

DEFINITION

- Patient believes they are having a reaction to a COVID-19 vaccination (immunization).
- Questions about the COVID-19 vaccine.
- Questions about being fully vaccinated.

Notes:

- **Local Reaction:** Local injection site symptoms such as pain, redness, and swelling usually last 1 to 3 days.
- **Local Reaction - COVID Arm:** Some people get a red rash in their arm at the Moderna vaccine shot site that starts 3 to 14 days (most commonly 8 days) after the vaccine. This is called COVID Arm.
- **Systemic Reaction:** Systemic reaction symptoms such as chills, fatigue, fever, joint pain, headache, and muscle aches usually last 1 to 2 days.
- The following symptoms are NOT from a vaccine reaction: cough, difficulty breathing, loss of taste or smell, runny nose, sore throat.
- 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 guideline was **last updated** 8/25/2021.

INITIAL ASSESSMENT QUESTIONS

1. MAIN CONCERN OR SYMPTOM: "What is your main concern right now?" "What question do you have?" "What's the main symptom you're worried about?" (e.g., fever, pain, redness, swelling)
2. VACCINE: "What vaccination did you receive?" "Is this your first or second shot?" (e.g., none; AstraZeneca, J&J, Moderna, Pfizer, other)
3. SYMPTOM ONSET: "When did the _____ begin?" (e.g., not relevant; hours, days)
4. SYMPTOM SEVERITY: "How bad is it?"
5. FEVER: "Is there a fever?" If Yes, ask: "What is it, how was it measured, and when did it start?"
6. PAST REACTIONS: "Have you reacted to immunizations before?" If Yes, ask: "What happened?"
7. OTHER SYMPTOMS: "Do you have any other symptoms?"

TRIAGE ASSESSMENT QUESTIONS

Call EMS 911 Now

[1] Difficulty breathing or swallowing AND [2] starts within 2 hours after injection

R/O: anaphylactic reaction

CA: 40, 1189, 1188, 1

Sounds like a life-threatening emergency to the triager

CA: 40, 1

See More Appropriate Guideline

[1] Symptoms of COVID-19 (e.g., cough, fever, SOB, or others) AND [2] within 14 days of EXPOSURE (close contact) with diagnosed or suspected COVID-19 patient

Go to Guideline COVID-19 - Diagnosed or Suspected (Adult)

[1] Symptoms of COVID-19 (e.g., cough, fever, SOB, or others) AND [2] within 14 days of being at a crowded indoor or outdoor event (e.g., concert, festival, rally, wedding)

Go to Guideline COVID-19 - Diagnosed or Suspected (Adult)

Typical COVID-19 symptoms (e.g., cough, difficulty breathing, loss of taste or smell, runny nose, sore throat) that are NOT expected from vaccine

Go to Guideline COVID-19 - Diagnosed or Suspected (Adult)

[1] COVID-19 exposure AND [2] no symptoms, or symptoms not typical of COVID-19

Go to Guideline: COVID-19 - Exposure (Adult). Note: If symptoms, triager will likely want to use both the COVID-19 - Exposure guideline and a symptom guideline.

Go to ED Now (or PCP triage)

Fever > 104 F (40 C)

R/O: severe reaction

CA: 42, 1002, 1005, 1

Sounds like a severe, unusual reaction to the triager

CA: 42, 1

See HCP (or PCP Triage) Within 4 Hours

[1] Redness or red streak around the injection site AND [2] started > 48 hours after getting vaccine AND [3] fever

R/O: cellulitis, lymphangitis

CA: 43, 31, 32, 1001, 1004, 89, 1

[1] Fever > 101 F (38.3 C) AND [2] age > 60 years AND [3] started > 48 hours after getting vaccine

R/O: bacterial infection

CA: 43, 31, 32, 1002, 1005, 89, 1

[1] Fever > 100.0 F (37.8 C) AND [2] bedridden (e.g., nursing home patient, CVA, chronic illness, recovering from surgery) AND [3] started > 48 hours after getting vaccine

R/O: bacterial infection

CA: 43, 31, 32, 1002, 1005, 89, 1

[1] Fever > 100.0 F (37.8 C) AND [2] diabetes mellitus or weak immune system (e.g., HIV positive, cancer chemo, splenectomy, organ transplant, chronic steroids) AND [3] started > 48 hours after getting vaccine

R/O: bacterial infection

CA: 43, 31, 32, 1002, 1005, 89, 1

See PCP Within 24 Hours

Fever > 100.0 F (37.8 C) present > 3 days (72 hours)

R/O: bacterial superinfection or other acute illness. Note: COVID-19 vaccine related fever occurs most often during the first 2 days after the vaccination.

CA: 44, 31, 32, 1002, 1005, 89, 1

Call PCP Within 24 Hours

[1] Fever > 100.0 F (37.8 C) AND [2] healthcare worker

Reason: healthcare worker should contact employee health. May need to be excluded from work pending further evaluation, including consideration for SARS-CoV-2 testing.

