatric)
- [1] Symptoms of COVID-19 (cough, SOB or others) AND [2] lives in an area with community spread
Go to Protocol: COVID-19 - Diagnosed or Suspected (Pediatric)
- [1] Symptoms of COVID-19 (cough, SOB or others) AND [2] within 14 days of close contact with confirmed or suspected COVID-19 patient
Go to Protocol: COVID-19 - Diagnosed or Suspected (Pediatric)

- [1] Symptoms of COVID-19 AND [2] travel from high risk area (hot spot) for COVID-19 community spread (identified by CDC) within last 14 days
Go to Protocol: COVID-19 - Diagnosed or Suspected (Pediatric)
- [1] Positive COVID-19 test BUT [2] NO symptoms (asymptomatic patient)
Go to Protocol: COVID-19 - Diagnosed or Suspected (Pediatric)
- [1] Difficulty breathing (or shortness of breath) AND [2] onset > 14 days after COVID-19 exposure (Close Contact) AND [3] no community spread where patient lives
Go to Protocol: Breathing Difficulty (Respiratory Distress) (Pediatric)
- [1] Cough AND [2] onset > 14 days after COVID-19 exposure AND [3] no community spread where patient lives
Go to Protocol: Cough (Pediatric)
- [1] Common cold symptoms AND [2] onset > 14 days after COVID-19 exposure AND [3] no community spread where patient lives
Go to Protocol: Colds (Pediatric)
- COVID-19 vaccine reactions or questions
Go to Protocol: Immunization Reactions (Pediatric)

Discuss With PCP and Callback by Nurse Today

- [1] Close contact with confirmed COVID-19 patient AND [2] within last 14 days BUT [3] NO symptoms
Reason: Asymptomatic patients may need testing 5-7 days after true exposure. PCP will discuss testing. Also, needs home isolation.
- [1] Close contact with diagnosed or suspected COVID-19 patient AND [2] within last 14 days BUT [3] COVID-19 vaccine series completed (fully vaccinated)
Reason: PCP will discuss if testing is needed. Risk of developing COVID-19 is highly unlikely.
- [1] Close contact with diagnosed or suspected COVID-19 patient within last 14 days AND [2] needs COVID-19 lab test to return to essential work force or school setting AND [3] NO symptoms
Reason: PCP will discuss testing.
- [1] School notification about school 'exposure' to COVID-19 AND [2] unknown if true close contact occurred AND [3] school requesting test to come back AND [4] NO symptoms in caller's child
Reason: Asymptomatic patients may need testing 5-7 days after true exposure. PCP will discuss testing.

See in Office Within 3 Days

- Triage thinks child needs to be seen for non-urgent problem
- Caller wants child seen for non-urgent problem

Home Care

- [1] Close contact with confirmed COVID-19 patient AND [2] 15 or more days ago AND [3] NO symptoms
Reason: Asymptomatic for 14 days. Risk of developing COVID-19 infection has passed. Reassure and discontinue isolation.

- [1] Living in or travel from high risk area ('hot spot') for COVID-19 community spread BUT [2] NO symptoms AND [3] no known close contact

Reason: follow PHD or CDC directives regarding staying at home

- Caller concerned that COVID-19 exposure occurred BUT does not meet CDC criteria for close contact

Reason: unrealistic fear of exposure and needs reassurance

- COVID-19 testing, questions about
 - COVID-19 prevention, questions about
 - COVID-19 Disease, questions about
- Note: Refer most callers to CDC website: www.cdc.gov/coronavirus*
- Multisystem Inflammatory Syndrome (MIS-C), questions about

