

## DEFINITION

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

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 vaccine shot site that starts 3 to 14 days (most commonly 8 days) after the vaccine. This mainly happens with the Moderna vaccine, but can occur with the Pfizer vaccine.
- **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).
- *Up-to-date on vaccination* means the person is fully vaccinated AND got a booster 5 or more months later. A person is also up-to-date if they are fully vaccinated but are not yet eligible for a booster. For people with moderately to severely weak immune systems up-to-date means they received an extra primary shot (third shot) of an mRNA vaccine and a booster.

**Updated:** January 18, 2022 (version 6)

## TRIAGE ASSESSMENT QUESTIONS

### Call EMS 911 Now

Difficulty breathing or swallowing and starts within 2 hours after injection

*R/O: anaphylactic reaction*

Sounds like a life-threatening emergency to the triager

### See More Appropriate Protocol

[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 Protocol: 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 Protocol: 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 Protocol: COVID-19 - Diagnosed or Suspected (Adult)*

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

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

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

Fever > 104 F (40 C)

*R/O: severe reaction*

Sounds like a severe, unusual reaction to the triager

### **Go to Office Now**

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

*R/O: bacterial infection*

[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*

[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*

### **See in Office Today**

[1] Fever > 100.0 F (37.8 C) AND [2] 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.*

### **Callback by PCP Today**

[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 COVID-19 testing.*

[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*

[1] Redness around the injection site AND [2] started > 48 hours after getting vaccine (Exception: red area < 1 inch or 2.5 cm wide)

*R/O: bacterial superinfection, cellulitis, COVID arm*

### **See in Office Within 3 Days**

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

*R/O: low-grade infection, COVID arm*

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

## See in Office Within 2 Weeks

Requesting COVID-19 vaccine

## Home Care

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

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

COVID-19 vaccine, Frequently Asked Questions (FAQs)

Up-to-date on COVID-19 vaccination and exposure to COVID-19, Frequently Asked Questions (FAQs)

*Note: Information about masking, quarantine, and testing.*

COVID-19 Prevention and Healthy Living, questions about

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

## HOME CARE ADVICE

### COVID-19 Vaccine - Injection Site Reactions

- 1. 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.*
- 2. 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.
- 3. 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. Some people find that a cold pack works better than heat; follow your doctor's advice.
- 4. 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.

#### 5. **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.*

#### 6. **FAQ - What Is COVID Arm?**

- Some people get a red rash in their arm at the vaccine shot site that starts 3 to 14 days (most commonly 8 days) after the vaccine. This mainly happens with the Moderna vaccine but can occur with the Pfizer 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 minor vaccine side effect is called "COVID arm".
- 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.

#### 7. **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.

8. **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.

**COVID-19 Vaccine - General Questions About Reactions**

1. **Note to Triage - 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.

2. **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.*

3. **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.

4. **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. Some people find that a cold pack works better than heat; follow your doctor's advice.

5. **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.

#### 6. **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.*

#### 7. **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.

#### 8. **Call Back If:**

- Fever lasts over 3 days
- Pain at injection site lasts over 3 days
- You become worse.

### **COVID-19 Vaccine - Frequently Asked Questions (FAQs)**

#### 1. **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>.

#### 2. **FAQ - Why Should I Get the COVID-19 Vaccine (and the Booster)?**

- **Protect Yourself:** The COVID-19 vaccine and staying *up-to-date* on your vaccination 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.