CA: 50, 27, 4, 1002, 1005, 89, 1

[1] Redness around the injection site AND [2] started > 48 hours after getting vaccine AND [3] no fever (Exception: red area < 1 inch or 2.5 cm wide)

R/O: bacterial superinfection, COVID arm

CA: 50, 31, 1142, 1001, 1004, 1127, 1126, 1105, 1106, 7, 1

[1] Pain, tenderness, or swelling at the injection site AND [2] over 3 days (72 hours) since vaccine AND [3] getting worse

R/O: low-grade infection, COVID arm

CA: 50, 31, 1142, 1001, 1004, 1127, 1126, 1105, 1106, 7, 1

See PCP Within 3 Days

[1] Pain, tenderness, or swelling at the injection site AND [2] lasts > 7 days

R/O: low-grade infection

CA: 45, 34, 1001, 1004, 6, 7, 1

[1] Lymph node swelling (i.e., armpit or neck on side of vaccine) AND [2] lasts > 3 weeks

CA: 45, 1113, 89, 1

See PCP Within 2 Weeks

[1] Requesting COVID-19 vaccine AND [2] healthcare worker (e.g., EMS first responders, doctors, nurses)

CA: 46, 29, 10, 11, 12, 13, 14, 15, 21, 90, 1

[1] Requesting COVID-19 vaccine AND [2] resident of a long-term care facility (e.g., nursing home)

CA: 46, 30, 10, 11, 12, 13, 14, 15, 90, 1

[1] Requesting COVID-19 vaccine AND [2] vaccine available in the community for this patient group

CA: 46, 8, 9, 10, 11, 12, 13, 14, 15, 90, 1

Home Care

COVID-19 vaccine, injection site reaction (e.g., pain, redness, swelling), question about

CA: 48, 1114, 1202, 1143, 1001, 1004, 1105, 1106, 3, 1

COVID-19 vaccine, systemic reactions (e.g., fatigue, fever, muscle aches), questions about

CA: 48, 225, 4, 5, 1143, 1003, 24, 1006, 3, 1

COVID-19 vaccine, Frequently Asked Questions (FAQs)

CA: 48, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 33, 1104, 36, 1105, 1106,

COVID-19 vaccine, fully vaccinated, and "What can I do now?", Frequently Asked Questions (FAQs)

Note: 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)

CA: 48, 10, 37, 38, 39, 1104, 1112, 1047, 90, 1

COVID-19 vaccine, fully vaccinated, and exposure to COVID-19, Frequently Asked Questions (FAQs)

Note: Information about masking, quarantine, and testing.

CA: 48, 10, 36, 1104, 1112, 90, 1

COVID-19 Prevention and Healthy Living, questions about

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

CA: 48, 1047, 1048, 1049, 1050, 1051, 90, 1

CARE ADVICE (CA) -

1. **Care Advice** given per COVID-19 - Vaccine Questions and Reactions (Adult) guideline.
3. **Call Back If:**
 - Fever lasts over 3 days
 - Pain at injection site not improving after 3 days
 - Swollen lymph node lasts over 3 weeks
 - You become worse
4. **COVID-19 Vaccine - Common Reactions:**
 - Local pain, redness, or swelling at injection site
 - Feeling tired (fatigue)
 - Fever and chills
 - Headache
 - Muscle aches or joint pains
 - *Symptoms usually last 1 to 2 days.*

5. **COVID-19 Vaccine - Rare Reactions:**
 - Rarely, a **severe allergic reaction** (anaphylactic reaction) of the body's immune system may occur after a COVID-19 vaccination. This is a severe and sometimes life-threatening overreaction (allergic reaction) of the body's immune system.
 - *Symptoms:* Symptoms of an anaphylactic reaction include breathing difficulty, dizziness, face and throat swelling, fast heart beating, rash all over the body, and weakness.
 - *Onset:* Most allergic reactions to vaccines occur within minutes to two hours of getting the vaccine injection.

6. **Local Heat for Pain:**
 - Apply a warm wet washcloth or a heating pad for 20 minutes 4 times a day for pain relief.

7. **Call Back If:**
 - Fever occurs
 - You become worse

8. **Alternate Disposition - Department of Health:**
 - Your local, state, or provincial Department of Health can help you find out how to get the COVID-19 vaccine.
 - Visit their website to see your best options for vaccination.

9. **Alternate Disposition - Local Drug Store (Pharmacy):**
 - Your local drugstore may be able to help you find out how to get the COVID-19 vaccine.
 - Visit their website to see your best options for vaccination.

10. **Note to Triager - Frequently Asked Questions (FAQs):**
 - Select the FAQ(s) that best addresses the caller's main question or concern.
 - Briefly provide this care advice and health information to the caller.
 - You can direct the caller to national, state, or province websites for additional information.
 - *US Centers for Disease Control and Prevention (CDC):* Frequently Asked Questions about COVID-19 Vaccination. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/faq.html>.
 - *Public Health Agency of Canada (PHAC):* COVID-19 Drugs and Vaccines. <https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19.html>.

