

# Using an Infinity<sup>®</sup> Orange<sup>™</sup> Feeding Pump

HomeMed



**MICHIGAN MEDICINE**  
UNIVERSITY OF MICHIGAN

**Table of Contents:**

**Key points.....3**

**How do I use the Infinity® Orange™ pump? .....4-9**

**How long can the formula hang in the bag? .....10**

**Battery information.....11**

**How do I clean the pump? .....12**

**Pump safety.....13**

**Troubleshooting the Infinity® Orange™ Pump.....14-18**

**What do I do if the pump won't work or the power goes out?.....19**

**How do I use the syringe feeding method?.....19**

## Key points to remember when using an Infinity® Orange™ pump:



- Wash your hands with soap and water before handling your feeding tube and supplies.
- If you have more than one catheter (example: feeding tube and IV), always make sure you are putting your formula into the feeding tube and **not** into the IV (intravenous) line.
- Use a new Infinity® Orange™ feeding set each day.
- You may save your last feeding bag and reuse it for one additional day if you have not received your delivery yet. Please contact HomeMed 3-4 days in advance if you think you are going to run out of feeding bags.
- If the pump won't work or the power goes out, see page 19 for instructions.
- Keep supplies and formula in a dry, clean area.
- Do not use supplies if the seal is broken, the package is torn, or the inside or outside of the package is wet.
- Check your formula for expiration dates. Do not use formula if the expiration date has passed. See page 10 for instructions on how much formula you can add to the bag each time you fill.
- Clean your pump weekly to avoid frequent errors (see page 12).
- Keep your pump plugged into a wall outlet as much as possible.
- Unless otherwise directed, never mix your medications in with the formula. Medicine that needs to be put in your feeding tube should be given separately with a syringe.

## How do I use the Infinity® Orange™ pump?

If you view online instructions by Zevex on how to use the Infinity® Orange™ pump, you will notice some differences in our steps below. We designed these instructions to make setting up the pump as easy as possible.

### Step 1: Prepare the feeding set

1. Place your feeding set on a clean surface.
2. Prepare your formula as shown to you by a clinician.

**Note:** If you blenderize your formula, let the mixture stand for 10 to 15 minutes before adding to the feeding set. This will decrease the chance of an alarm due to air in the tubing.

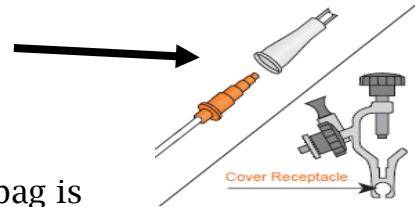
- Infinity® Orange™ pump set takes approximately 5.4 mL of fluid when priming and ~2.5 mL will remain in the pump set when the pump stops feeding. Be sure to account for 2.5 mL when filling the pump set. See Example below:

Total Fluid Desired for Feeding	+	Residual Fluid	=	Minimum Fluid Required in Bag Set
40 mL	+	2.5 mL	=	42.5 mL

3. Open the plastic cap of the feeding set and pour the formula into the bag. Ask your nutritionist how much formula to add to the feeding bag at a time, since formula can spoil if it hangs in the bag too long.
4. Remove the excess air from the bag by squeezing the formula to the top of the plastic rim before closing the plastic cap.



5. Remove the plastic protector from the end of the feeding set.



6. Hang the bag on the IV pole so the bottom of the bag is just above the pump.



### Step 2: Attach the feeding set to the pump

1. Press the tab on the front of the pump door and lift the door.
2. To load the tubing into the pump, hold the cassette so the clear plastic portion faces toward you and the loop of tubing is to the left (Figure 1). Loop the orange tubing around the wheel of the pump and stretch it slightly to the right.
3. The plastic portion should drop into place (Figure 2).

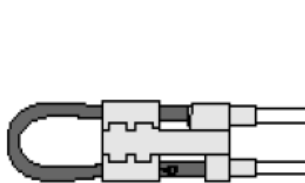


Figure 1

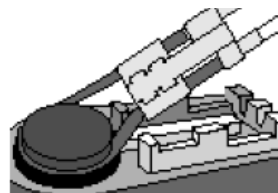


Figure 2

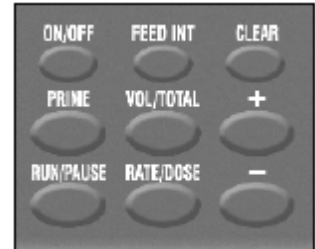
4. Close the lid by **pressing the tab** in until the latch clicks into place.