HOME CARE ADVICE

COVID-19 Exposed Person with No Symptoms: Home Quarantine

- 1. Reassurance and Education - Close Contact, No Symptoms, but Less than 14 Days:**
 - Although your child may have been or was exposed to COVID-19, your child does not currently have any symptoms of this infection. COVID-19 infections start within 14 days following the last exposure.
 - Since it's been less than 14 days, your child is still at risk for getting sick with it.
 - You need to watch for symptoms until 14 days have passed. Check your child's temperature two times a day.
 - Keep your child on home quarantine for 10 days to protect others (CDC). If you have further questions about when it is safe to return to school or work, call us back.
- 2. Exception for Fully Vaccinated and Close Contact:**
 - You have told me that your child is fully vaccinated against COVID-19 and 14 or more days have passed since the last shot.
 - Your child is greatly protected against the infection. The risk of getting infected is very low.
 - They do not need to quarantine.
 - They DO need to monitor for any fever or other symptoms for 14 days following the last exposure.
 - Your child probably won't need testing.
 - Note to Triager: Follow your office policy.
- 3. Measure Temperature:**
 - Measure your child's temperature 2 times each day.
 - Do this until 10 days after exposure to COVID-19.
 - If fever occurs, call back.
- 4. Watch for Other COVID-19 Symptoms:**
 - COVID-19 coronavirus causes a respiratory illness. The most common symptoms are cough, fever and shortness of breath.
 - Other common symptoms are chills, shivering (shaking), runny nose, sore throat, muscle pain, headache, fatigue and loss of smell or taste.
 - The CDC also includes the following less common symptoms: nausea, vomiting and diarrhea.
 - Some rare symptoms are a widespread red rash with red eyes, red lips and red palms/soles. This almost always occurs with several days of fever.

- Other rare symptoms are red or purple toes ("COVID toes").
- If any of these symptoms occur, call back.
- Early detection of symptoms and home isolation is the only way to reduce spread of the disease.

5. **Quarantine (Isolation) at Home Recommendations:**

- *Isolation will definitely be needed if your child develops a cough or fever within 14 days of COVID-19 exposure.*
- For patients without symptoms, home quarantine also is usually required for 10 days. Follow the current directives of your local health department or the CDC.
- Shorter quarantine option for asymptomatic people: If they get a negative COVID-19 lab test on day 5 to 7 after exposure, can leave quarantine after day 7. (CDC). This helps essential workers return to the work force.
- Exposed person: follow the same rules as above. Period of quarantine starts on the date of last exposure and usually goes for 10 days.
- **Exception:** Quarantine not needed following exposure for parents or children who completed their COVID-19 vaccine series within the last 3 months (90 days). (CDC)
- Keep your child at home. Do Not go to stores, restaurants, places of worship or other public places. Avoid public transportation or ride sharing. Do Not allow any visitors (such as friends).
- **Exception:** Leave the house only if you need to seek medical care. For routine medical appointments, check with your PCP or specialist first. They may want to re-schedule you. Always wear a mask.
- Home isolation of younger children can be very difficult. Many families also have limited options. Therefore, each triager should individualize the recommendations for isolation after discussing it with the caller.
- **Isolation Questions for PCP - Note to Triager:** Home isolation can be complicated. A parent may need to return to work. Someone in the household may be elderly or have a serious medical problem. If a caller has additional questions, involve the PCP.

6. **Day 15 or Later After Close Contact and No Symptoms:**

- The COVID-19 infection starts within 14 days of an exposure.
- Your child developed no symptoms of respiratory infection (such as fever or cough) during the 14 days after an exposure.
- Your child should be safe from getting COVID-19.
- If your child has been on home quarantine (isolation), it can be discontinued.

7. **Call Back If:**

- Fever occurs within 14 days of COVID-19 exposure
- Cough or difficulty breathing occur within 14 days of COVID-19 exposure
- Other symptoms of COVID-19 infection occur
- You have other questions

COVID-19 Testing Questions

1. **COVID-19 Testing - Who Needs It:**

- Note to Triager: Follow the policy for testing recommended by your practice.
- If COVID-19 is suspected, getting a lab test is the only way to know for sure. Getting the test is not urgent.
- The availability of testing and where to get it can be different for every community.
- National and state recommendations sometimes change.

2. **COVID-19 Testing Facts:**

- Here are some facts that may answer some of the caller's questions.
- **Diagnostic Tests:** These are performed on nasal or mouth secretions. The test can tell us if you have a COVID-19 infection now. Your doctor is the best resource for up-to-date information on diagnostic testing. Timing is important on when to do diagnostic tests.