11. **FAQ - Why Should I Get the COVID-19 Vaccine?**
 - **Protect Yourself:** 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.
 - **Protect Others:** You can help protect your family and your community by choosing to get the COVID-19 vaccine.

12. **FAQ - How Is the Vaccine Given?**
- The vaccine is given as an injection (shot) into the muscle of the upper arm.
 - All but one of the vaccines being developed need two doses 21 to 28 days apart to work best. For example, for the Pfizer vaccine you will need two shots 21 days apart. The exact timing of the second dose depends on which vaccine you get.
 - Write down the following information when you get your first dose: (1) the name of the vaccine, (2) the date you got it, (3) when you are due for your next dose.
13. **FAQ - Is the COVID-19 Vaccine Safe?**
- Yes. The vaccine is safe.
 - The side effects are similar to other vaccines, such as the flu shot (influenza), tetanus, or shingles.
 - Like all vaccines there is always a chance of a more serious side effect. However, serious side effects, such as an allergic reaction, are rare.
14. **FAQ - What Are the Most Common Side Effects of the COVID-19 Vaccine?**
- The most common side effects are feeling tired, fever, headache, muscle aches, and pain at the site of the injection.
 - Side effects are normal. They mean your immune system is working and building antibodies.
 - While they can be unpleasant, they are not serious. They do not lead to any risks to your health.
 - Side effects usually last 1 to 3 days.
 - Side effects may be worse after the second vaccine shot.
15. **FAQ - What Are the Symptoms of a Severe Reaction to the COVID-19 Vaccine?**
- Serious side effects, such as an allergic reaction, are rare.
 - Severe allergic reactions to vaccines occur within minutes to two hours of getting the vaccine injection.
 - Symptoms of a severe allergic reaction include breathing difficulty, dizziness, face and throat swelling, fast heart beating, rash all over the body, and weakness.
16. **FAQ - When Can I Get the COVID-19 Vaccine?**
- The Pfizer - BioNTech and the Moderna COVID-19 vaccines were approved for use in December 2020. Many other vaccines are in development. Vaccines were first offered to healthcare workers and residents of long-term care facilities.
 - *May 2021*: Everyone 12 years of age and older is now eligible to get a COVID-19 vaccination. Get a vaccine as soon as you can.
17. **FAQ - Where Can I Get the COVID-19 Vaccine?**
- Eventually you will be able to get the COVID-19 vaccine at all the same places you currently get your immunization shots.
 - This includes doctors' offices, retail pharmacies, hospitals, and federally qualified health centers.
18. **FAQ - Who Should Get the COVID-19 Vaccine?**
- The Pfizer vaccine is approved for use in people 12 years and older.
 - The AstraZeneca, J&J, and Moderna vaccines are approved for use in people 18 years and older.

19. **FAQ - Who Should NOT Get the COVID-19 Vaccine?**
- **Prior Severe Reaction:** You should not get the COVID-19 vaccine if you have had a severe allergic reaction after the first dose of this vaccine. Tell your healthcare provider if you have ever had a bad allergic reaction to a vaccine or other injected medicine. Your healthcare provider will advise you if it is OK.
 - **Current COVID-19 Infection:** Vaccination should be **postponed** until you are feeling well and the isolation period is over.
 - **Recent Exposure:** Vaccination should be **postponed** until after the quarantine period is over.
 - **Antibody Therapy:** If you had antibody therapy for COVID-19, the vaccine should be postponed at least 90 days. Discuss this with your healthcare provider.
21. **FAQ - Can I Get the COVID-19 Vaccination if I Am Pregnant or Breastfeeding?**
- 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.
 - Pregnant and recently pregnant people are more likely to get severely ill with COVID-19 compared with non-pregnant people.
 - Getting a COVID-19 vaccine can protect you from severe illness from COVID-19.
 - *Source:* CDC 08.11.2021
22. **FAQ - Can I Get My Child Vaccinated Against COVID-19?**
- The Pfizer COVID-19 vaccine has been approved for people 12 years and older.
 - The COVID-19 vaccine has not been tested in babies, infants, and children. More research is needed to make certain that it is safe.
 - Therefore, the COVID-19 vaccine is not yet available for children.
23. **FAQ - Which COVID-19 Vaccine Should I Get?**
- Any COVID-19 vaccine that has been approved means it is effective and safe.
 - Follow the recommendation of your healthcare provider (doctor, NP, PA) or drugstore pharmacist.
24. **FAQ - Can I Get COVID-19 From the Vaccine?**
- No.
 - There is no living COVID-19 virus in the vaccine. It is impossible to get COVID-19 from the vaccine.
25. **FAQ - If I Already Had COVID-19, Should I Get the Vaccine?**
- Yes. A test for prior infection is not needed to decide if you should get the vaccine.
 - The CDC states that the vaccines should be offered to those with a history of COVID-19 infection.
 - If you are sick with COVID, the vaccination should be postponed until you are feeling well and the isolation period is over.
 - You are unlikely to catch COVID-19 again within 90 days of a proven prior infection (tested positive). Therefore, you may choose to postpone the vaccine until after this 90 day period.