#### 3. **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 (Johnson & Johnson) need two doses to work best.
  - A booster shot is also recommended for all vaccines. People who get the Pfizer or Moderna vaccine should get a booster at least 5 months after their second shot. People who got the Johnson & Johnson vaccine should get the booster at least 2 months after their shot.
  - 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 or booster.
4. **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. This is one sign your vaccine is working and strengthening your immune system.
  - 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.
5. **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.
5. **FAQ - What Is the Difference Between a Booster and Third Vaccine Dose?**
- **Booster:** Vaccine protection can decrease over time. **Everyone** 12 years and older should get a booster shot (vaccination). Booster shots are especially important for groups at higher risk.
  - ... *Booster, previous Pfizer or Moderna vaccine:* Get the booster at least 5 months after their second shot.
  - ... *Booster, previous Johnson & Johnson vaccine:* Get the booster at least 2 months after the first shot.
  - **Third Vaccine Dose:** People with moderately-severely **weak immune systems** are at higher risk of severe COVID-19 infection. These people may not build up good immunity with just 2 shots. It is recommended that they receive a third dose of an mRNA vaccine (Moderna, Pfizer) at least 28 days after the second shot.
  - For U.S. information and the most up-to-date criteria, see the CDC website at <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/booster-shot.html>. In Canada see <https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19/vaccines.html>.
6. **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.
7. **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.
8. **FAQ - When Can I Get the COVID-19 Vaccine?**
    - Now! Several vaccines are now available and approved for use. This includes the Pfizer - BioNTech, Moderna, and Johnson & Johnson (J&J) COVID-19 vaccines.
    - Everyone **5 years of age and older** is now eligible to get a COVID-19 vaccination.
    - Get a vaccine as soon as you can.
  9. **FAQ - Where Can I Get the COVID-19 Vaccine?**
    - You can get the COVID-19 vaccine at the same places you currently get your other immunization shots.
    - This includes doctors' offices, retail pharmacies, hospitals, and federally qualified health centers.
  10. **FAQ - Who Should Get the COVID-19 Vaccine?**
    - Everyone **5 years of age and older** is now eligible to get a COVID-19 vaccination.
    - Get a vaccine as soon as you can.
  11. **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 doctor (or NP/PA) if you have ever had a bad allergic reaction to a vaccine or other injected medicine. Your doctor 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 doctor.
  12. **FAQ - Can I Get the COVID-19 Vaccination if I Am Pregnant or Breastfeeding?**
    - COVID-19 vaccination is recommended for all people aged 5 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
  13. **FAQ - Can I Get My Child Vaccinated Against COVID-19?**
    - COVID-19 vaccination is recommended for all people aged **5 years and older**, including people who are pregnant, breastfeeding, trying to get pregnant now, or might become pregnant in the future.
    - Get a vaccine as soon as you can.
  14. **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 doctor (or NP/PA) or drugstore pharmacist.
  15. **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.

16. **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.
17. **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>.
18. **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.
19. **FAQ - Do I Still Need to Wear a Face Mask If I Am Up-To-Date on COVID-19 Vaccinations?**
  - Yes.
  - The COVID-19 vaccine is highly effective. However, there is a chance that you can get the Omicron 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.
20. **FAQ - Do I Still Need to Quarantine After COVID-19 Exposure If I Am Up-To-Date on COVID-19 Vaccinations?**
  - **Get Tested:** Get tested at least 5 days after you last had close contact with someone with COVID-19.
  - **Wear a Mask:** Wear a well-fitted mask for 10 full days any time you are around others inside your home or in public. Do not go to places where you are unable to wear a mask.
  - **Watch for Symptoms:** Watch for symptoms of COVID-19 until 14 days after you last had close contact with someone with COVID-19.
  - **No Quarantine:** You do not need to stay home unless you develop symptoms.
  - Up-to-date on vaccination means a person is fully vaccinated AND got a booster 5 or more months later. A person is also up-to-date if they are fully vaccinated but are not yet eligible for a booster. For people with moderately to severely weak immune systems up-to-date means they received an extra primary shot (third shot) of an mRNA vaccine and a booster.
21. **FAQ - What Is COVID Arm?**
  - Some people get a red rash in their arm at the vaccine shot site that starts 3 to 14 days (most commonly 8 days) after the vaccine. This mainly happens with the Moderna vaccine but can

occur with the Pfizer 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 minor vaccine side effect is called "COVID arm".
- 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.

22. **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.

23. **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!

24. **FAQ - Who Needs a Booster of the COVID-19 Vaccine?**

- Everyone 12 years and older should get a booster shot (vaccination).
- Booster shots are especially important for groups at higher risk.
- Recommendations for the timing of a booster shot are:
  - ... People who previously got the **Pfizer** or **Moderna** vaccine get the booster at least **5 months** after their second shot.
  - ... People who got the **Johnson & Johnson** vaccine get the booster at least **2 months** after the first shot.
- You can choose from any of the approved COVID-19 vaccines for your booster.
- For U.S. information and the most up-to-date criteria, see the CDC website at: <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/booster-shot.html>. In Canada see <https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19/vaccines.html>.