- **COVID-19 Diagnostic Tests - Recommended Timing:**
 - **Symptomatic patients** - get a test within 3 days of onset of symptoms.
 - **Asymptomatic patients with a COVID-19 close contact** - get a test on day 5-7 post exposure. Reason: Testing done during the first 5 days after exposure will usually be negative.
 - **Antibody Tests:** These tests are different. These are performed on blood. They can sometimes tell us if there are antibodies from a previous infection. Discuss if this test would be helpful with your doctor.
 - **Timing guideline for Antibody Tests:** If indicated, antibody tests are not recommended until at least 2 or 3 weeks have passed since the start of the infection (CDC). Waiting for a few weeks will give the most accurate result (highest positive rate).
3. **Repeat Diagnostic Tests - When They are Needed:**
 - After a positive test, repeat tests are not recommended. Even after it is safe to stop isolation (usually 10 days), tests may stay positive for up to 90 days. A positive test does not mean the patient can spread the infection once the required isolation period is completed.
 - After a negative test, a repeat test is sometimes needed. Reason: A test may be falsely 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.
 4. **Call Back If:**
 - You have other questions

COVID-19 Prevention Questions

1. **COVID-19 - How to Protect Yourself and Family from Catching It - The Basics:**
 - Get the COVID-19 vaccine. It is your best protection against this serious infection.
 - **Vaccine Site.** Find a nearby vaccine site at [vaccines.gov](https://www.vaccines.gov). If your doctor's office doesn't supply the vaccine, also look on your state's public health department website.
 - Avoid close contact with people outside your family unit. Avoid closed spaces (indoors) when possible and all crowds (even outdoors).
 - Always wear a mask when you leave your home. Also, observe social (safe) distancing.
 - Everyone 6 months and older should get an annual flu shot. Reason: Getting COVID-19 while you also have or are recovering from the flu may increase the chances of getting severe symptoms.
 - **Wash hands often with soap and water (very important).** Always do before you eat.
 - Use an alcohol-based hand sanitizer if water is not available. Remember: soap and water work better.
 - Don't touch your eyes, nose or mouth unless your hands are clean. Germs on the hands can get into your body this way.
 - Don't share glasses, plates or eating utensils.
 - No longer shake hands. Greet others with a smile and a nod.
 - If your child needs to be seen for an urgent medical problem, do not hesitate to go in. ERs, urgent care sites and your doctor's office are safe places. They are well equipped to protect you against the virus. For non-urgent conditions, talk to your doctor's office first.
2. **Social (Safe) Distancing and COVID-19 Prevention:**
 - Avoid any contact with people known to have COVID-19 infection. Avoid talking to or sitting close to them.
 - **Social (Safe) Distancing:** Try to stay at least 6 feet (2 meters) away from anyone who is sick, especially if they are coughing. Also called physical distancing. Avoid crowds because you can't tell who might be sick.
 - If COVID-19 is widespread in your community, try to stay 6 feet away from everyone outside your family unit.
 - **Stay at Home Orders:** Follow any stay at home (stay in place) orders in your community. Leave your home only for essential needs such as buying food or seeking medical care.
 - **After Stay at Home Orders are Lifted:** Continue social distancing. Also wear a mask when

entering any public building or outdoor crowded area. These precautions will be needed for many months. Your state public health department will decide when they are no longer needed.

3. **Face Masks and COVID-19 Prevention:**

- **Overview:** Face masks are essential for reducing the spread of COVID-19. They will also reduce the spread of influenza. Wearing a mask means you care about other people.
- **Recommended Masks:** Made of 2 or more layers of washable, breathable fabric. Completely cover the nose and mouth. Fits snugly under your chin and against the sides of your face. Neck gaiter masks may be less effective (CDC)
- **Sick patients:** Must always wear a face mask if need to leave the home. Example: for medical visits. **Exception:** patients with trouble breathing can consider a loose face covering such as a bandana.
- **Well people:** The CDC recommends everyone wear a face mask or covering when going outside the home. They are critical if entering a public building, such as a grocery store. Face masks are required by management for entering most businesses. Reason: Many people with COVID-19 have no symptoms but can spread the virus.
- **After the Vaccine:** Continue to wear a mask in public spaces. Reason: reduce the spread of the infection to others.
- **Well People Exceptions:** Face mask or covering is optional if outdoors in nature and you can avoid being within 6 feet of other people. Examples: on an outdoor walk or run.
- **Age Limits:** Face coverings also are not recommended for children under 2 years (CDC).