### Step 3: Prime the tubing

The feeding set must be primed with formula before connecting it to the feeding tube.

1. Press and hold the “**on/off**” key for 2 seconds. The pump will beep and run through a short self-test.
2. Press and hold the “**prime**” key until the formula reaches the end of the tip on the feeding set.



### Step 4: Program the pump

1. When you turn the pump on, it should be at the rate screen. The word “**rate**” should be displayed in the lower left corner of the screen. If not, press the “**rate/dose**” key until “**rate**” appears. Then press the + key until the desired rate is shown on the screen.

Note: **Rate** is the speed at which the formula is infused (mL/hour). This is different from the dose.

2. Press the “**rate/dose**” key to display “**dose**” in the lower left corner of the screen. Then press the + key until the desired dose is shown on the screen. **Note: Dose** is the amount of formula you want to deliver. This is different from the rate.

3. Confirm food type to be delivered (formula or human milk) before starting pump by pressing the “**food type**” key. Press the + or - key to change between formula and human milk. Formula will be displayed as “FORMULA” and human milk will be displayed as “HUMAN MILK” on the screen. **Note:** The “**vol/total**” key keeps track of how much formula has been delivered.

### Step 5: Run the pump

1. Connect the tip of the feeding set to the patient's feeding tube.
2. Press the “run/pause” key. The word “run” will appear in the upper right-hand corner of the screen with an arc moving around it to indicate the pump is delivering formula.
3. When the feeding is finished, press the “on/off” key to turn the pump off.



#### Key points:

- If you want to stop the pump at any time, press the “run/pause” key. Display will show rate and pump will be in pause mode. Pump will save the memory of where it was in the feeding before paused. Or turn the pump off by pressing the “on/off” key. To restart the pump when in the paused mode, press the “run/pause” key. The pump will restart the feeding at the point where it was paused.
- **If the pump is turned off and turned back on again, the volume delivered counter resets to zero and food type resets to formula. Rate, dose, and food type must be confirmed before restarting the pump with a new feeding.**
- While the pump is running, the following may be viewed by pressing the appropriate key: rate, dose, and food type as shown below.

- To view the amount delivered in the current feeding, press the “vol/total” key. This counter will also reset to zero if a feeding is interrupted and rate or dose is changed, or if the pump is turned off and then back on again.



(amount currently delivered)

- To view the amount delivered over the course of several feedings, press the “vol/total” key a second time. Display will read “TOTL” and then the amount. This counter never resets itself. It can only be reset by the user.



### Step 6: Feeding Complete

When the formula or breastmilk has been completely delivered, the pump will stop running and display “DOSE DONE”. Pump will be in a pause mode until it is turned off or feeding is restarted. Press and hold the “on/off” key for 1.5 seconds to turn pump off.



### Step 7: Rinsing the feeding set

If you need to continue your feeding, the feeding set should be rinsed out before you add more formula (the same feeding bag should be used for 24 hours).

1. Before refilling the bag, disconnect the feeding set from the patient’s feeding tube and remove the tubing from the pump.
2. Place some hot water in the bag, shake well, and dump out (repeat if necessary).
3. Place more hot water in the bag and snap the cap closed.
4. Locate the droplet symbol on the orange tubing. Gently pinch the tubing right below the droplet symbol (Figure 3). This will allow the water to flow through the tubing.
5. While pinching the tubing, squeeze the bag to force water through the tubing until the water runs clear.
6. To continue feeding start at Step 1. If you are not going to restart the feeding right away, store the bag in an airtight container.

