

# Prevaccination Checklist for COVID-19 Vaccines



For vaccine recipients:

Patient Name \_\_\_\_\_

The following questions will help us determine if there is any reason you should not get the COVID-19 vaccine today.

Age \_\_\_\_\_

**If you answer “yes” to any question, it does not necessarily mean you should not be vaccinated.** It just means additional questions may be asked.

If a question is not clear, please ask your healthcare provider to explain it.

Yes      No      Don't know

	Yes	No	Don't know
1. Are you feeling sick today?			
2. Have you ever received a dose of COVID-19 vaccine?			
<ul style="list-style-type: none"> <li>If yes, which vaccine product did you receive?                               <input type="checkbox"/> Pfizer      <input type="checkbox"/> Moderna      <input type="checkbox"/> Another product _____                         </li> </ul>			
3. Have you ever had an allergic reaction to:			
<small>(This would include a severe allergic reaction [e.g., anaphylaxis] that required treatment with epinephrine or EpiPen® or that caused you to go to the hospital. It would also include an allergic reaction that occurred within 4 hours that caused hives, swelling, or respiratory distress, including wheezing.)</small>			
<ul style="list-style-type: none"> <li>A component of the COVID-19 vaccine, including polyethylene glycol (PEG), which is found in some medications, such as laxatives and preparations for colonoscopy procedures</li> </ul>			
<ul style="list-style-type: none"> <li>Polysorbate</li> </ul>			
<ul style="list-style-type: none"> <li>A previous dose of COVID-19 vaccine</li> </ul>			
4. Have you ever had an allergic reaction to another vaccine (other than COVID-19 vaccine) or an injectable medication?			
<small>(This would include a severe allergic reaction [e.g., anaphylaxis] that required treatment with epinephrine or EpiPen® or that caused you to go to the hospital. It would also include an allergic reaction that occurred within 4 hours that caused hives, swelling, or respiratory distress, including wheezing.)</small>			
5. Have you ever had a severe allergic reaction (e.g., anaphylaxis) to something other than a component of COVID-19 vaccine, polysorbate, or any vaccine or injectable medication? This would include food, pet, environmental, or oral medication allergies.			
6. Have you received any vaccine in the last 14 days?			
7. Have you ever had a positive test for COVID-19 or has a doctor ever told you that you had COVID-19?			
8. Have you received passive antibody therapy (monoclonal antibodies or convalescent serum) as treatment for COVID-19?			
9. Do you have a weakened immune system caused by something such as HIV infection or cancer or do you take immunosuppressive drugs or therapies?			
10. Do you have a bleeding disorder or are you taking a blood thinner?			
11. Are you pregnant or breastfeeding?			

Form reviewed by \_\_\_\_\_

Date \_\_\_\_\_

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# Prevaccination Checklist for COVID-19 Vaccines

Information for Healthcare Professionals



For additional information on COVID-19 vaccine clinical guidance, see: <https://www.cdc.gov/vaccines/covid-19/info-by-product/clinical-considerations.html>.

For additional information on ACIP general recommendations, see: <https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html>.

Two COVID-19 vaccines are currently authorized for use in the United States. These vaccines are authorized for use among different age groups.

PRODUCT	AUTHORIZED AGE GROUPS
Pfizer-BioNTech COVID-19 Vaccine	16 years of age and older
Moderna COVID-19 Vaccine	18 years of age and older

Anyone outside of the authorized age groups for a product should not receive the vaccine.

## Postvaccination Observation Times for Persons without Contraindications to COVID-19 Vaccination

- **30 minutes:** Persons with a history of an immediate allergic reaction of any severity to a vaccine or injectable therapy or a history of anaphylaxis due to any cause
- **15 minutes:** All other persons

## Are you feeling sick today?

There is no evidence that acute illness reduces vaccine efficacy or increases vaccine adverse events. However, as a precaution with moderate or severe acute illness, all vaccines should be delayed until the illness has improved. **Mild illnesses (e.g., upper respiratory infections, diarrhea) are NOT contraindications to vaccination.** Do not withhold vaccination if a person is taking antibiotics.

**Vaccination of persons with current SARS-CoV-2 infection should be deferred until the person has recovered from acute illness and they can discontinue isolation.** This recommendation applies to persons who develop SARS-CoV-2 infection before receiving any vaccine doses as well as those who develop SARS-CoV-2 infection after the first dose but before receipt of the second dose.

## Have you ever received a dose of COVID-19 vaccine?

COVID-19 vaccines are **NOT** interchangeable. Currently authorized COVID-19 vaccines require two doses. Both doses of the series should be completed with the same product. Product dosing schedules vary.

Check medical records, immunization information systems, and vaccination record cards to help determine the initial product received. Those who received a trial vaccine should consult with the trial sponsors to determine if it is feasible to receive additional doses.