4. **Keep Your Body Strong:**

- Get your body ready to fight the COVID-19 virus.
- Get enough sleep (very important)
- Keep your heart strong. Walk or exercise every day. Take the stairs. Caution: Avoid physical exhaustion.
- Stay well hydrated.
- Eat healthy meals. Avoid overeating to deal with your fears.
- Avoid the over-use of anti-fever medicines. Fever fights infections and ramps up your immune system.

5. **Keep Your Mind Positive:**

- **Live in the present, not the future.** The future is where your needless worries live.
- **Stay positive.** Use a mantra to reduce your fears, such as "I am strong".
- **Get outdoors.** Take daily walks. Go to a park if you have one. Being in nature is good for your immune system.
- **Show love.** As long as they are well, hug your children and partner frequently. Speak to them in a kind and loving voice. Love strengthens your immune system.
- **Stay in touch.** Use regular phone calls and video chats to stay in touch with those you love.
- **"2-Household Bubble"**. To reduce social isolation, especially for young children, some families have joined up with one other family for visits. Rules: Both families must agree that they will not have social contacts with any other families. No one in either family can work outside the home. Not approved by CDC but a reasonable family decision.

6. **How to Protect Others - When You or Your Child are Sick:**

- **Stay Home:** Stay home from school or work if you are sick. Your doctor or local health department will tell you when it is safe to return.
- **Cover the Cough:** Cough and sneeze into your shirt sleeve or inner elbow. Don't cough into your hand or the air. If available, sneeze into a tissue and throw it into trash can.
- **Wash Hands often with Soap and Water:** After coughing or sneezing are important times.
- **Don't Share Personal Household Items:** Don't share glasses, plates or eating utensils.
- **Wear a Mask:** Wear a face mask when around others or you go to a medical facility.
- **Avoid High-risk People:** Carefully avoid any contact with the elderly and people with weak immune systems or other chronic health problems.

7. **Call Back If:**
- You have other questions

COVID-19 Disease FAQs

1. **Trusted Sources for Accurate Information - CDC and AAP:**
 - To meet the extreme demand for COVID-19 information, when possible, find your answers online. Here are the most reliable websites:
 - CDC website: <https://www.cdc.gov/coronavirus>.
 - American Academy of Pediatrics parent website: www.healthychildren.org
2. **COVID-19 Outbreak:**
 - COVID-19 stands for Coronavirus disease 2019.
 - Cause: The name of the new virus is SARS-CoV-2.
 - An outbreak of this infection began in Wuhan, China in early December 2019.
 - The first COVID-19 patient in the United States was reported on January 21, 2020. During March, cases were identified in all states.
 - The first COVID-19 patient in Canada was reported on January 31, 2020.
 - The World Health Organization (WHO) declared COVID-19 a global pandemic on March 11, 2020.
 - The Centers for Disease Control and Prevention (CDC) is considered the source of truth. This continues to be a rapidly changing situation and recommendations from the CDC are being updated daily.
 - See: <https://www.cdc.gov/coronavirus>
3. **COVID-19 Symptoms:**
 - COVID-19 coronavirus causes a respiratory illness. The most common symptoms are cough and fever. Some patients progress to shortness of breath.
 - Other common symptoms are chills, shivering (shaking), runny nose, sore throat, muscle pain, headache, fatigue, and loss of smell or taste.
 - The CDC also includes the following less common symptoms: nausea, vomiting and diarrhea.
4. **COVID-19 - CDC Definition of Exposure (Close Contact):**
 - You are at risk of getting COVID-19 if the following has occurred:
 - Close contact with a person who tested positive for COVID-19 AND contact occurred while they were ill. CDC Definition of close contact: within 6 feet (2 meters) for a total of 15 minutes or more over a 24-hour period. Prolonged close contact would extend the risk to the 48 hours prior to the person becoming ill with symptoms.
 - Close contact with a person diagnosed by their HCP as a suspected COVID-19 patient.
 - The CDC (<https://www.cdc.gov/coronavirus>) has the most up-to-date list of where COVID-19 outbreaks are highest.
5. **COVID-19 - How it is Spread:**
 - COVID-19 is spread from person to person.
 - The virus spreads when respiratory droplets produced when a person coughs, sneezes, sings or shouts. 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.
 - 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.
 - These methods are how most respiratory viruses spread.
 - Aerosols are tiny, invisible particles that can float in the air for 1 to 2 hours. They only occur in a closed room with poor ventilation. Aerosols are a rare cause of COVID-19 transmission (CDC and WHO). Evidence: within household units, only 30% of contacts get infected.

