

**VFC**

Vaccines for children

CHICAGO DEPARTMENT OF PUBLIC HEALTH

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# Vaccine Management Guide



# Vaccine Coordinator

## The Role of the Vaccine Coordinator

**Vaccines are expensive and sensitive to temperature. Careful vaccine management is essential to protecting your vaccine supply.**

Every provider office should have one person designated as the Vaccine Coordinator who has primary responsibility for overseeing the vaccine supply. The Vaccine Coordinator should have a Backup Vaccine Coordinator who is responsible when the Vaccine Coordinator is not available. In many VFC practices, the Vaccine Coordinator is a medical assistant. In other practices the Vaccine Coordinator is an LVN, RN, office manager, or other staff person.



## Responsibilities of the Vaccine Coordinator

The responsibilities of the Vaccine Coordinator vary according to the number of immunizations a practice gives and the protocols of that practice. Below is a list of vaccine management responsibilities. In some practices, the Vaccine Coordinator is responsible for all of them. In other practices, a different person may have one or more vaccine management responsibilities (e.g., ordering vaccines) and keeps the Vaccine Coordinator informed as necessary.

The responsibilities of the Vaccine Coordinator vary from practice to practice and may include performing or training other (especially new) staff to do any of the following:

### Receiving vaccines

- Be present when vaccine shipments are delivered and process the vaccine shipment into inventory.
- Ensure that the cold chain has been maintained.

### Storing vaccines

- Rotate the vaccine inventory so that vaccines with shorter expiration dates are used first.
- Ensure that there are no expired vaccines in the refrigerator or freezer.
- Keep VFC vaccine separate from privately purchased vaccine.
- Perform routine cleaning on vaccine storage units.

### Monitoring vaccine temperatures

- Record refrigerator and freezer temperatures on a temperature log twice a day.
- Take action if temperatures are outside acceptable ranges.
- Implement the vaccine emergency plan, if necessary.
- Review vaccine temperature logs weekly.
- Ensure that temperature logs are retained for three years.

### Ordering vaccines

- Perform a physical inventory of all vaccines.
- Complete the VFC vaccine order form.
- Send the order form to the VFC office.

# Vaccine Freezer Setup

Preparing for Vaccine Storage

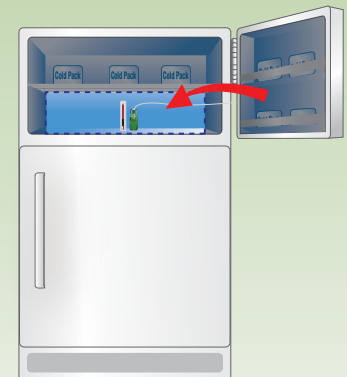
**1** Put cold packs in areas where vaccines should not be stored, including the freezer door and on the top shelf of the freezer.



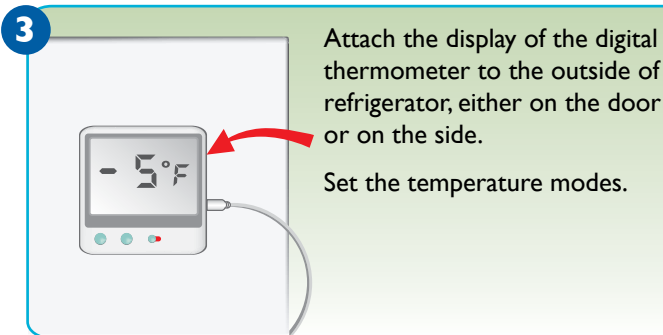
Two thermometers are needed to ensure accurate temperatures. Many practices use a digital thermometer as the primary thermometer and a liquid-filled or dial thermometer as the back-up.



In a stand-alone freezer, place the digital thermometer probe and the back-up thermometer in the center of the freezer, next to the vaccine.