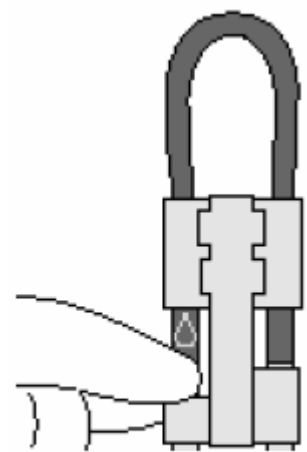


Figure 3



**Note:** The feeding set can also be rinsed by disconnecting the feeding set from the patient and pouring hot water into the bag. Hold the end of the feeding set over a sink and use the “**prime**” key to push the water through the tubing. Repeat until the feeding set is clear.

**Step 8: Next feeding**

1. Turn pump on. Previous settings for rate and dose will be saved in memory.
2. Prime formula through tubing (see page 6).
3. Confirm that the rate and dose are correct by pressing “**rate/dose**” key. Select the + or - key to change the rate and/or dose if a change is needed.
4. Confirm the food type by pressing the “**food type**” key. Select the + or - key to choose “FORM ULA” or “HUMN MILK”.
5. Run the pump (see page 7).

**Note:** If the pump is turned off and turned back on again, the volume delivered counter resets to zero and food type resets for formula. If dose and food type are not reviewed prior to pressing the “**run/pause**” key, the pump will alarm and display “CON FIRM DOSE AND FOOD TYPE”.

## How long can the formula hang in the bag?

- Formula may spoil if it is left at room temperature for too long after being opened.
- Different types of formula have different hang times.
- **Only add enough formula to the feeding bag so it does not hang longer than recommended** (see below).

Type of formula	Maximum Hang Time
Ready-to-feed liquid formula in a can	8 hours
Ready-to-feed liquid formula in a can plus added water, oils, protein, carbohydrate, or electrolytes	4 hours
Powder or liquid concentrate formula with added water	4 hours
Breastmilk	4 hours (less is better)
Breastmilk plus calorie booster	2 hours

To figure out how much formula you can add to your bag each time you refill, use this simple calculation:

**Rate x maximum hang time = mL of formula you can add to the bag**

	<i>Example:</i>	Your formula:
<b>Rate:</b>	<i>40 mL/hr</i>	
<b>Maximum hang time:</b>	<i>4 hours: (powdered formula and water)</i>	
<b>Total:</b>	<i>160 mL of formula to bag</i>	

**Always rinse out the feeding bag and tubing with water before adding more formula.**

## Battery information

- Keep the pump plugged into a wall outlet when not in use to keep the battery fully charged. The pump will charge whether it is turned off or running. When the pump is plugged into a wall outlet and is recharging, a plug icon will appear in the lower right-hand corner and bars will move on the fuel gauge from E to F.



- The pump can be fully recharged in 6 hours. When fully charged, the pump will run for 24 hours if it is running less than a rate of 125 mL/hour.
- When the pump is operating on the battery, a battery icon will appear in the lower right-hand corner. Each bar on the fuel gauge represents about 6 hours of battery charge.



- When there are only 30 minutes of charge time left, the pump will alarm “LOW BATT” indicating that the pump needs to be plugged into a wall outlet.
- If the pump completely shuts down from a depleted battery, it will need to be plugged in for at least 10 minutes before turning it on again.
  - Keep the pump plugged in until fully recharged. If the pump is plugged in for less than 10 minutes after the battery is depleted, an error will occur.
  - Turn off the pump to clear the alarm and allow to recharge for at least 10 minutes before turning it on.

## How do I clean the pump?

1. **Turn off** the pump and **unplug** from the outlet before cleaning.
2. Clean the pump **at least** one time per week or whenever anything is spilled on it.
3. Use warm soapy (dish soap) water and a soft sponge or cloth to wipe the pump. You may use a cotton swab to gently clean the tubing pathways inside the door.
4. Rinse the pump by holding it under a stream of warm water. Do not immerse the pump in water.



5. Dry the pump after cleaning with a clean cloth.

### Key points:

- Never use sharp objects (fingernails, pens or pencils, paper clips, or needles) to clean the pump.
- Do not use alcohol or harsh disinfectants for cleaning.
- The Infinity® carry packs are machine washable. Use cold water and gentle cycle. Hang to dry.