6. **COVID-19 - Travel:**
 - Avoid all non-essential travel.
 - If you must travel, go to CDC website for updates on travel advisories: <https://www.cdc.gov/coronavirus>.
7. **Other COVID-19 Facts:**
 - **Incubation Period:** average 5 days (range 2 to 14 days) after coming in contact with the secretions of a person who has COVID-19.
 - **No Symptoms but Infected:** Over 30% of infected adult patients have no symptoms (asymptomatic). Children and teens are even more likely to have no symptoms. Such patients do however spread the disease and develop protective antibodies (immunity).
 - **Mild Infections:** 80% of those with symptoms have a mild illness, much like normal flu or a bad cold. The symptoms usually last 2 weeks.
 - **Severe Infections:** 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.
 - **Deaths:** Children generally have a mild illness and recover quickly. Pediatric deaths are very rare. Older adults, especially those with chronic lung disease, heart disease, diabetes or weak immune systems, have the highest death rates. The overall death rate for COVID-19 infections is around 0.6%.
 - **Vaccine:** Safe and highly effective vaccines are available. Some vaccines are 2 doses, given 3-4 weeks apart. Others are a single dose. Similar to flu shots, they will probably provide protection for 6 to 9 months or longer. At this time, vaccines have been tested and are FDA approved for 12 years and older. Trials on children younger than 12 years have started (May 2021).
 - **Treatment:** New treatments for severe COVID-19 are becoming available. They are mainly used on hospitalized patients and are given in a vein (IV).
 - **Prevention:** Currently, there is no oral medicine to prevent COVID-19. Social (safe) distancing, extra hand washing and face masks help prevent disease.
8. **Call Back If:**
 - You have other questions

Multisystem Inflammatory Syndrome (MIS-C) Questions

1. **Multisystem Inflammatory Syndrome (MIS-C):**
 - MIS-C is a very rare complication of COVID-19. In general, COVID-19 continues to be a mild disease in children.
 - The most common symptoms are fever with red eyes, red lips, red palms and soles. Abdominal pain, vomiting and diarrhea also occur. Half of the patients develop trouble breathing.
 - Onset of symptoms: Usually about 4 weeks after a COVID-19 infection and apparent recovery.
 - Peak age: 8 years. Age range: 6 months to 21 years.
 - Treatment: MIS-C is treatable with medications, including IV immune serum globulin.
 - If a child gets this rare complication, a parent will know that their child needs to see a doctor. Patients with MIS-C need to be admitted to the hospital.
 - Prevention: MIS-C cannot be prevented nor predicted. When approved for this age group, the COVID-19 vaccine will prevent MIS-C.
2. **Call Back If:**
 - You have other questions

FIRST AID

N/A

BACKGROUND INFORMATION

COVID-19 Main Symptoms (CDC)

COVID-19 should be suspected in people who have 1 or more of the following symptoms (CDC) and have not been vaccinated against COVID-19:

- Cough
- Shortness of breath (difficulty breathing)
- Fever or chills
- Loss of smell or taste
- Muscle or body aches
- Headache
- Sore throat
- Runny nose (not from allergies)
- Fatigue
- The CDC also includes the following less common symptoms: nausea, vomiting and diarrhea. In isolation, these symptoms (such as diarrhea) are not very helpful for recognizing COVID-19. Reason: Too common, multiple causes and sometimes subjective. For example, mild diarrhea is often caused by a change in the diet.
- **"COVID Toes"**: Reddish or purple toes have been reported as a rare finding. They can occur alone and go away without treatment. Or they can occur 1-2 weeks after the more common symptoms.
- **Multisystem Inflammatory Syndrome (MIS-C)**: A small number of children present with symptoms similar to Kawasaki's disease. See complete description below.