26. **FAQ - How Can I Report a Bad Reaction to the COVID-19 Vaccine?**
- Anyone, including parents and patients, can report a bad reaction.
 - **Canada:** In Canada use the **Reporting Adverse Events Following Immunization (AEFI)** system. The reporting form can be found at: <https://www.canada.ca/en/public-health/services/immunization/reporting-adverse-events-following-immunization/form.html>.
 - **United States:** The best way to report is to use the **Vaccine Adverse Event Reporting System (VAERS)** website. There is an online form at: <https://vaers.hhs.gov/reportevent.html>.
27. **Alternate Disposition - Call Employee Health at Your Workplace Within 24 Hours:**
- You need to call and discuss this with the Employee Health Department for your workplace within the next 24 hours.
29. **Alternate Disposition - Call Employee Health at Your Workplace Within 2 Weeks:**
- Healthcare workers have priority for getting the COVID-19 vaccine.
 - Your hospital or healthcare organization will have a plan for vaccinating their staff.
 - You need to call and discuss this with the Employee Health Department for your workplace within the next 2 weeks.
30. **Alternate Disposition - Long-Term Care Facility:**
- Residents of long-term care facilities have priority for getting the COVID-19 vaccine.
 - Your facility will have a vaccination plan.
 - Talk with the nurse or medical leadership at the facility in the next 2 weeks.
31. **Alternate Disposition - Call Telemedicine Provider Now:**
- Telemedicine may be your best choice for care during this COVID-19 outbreak.
 - You should call a telemedicine provider now, if your own healthcare provider is not available.
32. **Note to Triage - If NO PCP, Have Other HCP Re-Triage the Patient, if Available:**
- During this COVID-19 pandemic, the medical community is trying to prevent unnecessary referrals to the emergency department (ED). Some patients are fearful of being exposed to COVID-19 in a medical setting. Second-level triage (re-triage) by a physician has been shown to reduce ED referrals. Here are resources that may be available in your community.
 - **PCP Second-level Telephone Triage:** Some PCPs (primary care providers) want to provide re-triage before any of their non-emergent patients are referred to an ED. This requires their approval.
 - **Telemedicine:** Telemedicine is often a preferred source of second-level triage and care during this pandemic. Many practices and some hospitals now offer a telemedicine (virtual visit) service. There are also many national telemedicine companies that are delivering COVID-19 care.

33. **FAQ - Can the COVID-19 Vaccine Change My DNA (Genes)?**
- No.
 - They cannot change a person's DNA. Instead they work with a person's immune system to fight the virus.
34. **Alternate Disposition - Call Telemedicine Provider:**
- Telemedicine is often a good choice for care during this COVID-19 pandemic.
 - You can talk to a telemedicine provider, if your own doctor (or NP/PA) is not available.
36. **FAQ - Do I Still Need to Quarantine After COVID-19 Exposure If I Have Received the COVID-19 Vaccine?**
- If you are fully vaccinated, you do not need to quarantine after exposure to COVID-19, unless you develop symptoms.
 - However, fully vaccinated people should **get tested 3 to 5 days** after an exposure to COVID-19.
 - You should also **wear a mask** (for 14 days), when you are around other people, until you know that your test result is negative.
 - 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).
37. **FAQ - What Does Fully Vaccinated Mean?**
- 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).
38. **FAQ - What Can I Do Now That I Am Fully Vaccinated?**
- "If you are fully vaccinated, you can participate in many of the activities that you did before the pandemic." [CDC 7/27/2021]
 - However, there is a chance that you can get the Delta variant (or other future variants) and spread it to others.
 - Protect yourself and others. Wear a mask when you are in any indoor space or public place and are in communities with high numbers (substantial or high transmission) of new COVID-19 cases:
 - ... indoor public spaces (such as a church or a grocery store).
 - ... crowded outdoor setting (e.g., concert, music festival, rally).
 - Follow local laws and regulations. Wear a mask when you are traveling on a plane, bus, train, or other form of public transportation or in transportation hubs such as airports and stations.
 - And, wear a mask if you must be around someone who has symptoms of COVID-19 or has tested positive for COVID-19.
 - **Weak Immune System:** "If you have a condition or are taking medications that weaken your immune system, you may not be fully protected even if you are fully vaccinated. You should continue to take all precautions recommended for unvaccinated people until advised otherwise by your healthcare provider." [CDC 07/27/2021]

39. **FAQ - Which Adults Are at Increased Risk of Severe COVID-19 Illness?**
- Age: The risk for severe illness from COVID-19 increases with age, with older adults at highest risk.
 - Cancer
 - Chronic kidney disease
 - COPD
 - Down Syndrome
 - Heart disease, such as heart failure, coronary artery disease
 - Obesity with a body mass index (BMI) of 30 or higher
 - Pregnancy
 - Sickle cell disease
 - Smoking
 - Solid organ transplant
 - Type 2 diabetes
40. **Call EMS 911 Now:**
- Immediate medical attention is needed. You need to hang up and call 911 (or an ambulance).
 - *Triager Discretion:* I'll call you back in a few minutes to be sure you were able to reach them.
41. **Go to ED Now:**
- You need to be seen in the Emergency Department.
 - Go to the ED at _____ Hospital.
 - Leave now. Drive carefully.
42. **Go to ED Now (or PCP Triage):**
- **If No PCP (Primary Care Provider) Second-Level Triage:** You need to be seen within the next hour. Go to the ED/UCC at _____ Hospital. Leave as soon as you can.
 - **If PCP Second-Level Triage Required:** You may need to be seen. Your doctor (or NP/PA) will want to talk with you to decide what's best. I'll page the provider on-call now. If you haven't heard from the provider (or me) within 30 minutes, go directly to the ED/UCC at _____ Hospital.