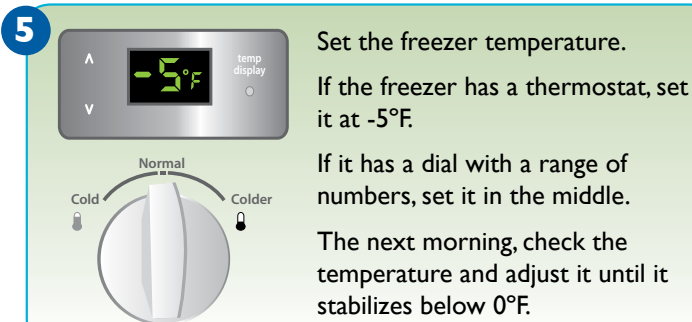
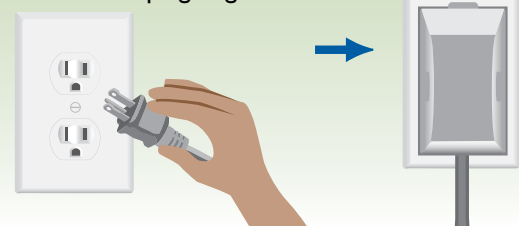
In a combination unit freezer, place the probe of the digital thermometer and the back-up thermometer in the center of the freezer floor.



Attach the display of the digital thermometer to the outside of refrigerator, either on the door or on the side.

Set the temperature modes.

**4** Plug in the freezer. Secure with plug guard/cover. Post "Do Not Unplug" sign.



Set the freezer temperature.

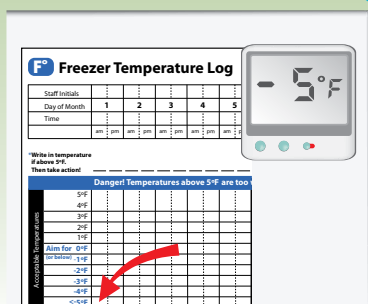
If the freezer has a thermostat, set it at  $-5^{\circ}\text{F}$ .

If it has a dial with a range of numbers, set it in the middle.

The next morning, check the temperature and adjust it until it stabilizes below  $0^{\circ}\text{F}$ .

**6** Once the temperature has stabilized, start recording temperatures on the temperature log twice a day.

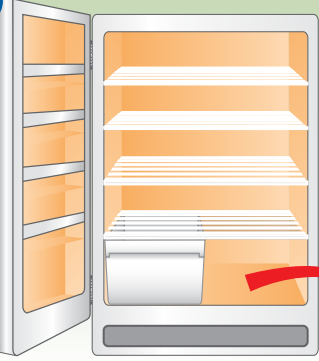
Do not store vaccines in the freezer until the temperature stays below  $0^{\circ}\text{F}$  for 3–5 days.



# Vaccine Refrigerator Setup


## Preparing for Vaccine Storage

**1**



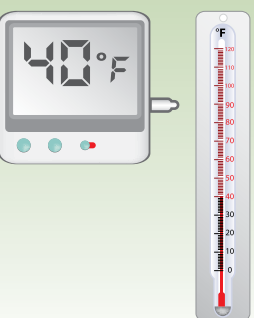
Vaccines should not be stored in refrigerator doors, drawers, or bins. Remove all drawers and bins.

**2**

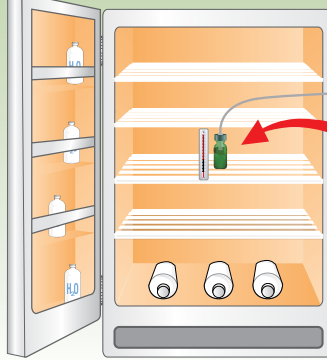


Put a few water bottles and/or cold packs in areas where vaccines will not be stored.

**3**

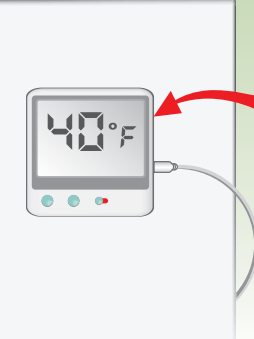


Two thermometers are needed to ensure accurate temperatures. Many practices use a digital thermometer as the primary and a liquid-filled or dial thermometer as the back-up.



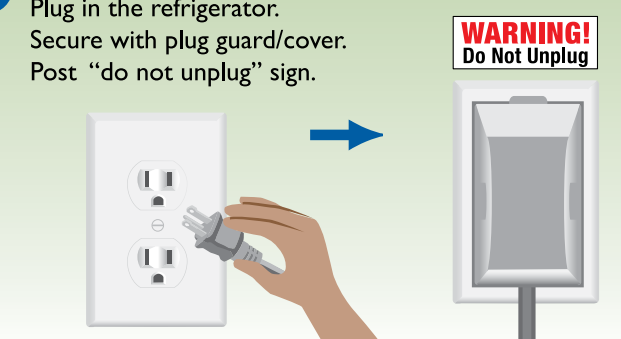
Place the probe of the digital thermometer in the center of the refrigerator. Place the back-up thermometer next to the probe.