Multisystem Inflammatory Syndrome (MIS-C)

- MIS-C is a rare and sometimes severe complication associated with COVID-19. The most common symptoms are fever with red eyes, red lips, red palms and soles. Abdominal pain, vomiting and diarrhea also occur. Half of the patients develop trouble breathing and shortness of breath. Always has multiple symptoms. All patients with suspected of having this syndrome should be seen by a doctor. Most need to be admitted to the hospital. Some cases are similar to Kawasaki's Disease (KD), but MIS-C is a more serious condition.
- Incidence: a very rare complication of COVID-19. In general, COVID-19 continues to be a mild disease in most children.
- Onset of symptoms: Usually about 4 weeks after COVID-19 infection and apparent recovery.
- Peak age: 8 years. Age range: 6 months to 21 years.
- Treatment: MIS-C is treatable with medications, including IV immune serum globulin (ISG). At this time, it cannot be prevented nor predicted.
- Reassurance: If a child gets this rare complication, a parent will know that their child needs to see a doctor.
- Outcomes: death rate is 10-29%. A shorter duration of symptoms before admission was associated with worse outcomes.
- Prevention: MIS-C cannot be prevented nor predicted. When approved for this age group, the COVID-19 vaccine will prevent MIS-C.

Child Abuse During the COVID-19 Pandemic

- Social isolation combined with the financial crisis has caused unremitting stress for many parents.
- Young children often become irritable and demanding when confined to the home.
- These factors have increased the rate of angry outbursts and child abuse.
- Triagers need to be alert for calls about bruises or other injuries that are suspicious, unexplained or occur in the first year of life.

- They also need to offer help to families in crisis before they reach the breaking point. Be prepared. Know where to refer at-risk families.
- National Alliance on Mental Health (NAMI) Helpline: 1-800-950-6264. This is an information and referral source for locating community mental health programs.
- Domestic Violence Hotline: 1-800-799-7233
- Child Abuse: Call the Child Abuse Reporting Hotline in the county where the child lives. The number can also be obtained by calling 911.
- See the Psychosocial Problems or Child Abuse protocols for details.

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>

COVID-19 Disease and Repeat Infections

- Most viral infections cause our immune system to create antibodies that protect us from getting that infection again.
- Sometimes this provides lifelong protection, but sometimes that protection only lasts months or years.
- **Protection Duration.** Research about how long protection against COVID-19 lasts is ongoing. Protection has been proven to last for at least 90 days (3 months) after infection. Some studies have shown protection lasting for 6 or even 9 months. The CDC recommends using 90 days post exposure as a protected period.
- For now, it remains important for people who have recovered from COVID-19 infections to be careful. Take normal precautions such as wearing a mask and social distancing.
- **Need for Vaccine.** People who have recovered from COVID-19 should get a COVID-19 vaccine. Vaccination will provide more reliable protection beyond the protection provided after a COVID-19 infection.
- **Recovery and Re-infections.** Re-infections after full recovery do occur. They are rare with the same virus. The arrival of COVID-19 variant (mutant) viruses has increased the rate of re-infections for some of the variants.
- **Vaccines and Re-infections.** Currently available COVID-19 vaccines still protect against most of the COVID-19 variants. Even when they don't, they usually protect against severe disease and the need for hospitalization.
- Modified vaccines are being developed to provide more targeted protection against COVID-19 variants.

COVID-19 Vaccines - Answers to Common Questions

- **Vaccine Efficacy:** All the vaccines approved by the FDA for use in the US are highly effective. Most vaccines provide over 90% protection against getting sick with COVID-19. The vaccines are even better at preventing serious symptoms, complications and the need for hospital or ICU admission. They are much more effective than flu vaccines.
- **Other Major Benefits:** Vaccines also prevent the rare serious delayed onset complications from COVID-19 infections that can occur in some unlucky people. One example is multisystem inflammatory syndrome in children (also called MIS-C). Another is "long hauler" symptoms (such as brain fog or chronic breathing problems). Key: Vaccines prevent death from COVID-19 infections.