43. **See HCP (or PCP Triage) Within 4 Hours:**
- **If Office Will Be Open:** You need to be seen within the next 3 or 4 hours. Call your doctor (or NP/PA) now or as soon as the office opens.
 - **If Office Will Be Closed and No PCP (Primary Care Provider) Second-Level Triage:** You need to be seen within the next 3 or 4 hours. A nearby Urgent Care Center (UCC) is often a good source of care. Another choice is to go to the ED. Go sooner if you become worse.
 - **If Office Will Be Closed and PCP Second-Level Triage Required:** You may need to be seen. Your doctor (or NP/PA) will want to talk with you to decide what's best. I'll page the on-call provider now. If you haven't heard from the provider (or me) within 30 minutes, call again. **Note:** If on-call provider can't be reached, send to UCC or ED.
- Note to Triager:**
- Use nurse judgment to select the most appropriate source of care.
 - Consider both the urgency of the patient's symptoms AND what resources may be needed to evaluate and manage the patient.
- Sources of Care:**
- **ED:** Patients who may need surgery or hospital admission need to be sent to an ED. So do most patients with serious symptoms or complex medical problems.
 - **UCC:** Some UCCs can manage patients who are stable and have less serious symptoms (e.g., minor illnesses and injuries). The triager must know the UCC capabilities before sending a patient there. If unsure, call ahead.
 - **OFFICE:** If patient sounds stable and not seriously ill, consult PCP (or follow your office policy) to see if patient can be seen NOW in office.
44. **See PCP Within 24 Hours:**
- **If Office Will Be Open:** You need to be examined within the next 24 hours. Call your doctor (or NP/PA) when the office opens and make an appointment.
 - **If Office Will Be Closed:** You need to be seen within the next 24 hours. A clinic or an urgent care center is often a good source of care if your doctor's office is closed or you can't get an appointment.
 - **If Patient Has No PCP:** Refer patient to a clinic or urgent care center. Also try to help caller find a PCP for future care.
- Note to Triager:**
- Use nurse judgment to select the most appropriate source of care.
 - Consider both the urgency of the patient's symptoms AND what resources may be needed to evaluate and manage the patient.
45. **See PCP Within 3 Days:**
- You need to be seen within 2 or 3 days.
 - **PCP Visit:** Call your doctor (or NP/PA) during regular office hours and make an appointment. A clinic or urgent care center are good places to go for care if your doctor's office is closed or you can't get an appointment. **Note:** If office will be open tomorrow, tell caller to call then, not in 3 days.
 - **If Patient Has No PCP:** A clinic or urgent care center are good places to go for care if you do not have a primary care provider. **Note:** Try to help caller find a PCP for future care (e.g., use a physician referral line). Having a PCP or "medical home" means better long-term care.

46. **See PCP Within 2 Weeks:**
- You need to be seen for this ongoing problem within the next 2 weeks.
 - **PCP Visit:** Call your doctor (or NP/PA) during regular office hours and make an appointment.
 - **If Patient Has No PCP:** A primary care clinic is where you need to be seen for chronic health problems. **Note:** Try to help caller find a PCP (e.g., use a physician referral line). Having a PCP or "medical home" means better long-term care.
47. **Home Care - Information or Advice Only Call.**
48. **Home Care:**
- You should be able to treat this at home.
49. **Call PCP Now:**
- You need to discuss this with your doctor (or NP/PA).
 - I'll page the on-call provider now. If you haven't heard from the provider (or me) within 30 minutes, call again.
50. **Call PCP Within 24 Hours:**
- You need to discuss this with your doctor (or NP/PA) within the next 24 hours.
 - **If Office Will Be Open:** Call the office when it opens tomorrow morning.
 - **If Office Will Be Closed:** I'll page the on-call provider now. **Exception:** from 9 pm to 9 am. Since this isn't urgent, we'll hold the page until morning.
51. **Call PCP When Office Is Open:**
- You need to discuss this with your doctor (or NP/PA) within the next few days.
 - Call the office when it is open.
52. **Go to L&D Now:**
- You need to be seen.
 - Go to the Labor and Delivery Unit or the Emergency Department at _____ Hospital.
 - Leave now. Drive carefully.
89. **Call Back If:**
- You become worse
90. **Call Back If:**
- You have more questions.
225. **Note to Triager - Discussing Common vs. Rare Reactions:**
- Discuss the **Common Reactions** with the caller. Reassure the caller that these reactions are generally harmless.
 - Discuss **Rare Reactions** only if the caller specifically asks.