**4**



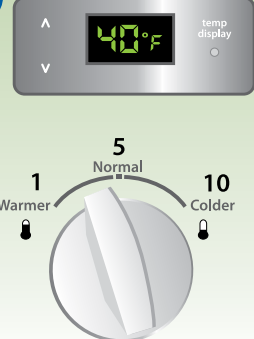
Attach the display of the digital thermometer to the outside of refrigerator, either on the door or on the side. Set the temperature modes.

**5**



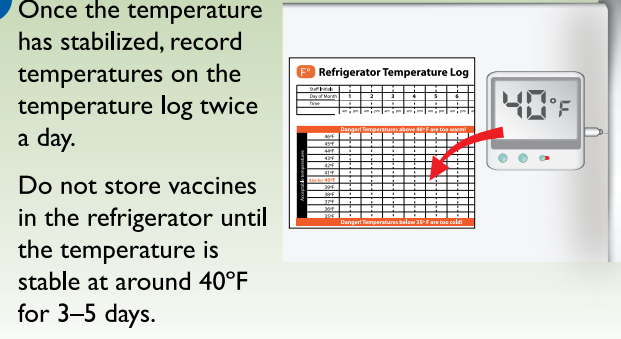
Plug in the refrigerator. Secure with plug guard/cover. Post "do not unplug" sign.

**6**



Set the refrigerator temperature. If the refrigerator has a thermostat, set it for 40°F. If it has a dial with a range of numbers, set it to slightly warmer than the middle of its range. The next morning, check the temperature and adjust it until it stabilizes at approximately 40°F.

**7**



Once the temperature has stabilized, record temperatures on the temperature log twice a day. Do not store vaccines in the refrigerator until the temperature is stable at around 40°F for 3–5 days.

# Vaccine Freezer Setup

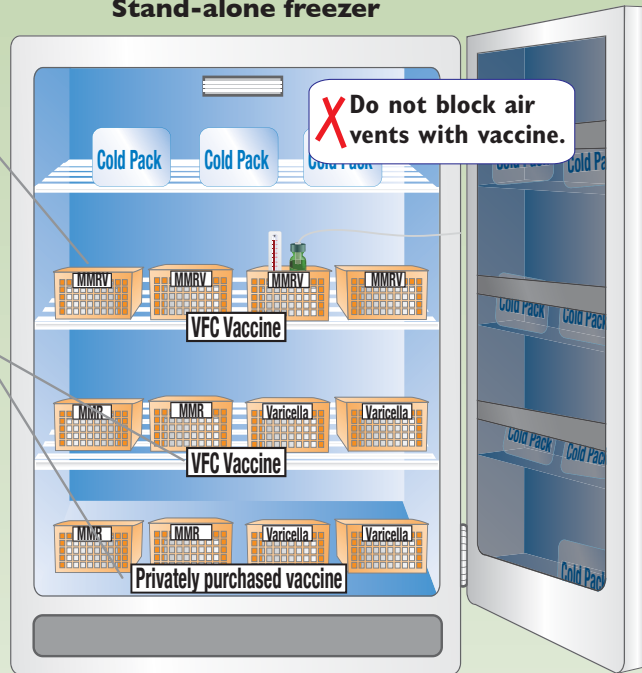
Storing Vaccines

Carefully organizing vaccines in a refrigerator helps protect vaccine and facilitates vaccine inventory management. Freeze MMR, MMRV, Varicella, and Zoster vaccines.

## Stand-alone freezer

✓ Place vaccine in breathable plastic mesh baskets and clearly label baskets by type of vaccine.

✓ Separate the VFC vaccine supply from privately purchased vaccine.



✓ Keep vaccines with shorter expiration dates to front of shelf.

If you have vaccine that will expire in 3 months or less that you will not be able to use, notify the VFC Program.