- **Vaccine Safety:** Very safe. Most people get a sore arm for a few days. About half get some general symptoms for about 24 hours, such as feeling tired and achy. A smaller number have a fever. These are the normal side effects seen with most vaccines and they go away quickly. They show your immune system is working. Serious reactions are extremely rare.
- **Blood Clot Concerns:** Very rare. Occur in about 1 person per million vaccinated people. Blood clots occur much more commonly in people who get the natural COVID-19 infection. (Note: have NOT occurred with Moderna or Pfizer vaccines)
- **Best Vaccine:** Any vaccine approved by the FDA is highly effective and safe. Get the first one that becomes available to you, the caller. They will protect you and your family.
- **Start of Vaccine Protection:** Full protection is reached about 2 weeks after you complete the vaccine series.
- **Duration of Vaccine Protection:** Research data has confirmed that protection is still high at 6 months after completing the vaccine series (April 2021). Experts predict the protection may last for 12 months or longer, but we need to wait for more data.
- **Booster Shots:** Experts predict we may need them yearly, just like flu vaccine boosters. Ongoing studies will tell.
- **COVID-19 Variants and Vaccine Protection:** For now, the current vaccines protect against the current variants in the US. The vaccinated person usually does not get infected. If they do, they develop either a mild illness or an asymptomatic infection. They are protected against serious symptoms and any complications. By contrast, natural immunity does not protect against some of the variants.
- **Re-infections:** Reinfections can occur after natural infections. Vaccination provides much better protection against future infections.
- **Quarantine after Exposure:** If you are vaccinated and 2 weeks have passed since your final dose, you do not have to quarantine for 10 days after close contact with a COVID-19 infected person.

COVID-19 Vaccines: Special Patient Questions

- **Children and Teens:** Currently approved for 12 years and older. Results: strong protection and also safe (normal side effects). Trials on children younger than 12 years have started (April 2021). Importance: while most children have mild or asymptomatic infections, they can get rare complications such as MIS-C. Also, they can innocently transmit the disease to others.
- **Pregnant Women:** Vaccines are approved and safe.
- **Breastfeeding Mothers:** Vaccines are approved and safe. Studies show that breastmilk passes antibody protection against COVID-19 to the baby.
- **Underlying High Risk Conditions:** Vaccines are approved and safe. These patients need the vaccine protection the most. If you have questions about a specific condition, discuss with your doctor.
- **Person Already had the Disease:** Get the vaccine. It provides higher levels of antibodies and better protection than the natural disease. Restriction: not approved until you are over any acute symptoms and the 10 days of isolation have passed.
- Go to CDC website for other questions: <https://www.cdc.gov/coronavirus/2019-ncov/vaccines>.

Office Call Surges: How to Better Manage

Getting behind in responding to calls is always a problem during infection outbreaks or panic created by the media. The COVID-19 pandemic caused major surges in call volumes. Here are some suggestions for off-loading calls:

- Refer callers to the American Academy of Pediatrics parent website: www.healthychildren.org while they are waiting for a callback. The answer to their questions will likely be found there.
- The website contains numerous articles written for parents on every COVID-19 issue. Examples are masks, getting outside, breastfeeding, dealing with anxiety, etc.
- Every topic is available in both English and Spanish.
- Your favorite COVID-19 handouts from the AAP or CDC can be emailed or texted to parents directly or using your EHR portal.

- The AAP website also features a Pediatric Symptom Checker. It helps a parent self-triage. It also provides self-care advice if they don't need to be seen. In addition to 160 other symptom topics, it contains 2 COVID-19 self-triage guides.
- Changing Parent Behavior: During a major pandemic, encourage parents to use a pediatric symptom checker before calling. Result: Parents would only call about patients who might need to be seen or need testing.

Internet Resources

- Centers for Disease Control and Prevention (CDC): Coronavirus. <https://www.cdc.gov/coronavirus>.
- Public Health Agency of Canada: <https://www.canada.ca/en/public-health/services/diseases/coronavirus.html>.
- World Health Organization (WHO): Coronavirus. <https://www.who.int/health-topics/coronavirus>.
- American Academy of Pediatrics: <http://www.healthychildren.org>

Expert Reviewers of Original COVID-19 Guideline (March 2020) and all Updates

- Jessica Cataldi, MD, Sections of Infectious Disease and Epidemiology, Children's Hospital Colorado, Aurora, CO
- Samuel Dominguez, MD, Sections of Infectious Disease and Epidemiology, Children's Hospital Colorado, Aurora, CO
- Lisa M. Koonin DrPH, MN, MPH. Founder, Health Preparedness Partners; Pandemic preparedness specialist.
- The author is extremely grateful for these critical reviews.

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Company:	Schmitt-Thompson Clinical Content
Content Set:	Office Hours Telephone Triage Protocols Pediatric
Version Year:	2021
Last Revised:	5/27/2021
Last Reviewed:	5/25/2021