## **Pump safety**


- **Avoid dropping or hitting the pump.** If the pump is dropped, always recheck the pump to be sure it is still infusing correctly.
- Electromagnetic emissions may affect the operation of the feeding pump. However, the Infinity® Orange™ will not be affected by most sources. Possible sources of interference include cell phones, cordless telephones, microwave ovens, security systems, etc. If an electromagnetic device is used within one yard of the Infinity® Orange™, the pump may automatically shut off and lose the saved settings.


## **Travel**

- If you plan to travel for an extended period of time, please make sure you are prepared in advance with enough supplies to take with you.
- If you use a pump to give your feedings and you are traveling out of state, we may be able to provide you with a back-up pump to take with you.
- If you will be taking your feeding pump on an airplane, please call HomeMed for further instructions.

## Troubleshooting the Infinity® Orange™ pump

For all pump alarms, press the “run/pause” key to silence the alarm, then identify and correct the problem and press the “run/pause” key again to restart the pump.

Alarm:	Probable cause:	How to fix:
<b>Load set</b>	<ul style="list-style-type: none"> <li>• Feeding set has not been placed properly into pump.</li> <li>• Possible crack in door or broken tab inside door.</li> </ul>	<ul style="list-style-type: none"> <li>• Check to make sure feeding set has been properly placed into pump and that the door is closed.</li> <li>• Check to make sure the pump is clean, especially where the cassette is loaded.</li> <li>• Check to make sure the proper type of tubing is in the pump. May need to use a new feeding set.</li> <li>• Check door for cracks or broken tab. Call HomeMed for pump replacement if cracks found.</li> </ul>
<b>No flow in</b> (see note below) 	<ul style="list-style-type: none"> <li>• There are kinks or formula clumps in the tubing between the bag and the pump.</li> </ul>	<ul style="list-style-type: none"> <li>• Check to make sure the pump is clean, especially where the cassette is loaded.</li> <li>• Correct by following the steps on the next page.</li> </ul>

Alarm:	Probable cause:	How to fix:
<p><b>No flow out</b> (see note below)</p> 	<ul style="list-style-type: none"> <li>• There are kinks or blockages between the pump and the patient's feeding tube.</li> <li>• The patient's feeding tube may be clogged.</li> </ul>	<ul style="list-style-type: none"> <li>• Check to make sure the pump is clean, especially where the cassette is loaded.</li> <li>• Correct by following the steps below.</li> <li>• Unclog the patient's feeding tube as directed by your doctor's office or a HomeMed nutritionist.</li> </ul>

**Note:** Do not press the “prime” key for “no flow in” or “no flow out” errors. This may cause the pump to malfunction. The pump may appear to be running, but formula may not infuse.

**If these errors happen, follow these instructions:**

1. Remove the cassette from the pump.
2. Clear the occlusion (kink or blockage).
3. Reinsert the cassette into the pump and press run.
4. Before connecting to patient, verify that formula is dripping from the end.
5. Reconnect to patient and resume feeding.

Alarm:	Probable cause:	How to fix:
<b>No food</b>	<ul style="list-style-type: none"> <li>• Feeding bag is empty.</li> <li>• Air is trapped in the cassette or tubing.</li> </ul>	<ul style="list-style-type: none"> <li>• Rinse the feeding bag with water and refill with formula if feedings are to continue. Replace the feeding bag if it has been 24 hours since last changed.</li> <li>• Disconnect the feeding bag tubing from the patient and press the “<b>prime</b>” key until the air bubbles have moved out of the tubing.</li> <li>• Check to make sure the pump is clean, especially where the cassette is loaded.</li> <li>• Check to make sure feeding set has been properly placed into pump and that the door is closed.</li> </ul>
<b>Push run to feed</b>	<ul style="list-style-type: none"> <li>• The pump has been in the pause mode for more than two minutes.</li> </ul>	<ul style="list-style-type: none"> <li>• Press the “<b>run/pause</b>” key to silence the alarm. Press the “<b>run/pause</b>” key again to restart feedings or press the “<b>on/off</b>” key to turn the pump off.</li> </ul>
<b>Shut door</b>	<ul style="list-style-type: none"> <li>• The pump door has been opened while the pump was running.</li> </ul>	<ul style="list-style-type: none"> <li>• Press the “<b>run/pause</b>” key to silence the alarm. Close the door until the latch clicks into place. Press the “<b>run/pause</b>” key to restart the feedings.</li> </ul>