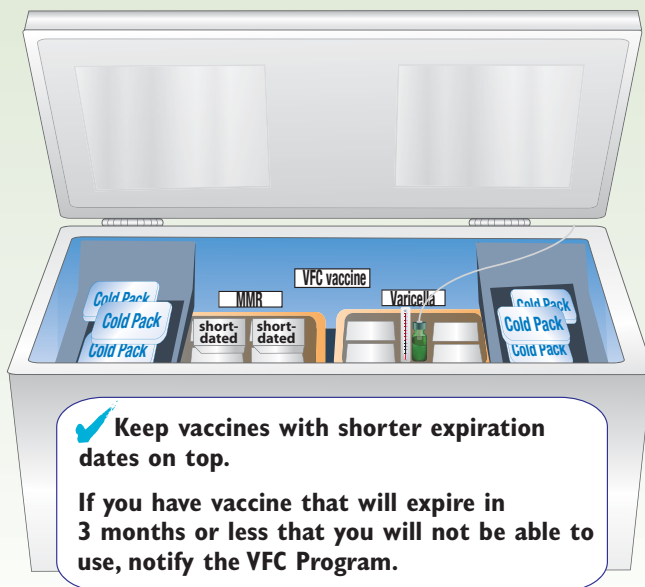
✓ Keep temperatures 5°F or colder.

Aim for 0°F and below

Colder is better.



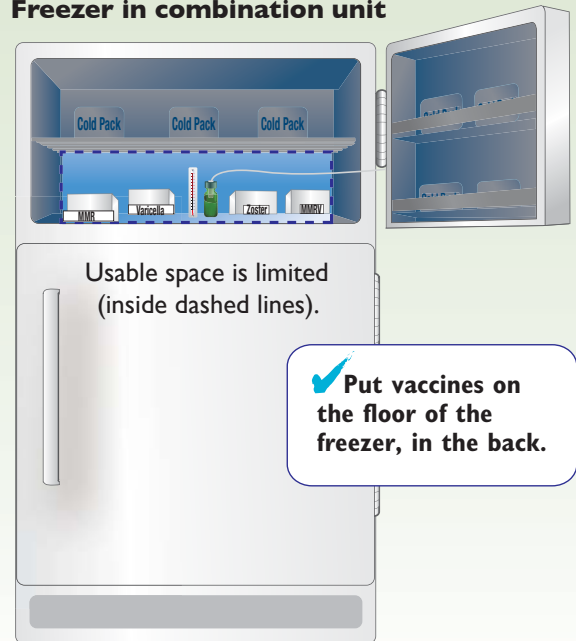
## Chest freezer



✓ Keep vaccines with shorter expiration dates on top.

If you have vaccine that will expire in 3 months or less that you will not be able to use, notify the VFC Program.

## Freezer in combination unit



✓ Put vaccines on the floor of the freezer, in the back.

If you have any problems with your refrigerator, keep the refrigerator door shut and notify the Chicago VFC Program.

• Chicago VFC (312) 746-5385

• VFC Field Representative

# Vaccine Refrigerator Setup

## Storing Vaccines

Carefully organizing vaccines in a refrigerator helps protect vaccine and facilitates vaccine inventory management. Refrigerate all vaccines except MMRV, Varicella, and Zoster.

### Refrigerator-only Unit

Almost all of the space is usable (inside dashed lines).

✓ Place vaccine in breathable plastic mesh baskets and clearly label baskets by type of vaccine.