PRODUCT	DOSING SCHEDULE between doses 1 and 2
Pfizer-BioNTech COVID-19 Vaccine	21 days
Moderna COVID-19 Vaccine	28 days

# Prevaccination Checklist for COVID-19 Vaccines

Information for Healthcare Professionals



## COVID-19 Vaccine Components

Description	Pfizer-BioNTech COVID-19 vaccine	Moderna COVID-19 vaccine
<b>mRNA</b>	Nucleoside-modified mRNA encoding the viral spike (S) glycoprotein of SARS-CoV-2	Nucleoside-modified mRNA encoding the viral spike (S) glycoprotein of SARS-CoV-2
<b>Lipids</b>	2[(polyethylene glycol)-2000]-N, N-ditetradecylacetamide	PEG2000-DMG; 1,2-dimyristoyl-rac-glycerol, methoxypolyethylene glycol
	1,2-distearoyl-sn-glycero-3-phosphocholine	1,2-distearoyl-sn-glycero-3-phosphocholine
	Cholesterol	Cholesterol
	(4-hydroxybutyl)azanediyl)bis(hexane-6,1-diyl) bis(2-hexyldecanoate)	SM-102: heptadecane-9-yl 8-((2-hydroxyethyl) (6-oxo-6-(undecyloxy) hexyl) amino) octanoate
<b>Salts, sugars, buffers</b>	Potassium chloride	Tromethamine
	Monobasic potassium phosphate	Tromethamine hydrochloride
	Sodium chloride	Acetic acid
	Dibasic sodium phosphate dihydrate	Sodium acetate
	Sucrose	Sucrose

### Have you ever had an allergic reaction to:

- Any component of a COVID-19 vaccine, including polyethylene glycol (PEG), which is found in some medications, such as laxatives and preparations for colonoscopy procedures?
- Polysorbate
- A previous COVID-19 vaccine

History of anaphylaxis or an immediate allergic reaction (of any severity) to any COVID-19 vaccine or any component of an mRNA COVID-19 vaccine is a contraindication to any current COVID-19 vaccine. Polyethylene glycol (PEG) is an ingredient in mRNA COVID-19 vaccines. Because of potential cross-reactive hypersensitivity with the COVID-19 vaccine ingredient PEG, a history of allergic reaction to polysorbate is also a contraindication to an mRNA COVID-19 vaccine.

Healthcare professionals should be familiar with identifying immediate-type allergic reactions, including anaphylaxis, and be competent in treating these events at the time of vaccine administration. Appropriate medical treatment for severe allergic reactions must be immediately available in the event that an acute anaphylactic reaction occurs following administration of a COVID-19 vaccine. See [Management of Anaphylaxis at COVID-19 Vaccination Sites](#) | CDC for additional guidance.

### Have you ever had an allergic reaction to another vaccine (other than COVID-19 vaccine) or another injectable medication?

A history of any immediate allergic reaction to any other vaccine or injectable therapy (i.e., intramuscular, intravenous, or subcutaneous vaccines or therapies not related to a component of mRNA COVID-19 vaccines or polysorbate) is a precaution to currently authorized COVID-19 vaccines. Vaccine may be given, but counsel patients about unknown risks of developing a severe allergic reaction and balance these risks against the benefits of vaccination. Deferral of vaccination and/or consultation with an allergist-immunologist may be considered. Considerations for vaccination include risk of exposure to SARS-CoV-2, risk of severe disease or death due to COVID-19, previous infection with COVID-19, unknown risk of anaphylaxis following mRNA COVID-19 vaccination, and ability of recipient to receive care immediately for anaphylaxis if necessary. **These individuals should be observed for 30 minutes after vaccination.**

When vaccine recipients report an immediate allergic reaction, providers should attempt to determine whether reactions reported following vaccination are consistent with immediate allergic reactions versus other types of reactions commonly observed following vaccination, such as vasovagal reaction or postvaccination side effects (which are not contraindications to receiving the second vaccine dose). See page 6 for additional information.

# Prevaccination Checklist for COVID-19 Vaccines

Information for Healthcare Professionals



## **Have you ever had a severe allergic reaction (e.g., anaphylaxis) to something other than a component of COVID-19 vaccine, polysorbate, or any vaccine or injectable medication? This would include food, pet, venom, environmental, or oral medication allergies.**

Allergic reactions, including severe allergic reactions, NOT related to vaccines or injectable therapies, components of mRNA COVID-19 vaccines (including PEG), or polysorbates are NOT contraindications or precautions to vaccination with currently authorized COVID-19 vaccines. HOWEVER, individuals who have had severe allergic reactions to anything, regardless of cause, **should be observed for 30 minutes after vaccination.** All others, including those with immediate allergic reactions that were not severe, should be observed for 15 minutes.