Alarm:	Probable cause:	How to fix:
<b>To stop let go</b>	<ul style="list-style-type: none"> <li>• Priming.</li> </ul>	<ul style="list-style-type: none"> <li>• When pressing and holding the “<b>prime</b>” key, alarm will sound once, pump will begin pumping at maximum rate of 480 mL/hour and display “T0 STOP LET GO”. Release the “<b>prime</b>” key when done priming.</li> </ul>
<b>Max</b>	<ul style="list-style-type: none"> <li>• A rate/dose limit has been programmed in Settings and Max limit has been met.</li> </ul>	<ul style="list-style-type: none"> <li>• Need to change the MAX limit under settings; check to see if settings are locked and if so, unlock to change.</li> </ul>
<b>Dose done</b>	<ul style="list-style-type: none"> <li>• The feeding dose of formula has been delivered.</li> </ul>	<ul style="list-style-type: none"> <li>• To clear pump, either press the “<b>on/off</b>” key to turn pump off or press the “<b>run/pause</b>” key to put pump in pause mode before starting another feeding.</li> </ul>
<b>Confirm Dose and Food Type</b>	<ul style="list-style-type: none"> <li>• The “<b>run/pause</b>” key was pressed prior to reviewing rate, dose, and food type.</li> </ul>	<ul style="list-style-type: none"> <li>• View rate, dose, and food type. Change settings where required by using the + or - key.</li> </ul>

<b>Alarm:</b>	<b>Probable cause:</b>	<b>How to fix:</b>
<b>Low batt</b>	<ul style="list-style-type: none"> <li>The battery charge is low.</li> </ul>	<ul style="list-style-type: none"> <li>There are approximately <b>30 minutes</b> of charge left on the battery. See page 10 for battery charging information.</li> </ul>
<b>Battery does not charge</b>	<ul style="list-style-type: none"> <li>The battery symbol and the E and F of the fuel gauge are flashing while pump is plugged in.</li> </ul>	<ul style="list-style-type: none"> <li>Contact HomeMed to service the pump.</li> </ul>
<b>Charger installed but no plug symbol visible</b>	<ul style="list-style-type: none"> <li>Plug symbol does not display after AC adapter/charger is plugged into pump and power outlet (battery is not charging).</li> </ul>	<ul style="list-style-type: none"> <li>Verify the wall outlet works by plugging in another appliance.</li> <li>Check if charger is connected properly.</li> <li>Pump or charger may be damaged; contact HomeMed for service.</li> </ul>
<b>ER01 – ER99 ERRA ERRZ</b>	<ul style="list-style-type: none"> <li>Internal error.</li> </ul>	<ul style="list-style-type: none"> <li>If any of these errors occur, turn the pump off and then back on. If the error does not clear, call HomeMed for instructions.</li> </ul>

## What do I do if the pump will not work or if the power goes out?

Notify HomeMed at (800) 862-2731 and use the syringe feeding method below if directed.

## How do I use the syringe feeding method?

1. Wash your hands with soap and water.
2. Flush feeding tube with water before the feeding.
3. Prepare your formula as instructed by your HomeMed clinician.
  - Using a syringe, pull up  $\frac{1}{4}$  of the hourly rate of formula.
  - Slowly push into the feeding tube.
  - Repeat the process every 15 minutes. For example, if the pump rate is 20 mL/hr, slowly administer 5 mL every 15 minutes.
4. Flush the feeding tube with water after the formula has been given.
  - If the volume is well tolerated, try giving half the volume of formula every 30 minutes.
  - If formula is usually given at night, you can give the syringe feedings during the following day.

Disclaimer: This document contains information and/or instructional materials developed by the Michigan Medicine for the typical patient with your condition. It may include links to online content that was not created by Michigan Medicine and for which Michigan Medicine does not assume responsibility. It does not replace medical advice from your health care provider because your experience may differ from that of the typical patient. Talk to your health care provider if you have any questions about this document, your condition or your treatment plan.

Author: HomeMed Patient Education Committee  
Last Revised 10/2022

Patient Education by [Michigan Medicine](#) is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International Public License](#).