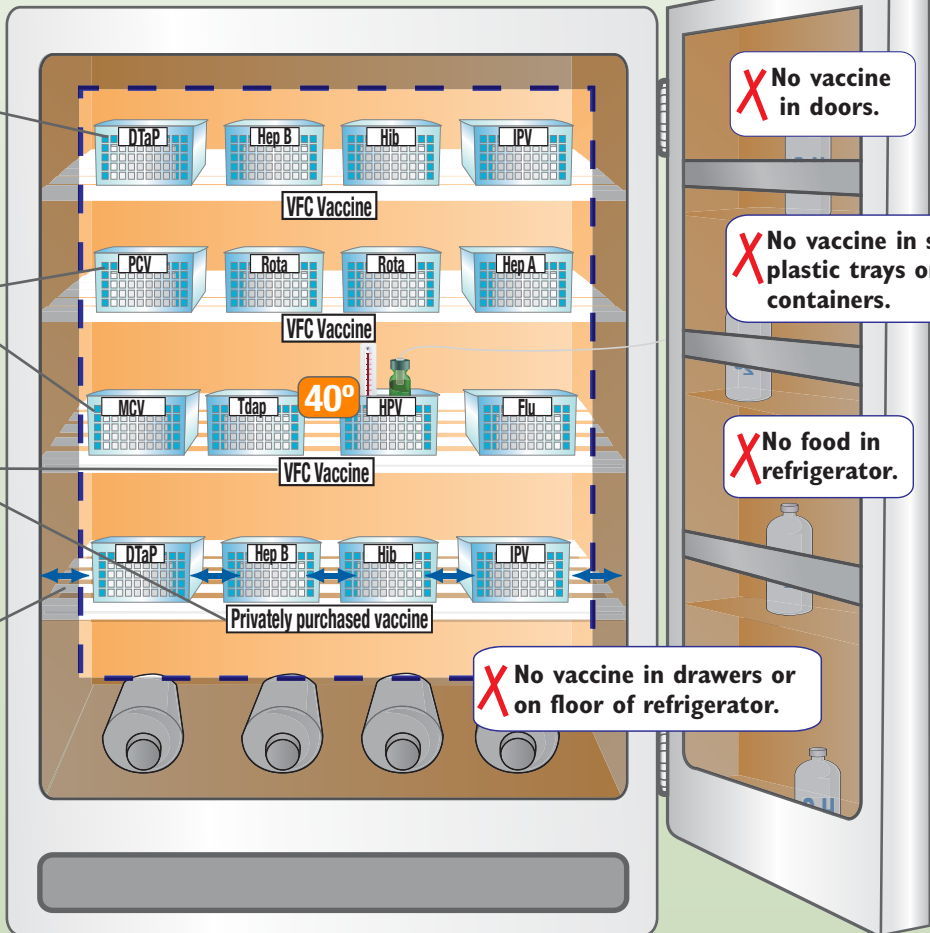
✓ Group vaccines by pediatric, adolescent, and adult types.

✓ Separate the VFC vaccine supply from privately purchased vaccine.

✓ Keep baskets 2-3 inches from walls and other baskets.

✓ Keep vaccines in their original boxes until you are ready to use them.

✓ Store only vaccine and other medication in vaccine storage units.



✗ No vaccine in doors.

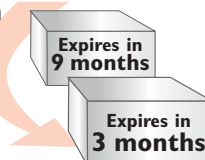
✗ No vaccine in solid plastic trays or containers.

✗ No food in refrigerator.

✗ No vaccine in drawers or on floor of refrigerator.

✓ Keep vaccines with shorter expiration dates to front of shelf.

If you have vaccine that will expire in 3 months or less that you will not be able to use, notify the VFC Program.



✓ Keep temperatures between 35°F to 46°F.

Aim for 40° F



Below 35°F is too cold! Call VFC.



Above 46°F is too warm! Call VFC.

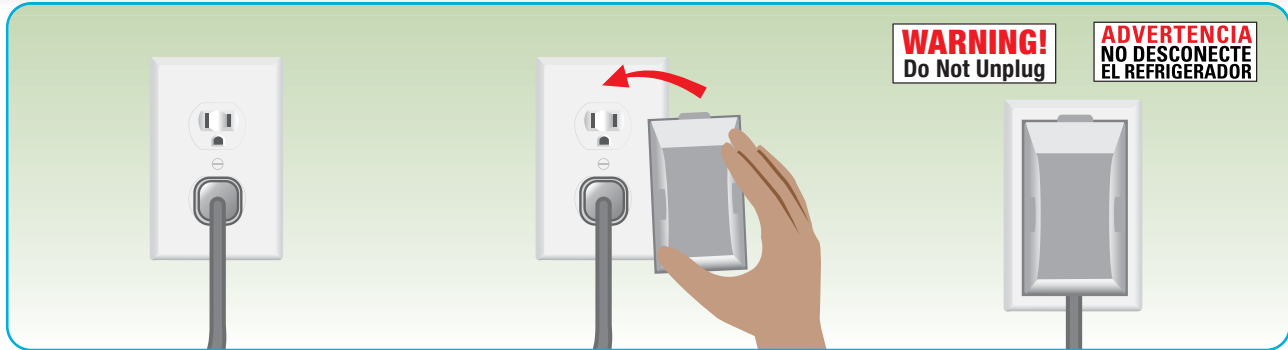
If you have any problems with your refrigerator, keep the refrigerator door shut and notify the Chicago VFC Program.