## Clinical Consideration Questions

Responses to these questions are not (on their own) contraindications or precautions to vaccination. However, healthcare professionals should be prepared to discuss information and options with patients based on their responses to the following questions.

### **Have you received another vaccine in the last 14 days?**

The COVID-19 vaccine series should be administered alone, with a minimum interval of 14 days before or after administration of other vaccines. This recommendation is based on the lack of data on the safety and efficacy of mRNA COVID-19 vaccines administered simultaneously with other vaccines.

### **Have you had a positive test for COVID-19 or has a doctor ever told you that you had COVID-19?**

Vaccination should be offered to persons regardless of history of prior symptomatic or asymptomatic SARS-CoV-2 infection. Vaccination of persons with known current SARS-CoV-2 infection should be deferred until the person has recovered from the acute illness (if the person had symptoms) and criteria have been met for them to discontinue isolation. Persons with documented acute SARS-CoV-2 infection in the preceding 90 days may delay vaccination until near the end of this period, if desired, because current evidence suggests reinfection is uncommon during this time. Viral testing to assess for acute SARS-CoV-2 infection or serologic testing to assess for prior infection solely for the purpose of vaccine decision-making is not recommended.

### **Have you received passive antibody therapy as treatment for COVID-19?**

Based on the estimated half-life of monoclonal antibodies or convalescent plasma as part of COVID-19 treatment, as well as evidence suggesting that reinfection is uncommon in the 90 days after initial infection, vaccination should be deferred for at least 90 days, as a precautionary measure until additional information becomes available, to avoid interference of the antibody treatment with vaccine-induced immune responses.

### **Do you have a weakened immune system caused by something such as HIV infection or cancer or do you take immunosuppressive drugs or therapies?**

Persons with HIV infection or other immunocompromising conditions, or who take immunosuppressive medications or therapies, might be at increased risk for severe COVID-19. mRNA COVID-19 vaccines may be administered to persons with underlying medical conditions who have no contraindications to vaccination. However, they should be counseled about the unknown vaccine safety profile and effectiveness in immunocompromised populations, as well as the potential for reduced immune responses and the need to continue to follow all current guidance to protect themselves against COVID-19, including wearing a mask, social distancing, and washing hands frequently. Revaccination is not recommended after immune competence is regained in persons who received mRNA COVID-19 vaccines during chemotherapy or treatment with other immunosuppressive drugs.

### **Do you have a bleeding disorder or are you taking a blood thinner?**

As with all vaccines, COVID-19 vaccine may be given to these patients, if a physician familiar with the patient's bleeding risk determines that the vaccine can be administered intramuscularly with reasonable safety. ACIP recommends the following technique for intramuscular vaccination in patients with bleeding disorders or taking blood thinners: A fine-gauge needle (23-gauge or smaller caliber) should be used for the vaccination, followed by firm pressure on the site, without rubbing, for at least 2 minutes.

# Prevaccination Checklist for COVID-19 Vaccines

Information for Healthcare Professionals



## Are you pregnant or breastfeeding?

If pregnant people are part of a group that is recommended to receive a COVID-19 vaccine (e.g., healthcare personnel), they may choose to be vaccinated. For pregnant people seeking guidance in making a decision, pregnant people and their healthcare providers should consider the level of COVID-19 community transmission, the patient's personal risk of contracting COVID-19, the risks of COVID-19 to the patient and potential risks to the fetus, the efficacy of the vaccine, the side effects of the vaccine, and the lack of data about use of the vaccine during pregnancy.

A lactating person who is part of a group recommended to receive a COVID-19 vaccine (e.g., healthcare personnel) may choose to be vaccinated. There are no data on the safety of COVID-19 vaccines in lactating people or the effects of mRNA COVID-19 vaccines on the breastfed infant or milk production/excretion.

## Potential characteristics of allergic reactions, vasovagal reactions, and vaccine side effects following mRNA COVID-19 vaccination

In patients who develop postvaccination symptoms, determining the etiology is important to decide whether a person can receive additional doses of mRNA COVID-19 vaccines. The following table of signs and symptoms is meant to serve as a resource but may not be exhaustive, and patients may not have all signs or symptoms. Providers should use their clinical judgement when assessing patients to determine the diagnosis and management.