25. **FAQ - Who Needs an Additional Primary Dose (Third Shot) of the Moderna or Pfizer Vaccine?**

- People with **moderately-severely weak immune systems** are at higher risk of severe COVID-19 infection. These people may not build up good immunity with just 2 shots.
- People with weak immune systems are recommended to get a third dose of Moderna or Pfizer at least 28 days after the second shot. Currently the CDC recommends that you get the same shot you got before.
- For more information and the most up-to-date criteria, see the CDC website at: <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/recommendations/immuno.html>.

72. **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 Omicron variant (and other possible future variants) recommendations for wearing masks are pretty much the same for people who are vaccinated or unvaccinated. Mask wearing is even more important if you 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/types-of-masks.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](http://www.samhsa.gov/find-help/national-helpline).
6. **FAQ - What Masks Are Best to Protect Against COVID-19?**
- There are many types of face masks. Some provide more protection against COVID-19 than others.
  - However, it is important to remember **any face mask is better than no face mask**. Also, any mask you use should fit well (snuggly against the face with no gaps) and should be clean and dry.
  - ... **Cloth masks** made with several layers of finely woven fabric provide good protection. A single fabric layer is not enough.
  - ... Disposable **surgical masks** (procedure masks) and **KN95 masks** provide better protection than cloth masks.
  - ... NIOSH-approved **N95 masks** (respirator masks) provide the best protection. These are most often used by healthcare workers.
  - The CDC recommends that "you wear the most protective mask you can that fits well and that you will wear consistently."
  - You can find more information on the CDC website: <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/types-of-masks.html>.
7. **Call Back If:**
- You have more questions.

## 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.
- COVID-19 vaccination is recommended for all people aged 5 years and older, including people who are pregnant, breastfeeding, trying to get pregnant now, or might become pregnant in the future.

### Types of COVID-19 Vaccines

COVID-19 vaccination is recommended for all people aged 5 years and older, including people who are pregnant, breastfeeding, trying to get pregnant now, or might become pregnant in the future.

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

- *AstraZeneca (Oxford)*: Approved for use in Canada in February 2021. 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>.
- *Pfizer (BioNTech)*: Approved for use in Canada and US, December 2020. For people 5 years and older. More information available at: <https://www.cvdvaccine.com/>.

### Booster Vaccination

Everyone 12 years and older should get a booster shot (vaccination). Booster shots are especially important for groups at higher risk. Recommendations for the timing of a booster shot are:

- People who previously got the **Pfizer** or **Moderna** vaccine should get the booster at least **5 months** after their second shot.
- People who got the **Johnson & Johnson** vaccine should get the booster at least **2 months** after the first shot.

You can choose from any of the approved COVID-19 vaccines for your booster.

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

### Additional Primary Dose (Third Shot) of the Moderna or Pfizer Vaccine

People with **moderately-severely weak immune systems** are at higher risk of severe COVID-19 infection. These people may not build up good immunity with just 2 shots.

- People with weak immune systems are recommended to get a third dose of an mRNA vaccine (Moderna, Pfizer) at least 28 days after the second shot.
- For more information and the most up-to-date criteria, see the CDC website at: <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/recommendations/immuno.html>.

## Up-To-Date on COVID-19 Vaccination

*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).

*Up-to-date on vaccination* means the person is fully vaccinated AND got a booster 5 or more months later. A person is also up-to-date if they are fully vaccinated but are not yet eligible for a booster. For people with moderately to severely weak immune systems up-to-date means they received an extra primary shot (third shot) of an mRNA vaccine and a booster.

## 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 vaccine shot site that starts 3 to 14 days (most commonly 8 days) after the vaccine. This mainly happens with the Moderna vaccine, but can occur with the Pfizer 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 an mRNA 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, Omicron, 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** was the most common COVID-19 variant. In the Winter of 2021-2022 the **Omicron variant** became the most common variant.