1001. **Pain Medicines:**

- For pain relief, you can take either acetaminophen, ibuprofen, or naproxen.
- They are over-the-counter (OTC) pain drugs. You can buy them at the drugstore.
- **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.
- **Naproxen (e.g., Aleve):** Take 220 mg (one 220 mg pill) by mouth every 8 to 12 hours as needed. You may take 440 mg (two 220 mg pills) for your first dose. The most you should take each day is 660 mg (three 220 mg pills a day), unless your doctor has told you to take more.

1002. **Fever Medicines:**

- For fevers above 101° F (38.3° C) 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.
- 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 4-6 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.

1003. **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 4-6 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.

1004. **Pain Medicines - Extra Notes and Warnings:**

- Use the lowest amount of medicine that makes your pain 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, the maximum dose per day is ten Regular-Strength (325 mg) pills.
- Bayer, the company that makes Aleve, has different dosage instructions for Aleve in Canada and the United States. In Canada, the maximum recommended dose per day is 440 mg (2 pills or caplets). In the United States, the maximum dose per day is 660 mg (3 pills or caplets).
- **Caution:** Do not take acetaminophen if you have liver disease.
- **Caution:** Do not take ibuprofen or naproxen 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 or naproxen for more than 7 days without consulting your doctor.
- *Before taking any medicine, read all the instructions on the package.*

1005. **Fever Medicines - Extra Notes and Warnings:**

- Use the lowest amount of medicine that makes your 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, the maximum dose per day is 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.*

1006. **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, the maximum dose per day is 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.*

1047. **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).

1048. **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>.

1049. **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!

1050. **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.

11051. **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.
1104. **FAQ - Do I Still Need to Wear a Face Mask If I Am Fully Vaccinated?**
- Yes.
 - The COVID-19 vaccine is highly effective. However, there is a chance that you can get the Delta variant (or other future variants) and spread it to others.
 - Protect yourself and others. Wear a mask if you live or travel to an area with **high numbers of new COVID-19 cases** (substantial or high transmission):
 - ... when you are in an indoor public space (such as a church or a grocery store).
 - ... when you are in a crowded outdoor setting (e.g., concert, music festival, rally).
 - Follow local laws and regulations. Wear a mask when you are traveling on a plane, bus, train, or other form of public transportation or in transportation hubs such as airports and stations.
 - And, wear a mask if you must be around someone who has symptoms of COVID-19 or has tested positive for COVID-19.
1105. **FAQ - What Is COVID Arm?**
- Some people get a red rash in their arm at the Moderna vaccine shot site that starts 3 to 14 days (most commonly 8 days) after the vaccine.
 - The rash can be quite large. It looks like a red oval or circle about 2 to 4 inches (5 to 10 cm) wide.
 - It can also feel itchy, slightly painful, or puffy.
 - It usually goes away in about a week and there are no long-term problems.
 - This is called "COVID arm". It appears to be a minor side effect of the Moderna vaccine.
 - If the rash is painful, you can take a pain medicine like acetaminophen (e.g., Tylenol) or ibuprofen (e.g., Advil or Motrin). If the rash is itchy, you can take an antihistamine medicine. These are medicines that you can get over-the-counter at the drugstore. *Before taking any medicine, read all the instructions on the package.*
 - Some people find that a cold pack helps with pain and itching. Apply a cold pack or ice in a wet washcloth to the area for 20 minutes. Antibiotics are not needed.
1106. **FAQ - I Had COVID Arm With My First Shot, Should I Get the Second Shot?**
- Yes.
 - You should get the second shot at the recommended time.
 - Tell the person who is giving you the shot that you had "COVID arm". They may want to give you the second shot in your other arm.
 - You may or may not get COVID arm with your second shot. With the second shot, these symptoms may be milder and happen sooner after getting the shot.