Characteristic	Immediate allergic reactions (including anaphylaxis)	Vasovagal reaction	Vaccine side effects (local and systemic)
Timing after vaccination	Most occur within 15-30 minutes of vaccination	Most occur within 15 minutes	Median of 1 to 3 days after vaccination (with most occurring day after vaccination)
<b>Signs and symptoms</b>			
Constitutional	Feeling of impending doom	Feeling warm or cold	Fever, chills, fatigue
Cutaneous	Skin symptoms present in ~90% of people with anaphylaxis, including pruritus, urticaria, flushing, angioedema	Pallor, diaphoresis, clammy skin, sensation of facial warmth	Pain, erythema or swelling at injection site, lymphadenopathy in same arm as vaccination
Neurologic	Confusion, disorientation, dizziness, lightheadedness, weakness, loss of consciousness	Dizziness, lightheadedness, syncope (often after prodromal symptoms for a few seconds or minutes), weakness, changes in vision (such as spots of flickering lights, tunnel vision), changes in hearing	Headache
Respiratory	Shortness of breath, wheezing, bronchospasm, stridor, hypoxia	Variable; if accompanied by anxiety, may have an elevated respiratory rate	N/A
Cardiovascular	Hypotension, tachycardia	Variable; may have hypotension or bradycardia during syncopal event	N/A
Gastrointestinal	Nausea, vomiting, abdominal cramps, diarrhea	Nausea, vomiting	Vomiting or diarrhea may occur
Musculoskeletal	N/A	N/A	Myalgia, arthralgia
<b>Vaccine recommendations</b>			
Recommended to receive second dose of mRNA COVID-19 vaccine?	No	Yes	Yes

Healthcare professionals or health departments in the United States can request a consultation from the [Clinical Immunization Safety Assessment COVIDvax project](#) for a complex COVID-19 vaccine safety question not readily addressed by CDC guidance about an individual patient residing in the United States not readily addressed by CDC guidance.

# What to Expect after Getting a COVID-19 Vaccine

Accessible version: <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/expect/after.html>

COVID-19 vaccination will help protect you from getting COVID-19. You may have some side effects, which are normal signs that your body is building protection. These side effects **may feel like flu** and **may even affect your ability** to do daily activities, but they should go away in a few days.

## Common side effects

### On the arm where you got the shot:

- Pain
- Swelling

### Throughout the rest of your body:

- Fever
- Chills
- Tiredness
- Headache

## Helpful tips

If you have pain or discomfort, talk to your doctor about taking an over-the-counter medicine, such as ibuprofen or acetaminophen.

### To reduce pain and discomfort where you got the shot:

- Apply a clean, cool, wet washcloth over the area.
- Use or exercise your arm.

### To reduce discomfort from fever:

- Drink plenty of fluids.
- Dress lightly.

## When to call the doctor

In most cases, discomfort from fever or pain is normal. Contact your doctor or healthcare provider:

- If the redness or tenderness where you got the shot increases after 24 hours
- If your side effects are worrying you or do not seem to be going away after a few days

## Remember

- Side effects may feel like flu and even affect your ability to do daily activities, but they should go away in a few days.
- With most COVID-19 vaccines, you will need 2 shots in order for them to work. Get the second shot even if you have side effects after the first one, unless a vaccination provider or your doctor tells you not to get a second shot.
- It takes time for your body to build protection after any vaccination. COVID-19 vaccines that require 2 shots may not protect you until a week or two after your second shot.
- It's important for everyone to continue using all the tools available to help stop this pandemic as we learn more about how COVID-19 vaccines work in real-world conditions. Cover your mouth and nose with a mask when around others, stay at least 6 feet away from others, avoid crowds, and wash your hands often.

## HEALTHCARE PROVIDER, PLEASE FILL IN THE INFORMATION BELOW:

If your temperature is \_\_\_\_°F or \_\_\_\_°C or higher or if you have questions, call your healthcare provider.

Tell your healthcare provider about: \_\_\_\_\_

**Healthcare provider phone number:** \_\_\_\_\_

### Medication (if needed):

Take \_\_\_\_\_ every \_\_\_\_ hours as needed.

(type and dose or amount)



**Ask your healthcare provider about getting started with v-safe**

Use your smartphone to tell CDC about any side effects after getting the COVID-19 vaccine. You'll also get reminders if you need a second dose

Learn more about **v-safe**.

[www.cdc.gov/vsafe](https://www.cdc.gov/vsafe)



[cdc.gov/coronavirus](https://cdc.gov/coronavirus)

# Medical Management of Vaccine Reactions in Adults in a Community Setting

*The table below describes steps to take if an adverse reaction occurs following vaccination.*

Administering any medication, including vaccines, has the potential to cause an adverse reaction. To minimize the likelihood of an adverse event, screen patients for vaccine contraindications and precautions prior to vaccination (see “Screening Checklist for Contraindications to Vaccines for Adults” at [www.immunize.org/catg.d/p4065.pdf](http://www.immunize.org/catg.d/p4065.pdf)). When adverse reactions do occur,

they can vary from minor (e.g., soreness, itching) to the rare and serious (e.g., anaphylaxis). Be prepared.