• Chicago VFC (312) 746-5385

• VFC Field Representative

# Safeguard Your Power Supply

## Protect plug and outlet

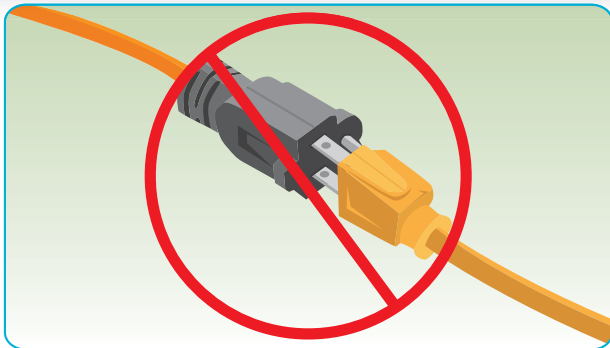


Plug in unit to a nearby outlet.

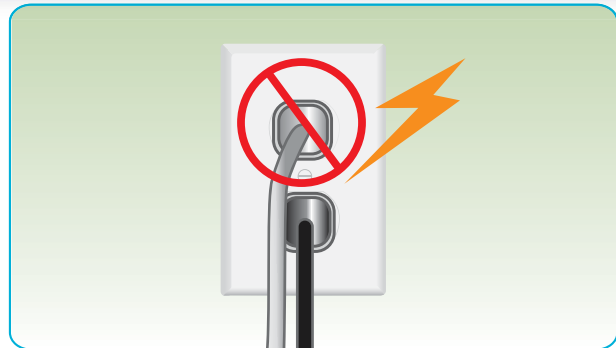
Secure plug with a guard/cover.

Post "Do Not Unplug" signs near outlet.

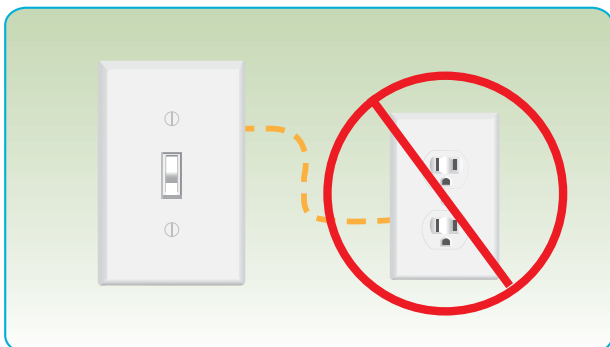
## Always avoid disruption of power



Do not use extension cords.



Do not plug more than one appliance into an outlet. This will prevent tripping of circuit breakers.



Do not use outlets that are controlled by wall switches.



Never unplug the vaccine refrigerator or freezer.

If you experience a power failure, do not open refrigerator/freezer doors. If it lasts more than 4-6 hours, call the VFC Program.

• Chicago VFC (312) 746-5385

• VFC Field Representative

# Recording Freezer Temperatures

Record freezer temperatures twice a day.

- **Acceptable temperatures are 5°F and colder.**
- **Unacceptable temperatures are above 5°F.**

The numbers on the temperature log on the right correspond to step numbers below.

**F** Freezer Temperature Log ① Month/Year June 2020  
Days 1-15

Staff Initials	h n ; n n	h n ; n n	h n ; n n	h n ; n n	h n ; n n	h n ; n n	h n ; n n	h n ; n n	h n ; n n	h n ; n n	h n ; n n	h n ; n n	h n ; n n	h n ; n n	h n ; n n
Day of Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Time	8:00:15 <sup>am</sup>	8:00:15 <sup>pm</sup>	8:00:15 <sup>am</sup>	8:00:15 <sup>pm</sup>	8:00:15 <sup>am</sup>	8:00:15 <sup>pm</sup>	8:00:15 <sup>am</sup>	8:00:15 <sup>pm</sup>	8:00:15 <sup>am</sup>	8:00:15 <sup>pm</sup>	8:00:15 <sup>am</sup>	8:00:15 <sup>pm</sup>	8:00:15 <sup>am</sup>	8:00:15 <sup>pm</sup>	8:00:15 <sup>am</sup>

Write any unacceptable temps (above 5°F). Then take action! ③ 7° MAX: 6° ④

**Danger! Temperatures above 5°F are too warm!** Write any unacceptable temperature on the lines above\* and call your VFC Rep. immediately!