1112. **FAQ - How to Select and Use a Face Mask?**
- Choose a mask that has two or more layers of fabric.
 - 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>.
1113. **FAQ - When Can I Get a Screening Mammogram After Receiving the COVID-19 Vaccine?**
- Vaccines of all types can result in temporary swelling of the lymph nodes, which may be a sign that the body is making antibodies in response as intended.
 - The COVID-19 vaccine can sometimes cause temporary lymph node swelling. This can interfere with the correct interpretation of a screening mammogram.
 - The Society of Breast Imaging recommends scheduling your mammogram either before your first dose of the COVID-19 vaccine or **about four to six weeks after completing the COVID-19 vaccine series**. If that's not possible, it's important to keep both your scheduled screening and your vaccine appointment and **let the mammography technician know when you had your vaccine**.
 - If you feel a lump or have any concerns, you should proceed with imaging and inform the mammogram technician of the date of your last vaccine.
1114. **Reassurance and Education - Local Vaccine Reaction:**
- A **local reaction** can occur at the injection site after a COVID-19 vaccination. These symptoms usually last 1 to 3 days. Side effects are more frequent after the second vaccine shot. These are signs that your vaccine is working and triggering your immune system.
 - Lymph node swelling in armpit of injection (12%)
 - Pain at injection site (84-92%)
 - Redness at injection site (6%)
 - Swelling at injection site (9%)
 - *Here is some more care advice that should help.*
1126. **Antihistamine Medicines - Extra Notes and Warnings:**
- Antihistamine medicines can be used to treat allergic reactions, allergies, hay fever, hives, and itching.
 - Diphenhydramine (Benadryl) is a **first generation antihistamine** medicine. It causes more sleepiness than the newer second generation antihistamine medicines. The adult dosage of Benadryl is 25 to 50 mg by mouth and you can take it up to 4 times a day.
 - **Second generation antihistamines** such as cetirizine and loratadine have fewer side effects than first generation antihistamines. Loratadine is one of the least sedating antihistamines.
 - **Caution:** Antihistamine medicines can cause sleepiness. Do not drink alcohol, drive, or operate dangerous machinery while taking this drug.
 - *Before taking any medicine, read all the instructions on the package.*

1127. **Antihistamine Medicines for Severe Itching:**
- For severe itching, take either cetirizine or loratadine.
 - They are over-the-counter (OTC) antihistamine medicines. You can buy them at the drugstore.
 - **Cetirizine (Reactine, Zyrtec):** The adult dose is 10 mg and you take it once a day. Cetirizine is available in the United States as Zyrtec and in Canada as Reactine.
 - **Loratadine (Alavert, Claritin):** The adult dose is 10 mg and you take it once a day. Loratadine is available in the United States as Alavert and Claritin; it is available in Canada as Claritin.
1142. **Cold Pack for Pain or Itching at Vaccine Site:**
- Some people find that a cold pack helps with pain or itching.
 - Apply a cold pack or ice in a wet washcloth to the area for 20 minutes.
1143. **Heat Pack for Local Reaction at Vaccine Site:**
- Put a heat pack or warm wet washcloth on the vaccine shot area for 10 to 20 minutes.
 - Repeat as needed for the first 48 hours after the injection.
 - *Reason:* Improve blood flow to the area. Reduce the pain and swelling.
 - *Caution:* Burn. Do not sleep on a heating pad.
 - *Note:* Some pain, redness and swelling at the injection site are NORMAL. It means the vaccine is working. Redness does not mean there's any infection. Some people find that a cold pack works better than heat; follow your doctor's advice.
1144. **FAQ - Do I Need to Get Vaccinated If I Have O-Negative Blood Type?**
- 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!
1188. **First Aid Advice for Anaphylaxis - Benadryl:**
- Give antihistamine by mouth **Now** if able to swallow.
 - Use Benadryl (over-the-counter diphenhydramine; adult dose: 50 mg) or any other available antihistamine medicine.
1189. **First Aid Advice for Anaphylaxis - Epinephrine:**
- If the patient has an epinephrine autoinjector, **give it now**. Do not delay.
 - Use the autoinjector on the upper outer thigh. You may give it through clothing if needed.
 - Give epinephrine first, then call 911.
 - Epinephrine is available in autoinjectors under trade names: *EpiPen*, *EpiPen Jr*, and *Auvi-Q* (Allerject in Canada). Auvi-Q has an audio chip and talks patients and caregivers through injection process.
 - You may give a second (repeat) dose of epinephrine 10 to 15 minutes later, IF the person with anaphylaxis does not respond to the first dose AND ambulance arrival takes longer than 10 minutes.

1202. **Reassurance and Education - Enlarged Lymph Nodes After Vaccination:**
- The vaccine can cause swelling of lymph nodes in the armpit or neck on the side you got the shot.
 - This is one sign your vaccine is working and triggering your immune system.
 - This usually happens 2 to 4 days after getting the vaccine.
 - It will usually go away on its own within a couple weeks.
 - If the swollen lymph nodes (lump) does not go away after 3 weeks, or is worsening, you should have it checked by your doctor.
1243. **FAQ - When Can I Get a COVID-19 Vaccine Booster?**
- People who are fully vaccinated (two shots of Pfizer or Moderna) may be able to get a COVID-19 booster shot in the Fall of 2021.
 - The first people will be people with weak immune systems, people in long term care facilities, healthcare workers, and older adults.
 - People will be eligible starting 8 months after vaccination.
 - It is likely that people who were vaccinated with the Johnson & Johnson vaccine (one shot) will need a booster too.

FIRST AID



FIRST AID ADVICE for Anaphylaxis - Epinephrine

- If the patient has an epinephrine autoinjector, **give it now**. Do not delay.
- Use the autoinjector on the upper outer thigh. You may give it through clothing if needed.
- Give epinephrine first, then call 911.

Epinephrine is available in autoinjectors under trade names: *EpiPen*, *EpiPen Jr*, and *Auvi-Q* (Allerject in Canada). *Auvi-Q* has an audio chip and talks patients and caregivers through injection process.