Vaccine providers should know how to recognize allergic reactions, including anaphylaxis. Have a plan in place and supplies available to provide appropriate medical care should such an event occur.

REACTION	SIGNS AND SYMPTOMS	MANAGEMENT
Localized	Soreness, redness, itching, or swelling at the injection site	Apply a cold compress to the injection site. Consider giving an analgesic (pain reliever) or antipruritic (anti-itch) medication.
	Slight bleeding	Apply pressure and an adhesive compress over the injection site.
	Continuous bleeding	Place thick layer of gauze pads over site and maintain direct and firm pressure; raise the bleeding injection site (e.g., arm) above the level of the patient’s heart.
Psychological fright, presyncope, and syncope (fainting)	Fright before injection is given	Have patient sit or lie down for the vaccination.
	Patient feels “faint” (e.g., light-headed, dizzy, weak, nauseated, or has visual disturbance)	Have patient lie flat. Loosen any tight clothing and maintain open airway. Apply cool, damp cloth to patient’s face and neck. Keep them under close observation until full recovery.
	Fall, without loss of consciousness	Examine the patient to determine if injury is present before attempting to move the patient. Place patient flat on back with feet elevated.
	Loss of consciousness	Check to determine if injury is present before attempting to move the patient. Place patient flat on back with feet elevated. Call 911 if patient does not recover immediately.
Anaphylaxis	<b>Skin and mucosal symptoms</b> such as generalized hives, itching, or flushing; swelling of lips, face, throat, or eyes. <b>Respiratory symptoms</b> such as nasal congestion, change in voice, sensation of throat closing, stridor, shortness of breath, wheeze, or cough. <b>Gastrointestinal symptoms</b> such as nausea, vomiting, diarrhea, cramping abdominal pain. <b>Cardiovascular symptoms</b> such as collapse, dizziness, tachycardia, hypotension.	See the emergency medical protocol on the next page for detailed steps to follow in treating anaphylaxis.

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**Suggested Medications for Managing Anaphylaxis in a Community Immunization Clinic Setting**

**FIRST-LINE medication**

**Epinephrine** 1.0 mg/mL aqueous solution (1:1000 dilution) in prefilled autoinjector or prefilled syringe (0.3 mg), prepackaged syringes, vials, or ampules. At least three epinephrine doses should be available onsite.

**OPTIONAL medications: H<sub>1</sub> antihistamines**

These relieve itching and hives only; they DO NOT relieve upper or lower airway obstruction, hypotension, or shock.

**Diphenhydramine** (e.g., Benadryl) oral, 12.5 mg/5 mL liquid, 25 or 50 mg tablets

**Additional emergency supplies you may need**

- Syringes (1 and 3 cc) and needles (22 and 25 g, 1", 1½", and 2") if needed for epinephrine
- Alcohol wipes
- Tourniquet  
Applied on the extremity above the injection site to slow systemic absorption of antigen and anaphylactic mediators
- Stethoscope
- Blood pressure measuring device with adult-sized and extra-large cuffs
- Tongue depressors
- Light with extra batteries (for examination of the mouth and throat)
- A timing device, such as wristwatch, for checking pulse
- Cell phone or access to onsite phone

**For remote areas without EMS support**

- Adult airways (various sizes)
- Adult-sized pocket mask with one-way valve
- Oxygen (if available)

**REFERENCES**

\* American Academy of Pediatrics. *Red Book: 2018–2021*, 31st ed (p. 66).

Campbell RL, Kelso JM. Anaphylaxis: Emergency treatment. In: UpToDate, Post TW (Ed), UpToDate, Waltham, MA. November 2018.

Kroger AT, Duchin J, Vazquez M. General Best Practice Guidelines for Immunization. Best Practices Guidance of the Advisory Committee on Immunization Practices (ACIP) at [www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html](http://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html).