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

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

## 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*: Vaccines for COVID-19: <https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19/vaccines.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>.

## REFERENCES

1. Blumenthal KG, Freeman EE, Saff RR, et.al. Delayed Large Local Reactions to mRNA-1273 Vaccine against SARS-CoV-2. *N Engl J Med*. 2021 Mar 3;NEJMc2102131.
2. 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.
3. Cook IF. Sepsis, parental vaccination and skin disinfection. *Hum Vaccin Immunother*. 2016 Oct; 12(10): 2546-2559.

4. 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.
5. Dooling K, McClung N, Chamberland M, Marin M, Wallace M, Bell BP, Lee GM, Talbot HK, Romero JR, Oliver SE. The Advisory Committee on Immunization Practices' Interim Recommendation for Allocating Initial Supplies of COVID-19 Vaccine - United States, 2020. *MMWR Morb Mortal Wkly Rep.* 2020 Dec 11;69(49):1857-1859.
6. Doria-Rose N, Suthar MS, Makowski M, et.al. Antibody Persistence through 6 Months after the Second Dose of mRNA-1273 Vaccine for Covid-19. *N Engl J Med.* 2021 Apr 6.
7. Freedman M, Kroger A, Hunter P, Ault KA; Advisory Committee on Immunization Practices. Recommended Adult Immunization Schedule, United States, 2020. *Ann Intern Med.* 2020;172(5):337-347.
8. Gray KJ, Bordt EA, Atyeo C, et.al. COVID-19 vaccine response in pregnant and lactating women: a cohort study. *Am J Obstet Gynecol.* 2021 Mar 24:S0002-9378(21)00187-3.
9. 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.
10. 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.
11. 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.
12. Oliver SE, Gargano JW, Scobie H, et.al. The Advisory Committee on Immunization Practices' Interim Recommendation for Use of Janssen COVID-19 Vaccine - United States, February 2021. *MMWR Morb Mortal Wkly Rep.* 2021 Mar 5;70(9):329-332.
13. 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.
14. Polack FP, Thomas SJ, Kitchin N, et.al. Safety and Efficacy of the BNT162b2 mRNA Covid-19 Vaccine. *N Engl J Med.* 2020 Dec 10. doi: 10.1056/NEJMoa2034577. Epub ahead of print.
15. Schultz NH, Sørvoll IH, Michelsen AE, et.al. Thrombocytopenia after ChAdOx1 nCoV-19 Vaccination. *N Engl J Med.* 2021 Apr 9.
16. Shimabukuro TT, Kim SY, Myers TR, et.al. CDC v-safe COVID-19 Pregnancy Registry Team. Preliminary Findings of mRNA Covid-19 Vaccine Safety in Pregnant Persons. *N Engl J Med.* 2021 Apr 21.
17. Sponsor - Moderna COVID-19 Vaccine. FDA Briefing Document. Moderna COVID-19 Vaccine. Vaccines and Related Biological Products Advisory Committee Meeting. December 10, 2020. Moderna COVID-19 Vaccine. Available at: <https://www.fda.gov/media/144434/download>.

18. Sponsor - Pfizer and BioNTech. FDA Briefing Document. Pfizer-BioNTech COVID-19 Vaccine. Vaccines and Related Biological Products Advisory Committee Meeting. December 10, 2020. Pfizer and BioNTech. Available at: <https://www.fda.gov/media/144245/download>.
19. Zhu FC, Li YH, Guan XH, et.al. Safety, tolerability, and immunogenicity of a recombinant adenovirus type-5 vectored COVID-19 vaccine: a dose-escalation, open-label, non-randomised, first-in-human trial. Lancet. 2020 Jun 13;395(10240):1845-1854.

## AUTHOR AND COPYRIGHT

<b>Author:</b>	David A. Thompson, MD, FACEP
<b>Copyright:</b>	2000-2021, LaGrange Medical Software, Inc. All rights reserved.
<b>Company:</b>	Schmitt-Thompson Clinical Content
<b>Content Set:</b>	Office Hours Telehealth Triage Protocols   Adult
<b>Version Year:</b>	2021
<b>Last Revised:</b>	1/20/2022
<b>Last Reviewed:</b>	1/18/2022