Acceptable Temperatures	5°F														
	4°F	X	X	X											
	3°F														
	2°F	X		X											
	1°F														
	0°F	X													
	-1°F														
	-2°F														
	-3°F														
	-4°F														
-5°F to -30°F and colder															

**Take Action!** If temperature is too warm (above 5°F):  
 1. Put a "Do Not Use Vaccine" sign on the freezer.  
 2. Alert your supervisor immediately.  
 3. Contact your VFC Representative.  
 4. Record the actions you take.

Record actions taken for unacceptable temperatures.  
 Date: 6/3/20 Action: Power outage, called VFC, kept door shut until temp at 0°F

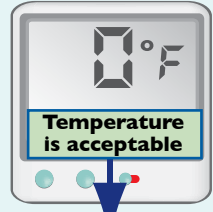
① Start a new log at the beginning of every month. Write the **month** and **year** in the upper right corner of the *Freezer Temperature Log*.

Month/Year June 2020  
Days 1-15

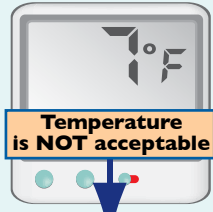
② At the beginning and end of every clinic day, write your **initials** in the *Staff Initials* a.m. or p.m. space for that day. Then write the a.m. or p.m. **time**.

Staff Initials	h n ; n n
Day of Month	1
Time	8:00:15 <sup>am</sup>

③ Read the **current temperature** on the freezer thermometer.



OR



Write an X next to the **current temperature** on the log.

Acceptable Temperatures	5°F	
	4°F	
	3°F	
	2°F	X
	1°F	
	0°F	X
	-1°F	
	-2°F	
	-3°F	
	-4°F	
-5°F to -30°F and colder		

Temperatures -5°F and colder go in the bottom space.

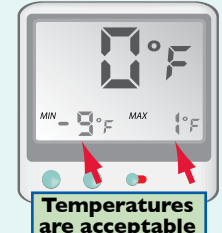
Write the **unacceptable temperature** in the space provided.

Immediately follow the steps under *Take Action!*

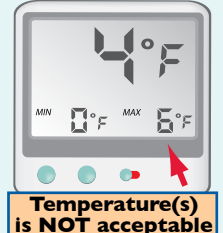
Write any unacceptable temps (above 5°F). Then take action! 7°

**Take Action!** If temperature is too warm (above 5°F):  
 1. Put a "Do Not Use Vaccine" sign on the freezer.  
 2. Alert your supervisor immediately.  
 3. Contact your VFC Representative.  
 4. Record the actions you take..

④ Read the **MIN** and **MAX** temperatures.



OR



Do nothing.

Write the **unacceptable temperature** in the space provided.

Write **MIN** or **MAX** next to the unacceptable temperature.

Immediately follow the steps under *Take Action!*

Write any unacceptable temps (above 5°F). Then take action! MAX: 6°

**Take Action!** If temperature is too warm (above 5°F):  
 1. Put a "Do Not Use Vaccine" sign on the freezer.  
 2. Alert your supervisor immediately.  
 3. Contact your VFC Representative.  
 4. Record the actions you take..

⑤ At the end of every clinic day repeat steps ② ③ ④ .

⑥ At the end of the day press the **Memory Clear** button on the thermometer.





# Recording Refrigerator Temperatures

Record refrigerator temperatures twice a day.

- Acceptable temperatures are 35°F to 46°F.
- Unacceptable temperatures are below 35°F and above 46°F.

The numbers on the temperature log on the right correspond to step numbers below.

**F** Refrigerator Temperature Log Month/Year June 2020  
Days 1-15

Staff Initials	<u>ZH, ZH</u>	<u>ZH, ZH</u>	<u>ZH, ZH</u>	<u>ZH, ZH</u>											
Day of Month	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
Time	<u>8<sup>00</sup></u>	<u>5<sup>00</sup></u>	<u>8<sup>00</sup></u>	<u>5<sup>00</sup></u>											
	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	pm

**Danger! Temperatures above 46°F are too warm! Write any unacceptable temperature on the lines below\* and call your VFC Rep. immediately!**

46°F	
45°F	
44°F	
43°F	
42°F	
41°F	X
<b>Aim for 40°F</b>	X
39°F	
38°F	X
37°F	
36°F	
35°F	X

**Danger! Temperatures below 35°F are too cold! Write any unacceptable temperature on the lines below\* and call your VFC Rep. immediately!**

\* Write any unacceptable temps (above 46° or below 35°) 34° MIN 33°

**Take Action!**  
If temperature is too cold or too warm (above 46°F or below 35°F):  
1. Put a "Do Not Use Vaccine" sign on the refrigerator.  
2. Alert your supervisor immediately.  
3. Contact your VFC Representative.  
4. Record the actions you take.