**Emergency medical protocol for management of anaphylactic reactions in adults in a community setting**

- 1 If itching and swelling are confined to the injection site where the vaccination was given, observe patient closely for the development of generalized symptoms.
- 2 If symptoms are generalized, activate the emergency medical system (EMS; e.g., call 911) and notify the patient’s physician. This should be done by a second person, while the primary healthcare professional assesses the airway, breathing, circulation, and level of consciousness of the patient. Vital signs should be monitored continuously.
- 3 **DRUG DOSING INFORMATION: The first-line and most important therapy in anaphylaxis is epinephrine. There are NO absolute contraindications to epinephrine in the setting of anaphylaxis.**
  - a **First-line treatment: EPINEPHRINE is the first-line treatment for anaphylaxis, and there is no known equivalent substitute.** Use epinephrine in a 1.0 mg/mL aqueous solution (1:1000 dilution). Administer a 0.3 mg dose IM using a premeasured or prefilled syringe or an autoinjector in the mid-outer thigh. If using another epinephrine formulation, the recommended dose is 0.01 mg/kg, ranging for adults from 0.3 mg to maximum dose of 0.5 mg. Administer IM, preferably in the mid-outer thigh. Epinephrine dose may be repeated 2 additional times every 5–15 minutes (or sooner as needed) while waiting for EMS to arrive.
  - b **Optional treatment: H<sub>1</sub> ANTIHISTAMINES** relieve itching and urticaria (hives). These medications DO NOT relieve upper or lower airway obstruction, hypotension, or shock. Consider giving diphenhydramine (e.g., Benadryl) for relief of itching and hives. Administer orally 1–2 mg/kg every 4–6 hours, up to a maximum single dose of 100 mg.\*
- 4 Monitor the patient closely until EMS arrives. Perform cardiopulmonary resuscitation (CPR), if necessary, and maintain airway. Keep patient in recumbent position (flat on back) unless he or she is having breathing difficulty. If breathing is difficult, patient’s head may be elevated, provided blood pressure is adequate to prevent loss of consciousness. If blood pressure is low, elevate legs. Monitor blood pressure and pulse every 5 minutes.
- 5 Record the patient’s reaction (e.g., hives, anaphylaxis) to the vaccine, all vital signs, medications administered to the patient, including the time, dosage, response, and the name of the medical personnel who administered the medication, and other relevant clinical information.
- 6 Notify the patient’s primary care physician.
- 7 Report the incident to the Vaccine Adverse Event Reporting System (VAERS) at [www.vaers.hhs.gov](http://www.vaers.hhs.gov).

These standing orders for the medical management of vaccine reactions in adult patients shall remain in effect for patients of the

\_\_\_\_\_ until rescinded or until \_\_\_\_\_

NAME OF CLINIC DATE

\_\_\_\_\_

MEDICAL DIRECTOR’S SIGNATURE DATE OF SIGNING

# Medical Management of Vaccine Reactions in Children and Teens in a Community Setting

*The table below describes steps to take if an adverse reaction occurs following vaccination.*

Administering any medication, including vaccines, has the potential to cause an adverse reaction. To minimize the likelihood of an adverse event, screen patients for vaccine contraindications and precautions prior to vaccination (see “Screening Checklist for Contraindications to Vaccines for Children and Teens” at [www.immunize.org/catg.d/p4060.pdf](http://www.immunize.org/catg.d/p4060.pdf)). When adverse reactions do

occur, they can vary from minor (e.g., soreness, itching) to the rare and serious (e.g., anaphylaxis). Be prepared.

Vaccine providers should know how to recognize allergic reactions, including anaphylaxis. Have a plan in place and supplies available to provide appropriate medical care should such an event occur.

REACTION	SIGNS AND SYMPTOMS	MANAGEMENT
Localized	Soreness, redness, itching, or swelling at the injection site	Apply a cold compress to the injection site. Consider giving an analgesic (pain reliever) or antipruritic (anti-itch) medication.
	Slight bleeding	Apply pressure and an adhesive compress over the injection site.
	Continuous bleeding	Place thick layer of gauze pads over site and maintain direct and firm pressure; raise the bleeding injection site (e.g., arm) above the level of the patient’s heart.
Psychological fright and syncope (fainting)	Fright before injection is given	Have patient sit or lie down for the vaccination.
	Paleness, sweating, coldness of the hands and feet, nausea, light-headedness, dizziness, weakness, or visual disturbances	Have patient lie flat. Loosen any tight clothing and maintain open airway. Apply cool, damp cloth to patient’s face and neck. Keep them under close observation until full recovery.
	Fall, without loss of consciousness	Examine the patient to determine if injury is present before attempting to move the patient. Place patient flat on back with feet elevated.
	Loss of consciousness	Check to determine if injury is present before attempting to move the patient. Place patient flat on back with feet elevated. Call 911 if patient does not recover immediately.
Anaphylaxis	<b>Skin and mucosal symptoms</b> such as generalized hives, itching, or flushing; swelling of lips, face, throat, or eyes. <b>Respiratory symptoms</b> such as nasal congestion, change in voice, sensation of throat closing, stridor, shortness of breath, wheeze, or cough. <b>Gastrointestinal symptoms</b> such as nausea, vomiting, diarrhea, cramping abdominal pain. <b>Cardiovascular symptoms</b> such as collapse, dizziness, tachycardia, hypotension.	See the emergency medical protocol on the next page for detailed steps to follow in treating anaphylaxis.