You may give a second (repeat) dose of epinephrine 10-15 minutes later, IF the person with anaphylaxis does not respond to the first dose AND ambulance arrival takes longer than 10 minutes.

FIRST AID ADVICE for Anaphylaxis - Benadryl

- Give antihistamine by mouth now if able to swallow.
- Use Benadryl (diphenhydramine; adult dose 50 mg) or any other available antihistamine.

BACKGROUND INFORMATION

Key Points

- Vaccines are generally safe and effective.
 - Side effects such as local pain, fever, and fatigue are common after any vaccination. They are normal symptoms after a vaccination.
 - Serious reactions, such as anaphylaxis, are very rare.
 - The Pfizer - BioNTech and the Moderna COVID-19 vaccines were approved for use in December 2020. Many other vaccines are in development.
 - 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

Types of COVID-19 Vaccines

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 many COVID-19 vaccines still in development.

COVID-19 Vaccine Reactions

Three types of reactions can occur after any type of vaccination: *local*, *systemic*, and *anaphylactic*.

A **local reaction** can occur at the injection site after a COVID-19 vaccination. These symptoms usually last 1 to 3 days. Side effects are more frequent after the second vaccine shot.

- Lymph node swelling in armpit of injection (12%)
- Pain at injection site (84-92%)
- Redness at injection site (6%)
- Swelling at injection site (9%)

Some people get a red rash in their arm at the Moderna vaccine shot site that starts 3 to 14 days (most commonly 8 days) after the vaccine. This is called **COVID Arm** or **COVID Vaccine Arm**.

- Can also feel itchy, slightly painful, or puffy.
- Usually goes away in about a week and there are no long-term problems.
- It appears to be a minor side effect of the Moderna vaccine. Antibiotics are not needed.

Symptoms from a **systemic reaction** are common and normal after a COVID-19 vaccination. These symptoms usually last 1 to 2 days. Side effects are more frequent after the second vaccine shot.

- Chills (32-43%)
- Fatigue (63-69%)
- Fever (14-15%)
- Headache (55-63%)
- Joint pain (24-45%)
- Muscle pain (38-60%)

Rarely, a **severe allergic reaction** (anaphylactic reaction) of the body's immune system may occur after a COVID-19 vaccination. This is a severe and sometimes life-threatening overreaction (allergic reaction) of the body's immune system.

- *Symptoms*: Symptoms of an anaphylactic reaction include breathing difficulty, dizziness, face and throat swelling, fast heart beating, rash all over body, and weakness.

- **Onset:** Most allergic reactions to vaccines occur within minutes to two hours after getting the vaccine injection.

The following are NOT side effects of the COVID-19 vaccine: cough, loss of taste or smell, runny nose, shortness of breath, and sore throat. Instead, they may be symptoms of a COVID-19 or another infection.

Delta and Other COVID-19 Variants

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.

Internet Resources

- *Centers for Disease Control and Prevention (CDC):* Frequently Asked Questions about COVID-19 Vaccination. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/faq.html>.
- *Centers for Disease Control and Prevention (CDC):* People with Certain Medical Conditions. <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html>.
- *Health Canada:* Health Canada authorizes first COVID-19 vaccine: <https://www.canada.ca/en/health-canada/news/2020/12/health-canada-authorizes-first-covid-19-vaccine0.html>.
- *The National Academies of Sciences, Engineering, Medicine:* National Academies Release Framework for Equitable Allocation of a COVID-19 Vaccine for Adoption by HHS, State, Tribal, Local, and Territorial Authorities. This news release summarizes the four phases of vaccine distribution. <https://www.nationalacademies.org/news/2020/10/national-academies-release-framework-for-equitable-allocation-of-a-covid-19-vaccine-for-adoption-by-hhs-state-tribal-local-and-territorial-authorities>.
- *Public Health Agency of Canada (PHAC):* COVID-19 Drugs and Vaccines. <https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19.html>.
- *United States Federal Drug Administration (FDA):* COVID-19 Vaccine. <https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines>.

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SEARCH WORDS

2019-NCOV
 ADVERSE REACTION
 ADVERSE REACTIONS
 ANTHRAX
 BOOSTER
 BOOSTER SHOT
 CORONAVIRUS
 CORONAVIRUS EXPOSURE
 COVID ARM
 COVID VACCINE ARM
 COVID19
 COVID-19
 COVID-19 ARM
 COVID-19 EXPOSURE
 EXPOSURE
 EXPOSURE QUESTION

EXPOSURE QUESTIONS
IMMUNIZATION
IMMUNIZATION REACTION
IMMUNIZATION REACTIONS
IMMUNIZATIONS
INFECTION EXPOSURE
INJECTION
INJECTION SITE
INJECTION SITES
INJECTIONS
MAMMOGRAM
NCOV
NOVEL CORONAVIRUS
REACTION
REACTIONS
SHOTS
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Content Set: After Hours Telehealth Triage Guidelines | Adult
Version Year: 2021
Last Revised: 8/25/2021
Last Reviewed: 8/25/2021