**Record actions taken for unacceptable temperatures.**  
Date 01/20 Action call VFC - Alerted & Home signat  
6/4/20 temp OK NOW, vaccine OK  
call VFC - Alerted & Home signat  
temp OK NOW, vaccine OK

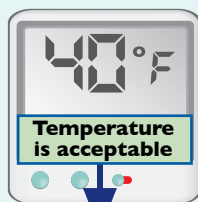
1 Start a new log at the beginning of every month. Write the **month** and **year** in the upper right corner of the Refrigerator Temperature Log.

Month/Year June 2020  
Days 1-15

2 At the beginning and end of every clinic day, write your **initials** in the Staff Initials a.m. or p.m. space for that day. Then write the a.m. or p.m. **time**.

Staff Initials	<u>ZH, ZH</u>
Day of Month	<u>1</u>
Time	<u>8<sup>00</sup></u> <u>5<sup>00</sup></u>
	am pm

3 Read the **current temperature** on the refrigerator thermometer.



OR



Write an X next to the **current temperature** on the log.

<b>Danger</b>	
46°F	
45°F	
44°F	
43°F	
42°F	
41°F	X
<b>Aim for 40°F</b>	X
39°F	
38°F	
37°F	
36°F	
35°F	
<b>Danger</b>	

Write the **unacceptable temperature** in the space provided.

Immediately follow the steps under **Take Action!**

\* Write any unacceptable temps (above 46° or below 35°) 34°

**Take Action!**  
If temperature is too cold or too warm (above 46°F or below 35°F):  
1. Put a "Do Not Use Vaccine" sign on the refrigerator.  
2. Alert your supervisor immediately.  
3. Contact your VFC Representative.  
4. Record the actions you take.

4 Read the **MIN** and **MAX** temperatures.



OR



Do nothing.

Write the **unacceptable temperature** in the space provided.

Write **MIN** or **MAX** next to the unacceptable temperature.

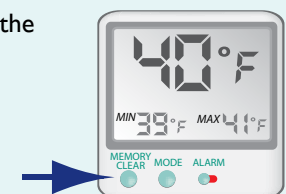
Immediately follow the steps under **Take Action!**

\* Write any unacceptable temps (above 46° or below 35°) MIN 33°

**Take Action!**  
If temperature is too cold or too warm (above 46°F or below 35°F):  
1. Put a "Do Not Use Vaccine" sign on the refrigerator.  
2. Alert your supervisor immediately.  
3. Contact your VFC Representative.  
4. Record the actions you take.

5 At the end of every clinic day repeat steps 2 3 4.

6 At the end of the day press the **Memory Clear** button on the thermometer.



# Monthly Care of Vaccine Storage Units

A small amount of regular maintenance is necessary to help ensure that vaccine refrigerators and freezers work properly. Follow the three steps below to keep **household-style** refrigerators and freezers clean. If you have a commercial grade unit, follow the manufacturer's maintenance schedule and other recommendations.

## 1. Clean the inside of the storage units

Cleaning the inside of the refrigerator and freezer will help prevent the growth of bacteria and fungus.

You do not need to remove the vaccine from the unit to clean it. Just move the trays of vaccine as you clean.

### **Do not unplug the unit.**

- Clean any spills.
- Wipe the inside of the compartment and the shelves with disinfectant or antibacterial wipes. Let it dry.
- Put the trays of vaccine back where they were.



## 2. Check the door seals

Refrigerators and freezers have flexible door seals that prevent cold air from escaping when doors are closed. If the seal does not seal completely, cold air escapes. This can cause temperatures to fluctuate in the unit.

### **Do not unplug the unit.**

1. Locate the seals.
2. Examine the seals.
  - They should not be torn or brittle.
  - When the unit is closed, there should be no gaps between the seals and the body of the unit.
3. If you suspect a problem with the seals, tell your supervisor.



## 3. Clean the coils

If the coils are easy to reach, use a duster to remove any visible dust.