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## Suggested Medications for Managing Anaphylaxis in a Community Immunization Clinic Setting

### FIRST-LINE medication

- Epinephrine** 1.0 mg/mL aqueous solution (1:1000 dilution) in prefilled autoinjector or prefilled syringe (various doses), prepackaged syringes, vials, or ampules. At least three epinephrine doses should be available on site, dosages as appropriate for patient population.

### OPTIONAL medications: H<sub>1</sub> antihistamines

These relieve itching and hives only; they DO NOT relieve upper or lower airway obstruction, hypotension, or shock.

- Diphenhydramine** (e.g., Benadryl) oral, 12.5 mg/5 mL liquid; 25 or 50 mg tablets
- Hydroxyzine** (e.g., Atarax, Vistaril) oral, 10 mg/5 mL liquid, 10 mg or 25 mg tablets

### Additional emergency supplies you may need

- Syringes (1 and 3 cc) and needles (22 and 25 g, 1", 1½", and 2") if needed for epinephrine
- Alcohol wipes
- Tourniquet  
Applied on the extremity above the injection site to slow systemic absorption of antigen and anaphylactic mediators
- Stethoscope
- Blood pressure measuring device with multiple-sized cuffs depending on patient population
- Tongue depressors
- Light with extra batteries (for examination of the mouth and throat)
- A timing device, such as wristwatch, for checking pulse
- Cell phone or access to onsite phone

### For remote areas without EMS support

- Pediatric- and adult-sized airways (various sizes)
- Various-sized pocket masks with one-way valve
- Oxygen (if available)

## REFERENCES

\*American Academy of Pediatrics. *Red Book: 2018–2021 Report of the Committee on Infectious Diseases*. 31st edition, p. 64–67.

Campbell RL, Kelso JM. Anaphylaxis: Emergency treatment. In: UpToDate, Post TW (Ed), UpToDate, Waltham, MA. November 2018.

Kroger AT, Duchin J, Vazquez M. General Best Practice Guidelines for Immunization. Best Practices Guidance of the Advisory Committee on Immunization Practices (ACIP) at [www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html](http://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html)

## Emergency medical protocol for management of anaphylactic reactions in children and teens in a community setting

- 1 If itching and swelling are confined to the injection site where the vaccination was given, observe patient closely for the development of generalized symptoms.
- 2 If symptoms are generalized, activate the emergency medical system (EMS; e.g., call 911) and notify the patient's physician. This should be done by a second person, while the primary healthcare professional assesses the airway, breathing, circulation, and level of consciousness of the patient. Vital signs should be monitored continuously.
- 3 **DRUG DOSING INFORMATION: The first-line and most important therapy in anaphylaxis is epinephrine. There are NO absolute contraindications to epinephrine in the setting of anaphylaxis.**
  - a **First-line treatment: EPINEPHRINE is the first-line treatment for anaphylaxis, and there is no known equivalent substitute.** Use epinephrine in a 1.0 mg/mL aqueous solution (1:1000 dilution). See page 3 to determine correct dose to be used based on child's weight. If using an autoinjector or pre-filled syringe, administer a dose of 0.1 mg, 0.15 mg, or 0.3 mg IM (as appropriate for the patient's weight) into the anterolateral thigh. If using another epinephrine format, the recommended dose is 0.01 mg/kg per dose, up to a maximum single dose of 0.5 mg. Administer IM, preferably in the anterolateral thigh. Epinephrine dose may be repeated every 5–15 minutes (or sooner as needed) while waiting for EMS to arrive.
  - b **Optional treatment: H<sub>1</sub> ANTIHISTAMINES** relieve itching and urticaria (hives). These medications DO NOT relieve upper or lower airway obstruction, hypotension, or shock. Consider giving **diphenhydramine** (e.g., Benadryl) or **hydroxyzine** (e.g., Atarax, Vistaril) for relief of itching or hives.
    - Administer **diphenhydramine** orally, standard dose of 1–2 mg/kg every 4–6 hours. Maximum single dose is 40 mg for children age <12 years; for children age ≥12 years, 100 mg. See dosing chart on page 3.\*
    - Administer **hydroxyzine** orally; the standard dose is 0.5–1 mg/kg/dose, up to 50–100 mg maximum per day in children and adolescents. See dosing chart on page 3.
- 4 Monitor the patient closely until EMS arrives. Perform cardiopulmonary resuscitation (CPR), if necessary, and maintain airway. Keep patient in recumbent position (flat on back) unless he or she is having breathing difficulty. If breathing is difficult, patient's head may be elevated, provided blood pressure is adequate to prevent loss of consciousness. If blood pressure is low, elevate legs. Monitor blood pressure and pulse every 5 minutes.
- 5 Record the patient's reaction (e.g., hives, anaphylaxis) to the vaccine, all vital signs, medications administered to the patient, including the time, dosage, response, and the name of the medical personnel who administered the medication, and other relevant clinical information.
- 6 Notify the patient's primary care physician.
- 7 Report the incident to the Vaccine Adverse Event Reporting System (VAERS) at [www.vaers.hhs.gov](http://www.vaers.hhs.gov).

CONTINUED ON NEXT PAGE ►

For your convenience, approximate dosages based on weight and age are provided in the following charts. Please confirm that you are administering the correct dose for your patient.

First-Line Treatment: Epinephrine				Epinephrine Dose	
Recommended dose is 0.01 mg/kg body weight up to 0.5 mg maximum dose. May be repeated every 5–15 minutes (or sooner) up to 3 times while waiting for EMS to arrive.	Age group	Range of weight (lb)	Range of weight (kg)*	1.0 mg/mL aqueous solution (1:1000 dilution); intramuscular. Minimum dose: 0.05 mL	Epinephrine autoinjector or prefilled syringe (0.1 mg, 0.15 mg, 0.3 mg)
	Infants and children	1–6 months	9–19 lb	4–8.5 kg	0.05 mL (or mg)
7–36 months		20–32 lb†	9–14.5 kg†	0.1 mL (or mg)	0.1 mg†
37–59 months		33–39 lb	15–17.5 kg	0.15 mL (or mg)	0.15 mg/dose
5–7 years		40–56 lb	18–25.5 kg	0.2–0.25 mL (or mg)	0.15 mg/dose
8–10 years		57–76 lb	26–34.5 kg	0.25–0.3 mL (or mg)	0.15 mg or 0.3 mg/dose
Teens	11–12 years	77–99 lb	35–45 kg	0.35–0.4 mL (or mg)	0.3 mg/dose
	13 years & older	100+ lb	46+ kg	0.5 mL (or mg) – max. dose	0.3 mg/dose

NOTE: If body weight is known, then dosing by weight is preferred. If weight is not known or not readily available, dosing by age is appropriate.

\* Rounded weight at the 50th percentile for each age range

† 0.1 mg autoinjector is licensed for use in 7.5 to 14 kg infants and children

Optional Treatment: Diphenhydramine				Diphenhydramine dose calculations based on 1 mg/kg†	
commonly known as Benadryl  Recommended dose is 1–2 mg/kg body weight every 4–6 hrs†	Age group	Range of weight (lb)	Range of weight (kg)*	Liquid: 12.5 mg/5 mL Tablets: 25 mg or 50 mg	
	Infants and children	7–36 months	20–32 lb	9–14.5 kg	10–15 mg/dose †
37–59 months		33–39 lb	15–17.5 kg	15–20 mg/dose †	
5–7 years		40–56 lb	18–25.5 kg	20–25 mg/dose †	
8–12 years		57–99 lb	26–45 kg	25–50 mg/dose †	
Teens	13 years & older	100+ lb	46+ kg	50 mg/dose (up to 50 mg or 100 mg single dose) †	

NOTE: If body weight is known, then dosing by weight is preferred. If weight is not known or not readily available, dosing by age is appropriate.

\* Rounded weight at the 50th percentile for each age range

† AAP. Red Book: 2018–2021, 31st ed. (p. 66). Diphenhydramine maximum single dose for children younger than age 12 years is 40 mg, for children age 12 years and older, 100 mg.

Optional Treatment: Hydroxyzine				Hydroxyzine dose calculations based on 0.5 mg/kg	
commonly known as Atarax, Vistaril  Recommended oral dose is 0.5–1 mg/kg body weight every 4–6 hrs†	Age group	Range of weight (lb)	Range of weight (kg)*	Liquid: 10 mg/5 mL Tablets: 10 mg or 25 mg	
	Infants and children	7–36 months	20–32 lb	9–14.5 kg	5–7.5 mg/dose
37–59 months		33–39 lb	15–17.5 kg	7.5–10 mg/dose	
5–7 years		40–56 lb	18–25.5 kg	10–12.5 mg/dose	
8–10 years		57–76 lb	26–34.5 kg	12.5–15 mg/dose	
Teens	11–12 years	77–99 lb	35–45 kg	15–25 mg/dose	
	13 years & older	100+ lb	46+ kg	25 mg/dose (50–100 mg, maximum per day)	

NOTE: If body weight is known, then dosing by weight is preferred. If weight is not known or not readily available, dosing by age is appropriate.

\* Rounded weight at the 50th percentile for each age range

This policy and procedure shall remain in effect for all patients of the name of practice _____ <small>NAME OF PRACTICE OR CLINIC</small> effective _____ until rescinded or until _____ <small>DATE DATE</small>	Medical Director _____ <small>PRINT NAME</small> _____ <small>SIGNATURE DATE</small>
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