



# Curlin

## Continuous- TPN

The Curlin Pump can be used to infuse antibiotics, hydration fluid, chemotherapy or Total Parenteral Nutrition and other therapies. Your nurse and pharmacist will already have programmed the pump to operate as the physician has ordered by the time you receive it.

***Before you begin:***

1. Wash hands thoroughly.
2. Prepare work area.
3. Gather the following supplies:
  - Curlin pump
  - Medication or fluid bag (take out to warm two hours ahead of time)
  - IV tubing
  - Additives (2 multivitamin vials, insulin)
  - 10ml syringe with needle for multivitamins
  - 1ml syringe and 20g needle for insulin
  - Alcohol wipes
  - Red Cap if needed
  - 1 syringe normal saline – **REMOVE AIR**

**Change tubing every day.**

**Red cap to be put on end of IV tubing, if infusion interrupted.**

**Valve to be changed weekly by nurse**

**ADDITIVES:**

I. Add Lipids

II. Multivitamins:

1. Remove caps from both vials. Wipe off the top of both vials with alcohol wipe, and wipe off rubber port on TPN bag with alcohol wipe
2. Remove wrapper and needle cover on 10ml syringe
3. Draw up 5ml of air into syringe
4. Insert needle into top of 1st vial and inject the air
5. Invert the vial and withdraw all (5ml) of solution into syringe
6. Insert needle into center of the port on TPN bag, **making sure not to puncture side of port**, and inject additive
7. Repeat steps 3-6 with 2<sup>nd</sup> vial using same syringe

III. If adding insulin, follow the same procedure, but inject with \_\_\_\_ml of air and withdraw \_\_\_\_ml of insulin using a small syringe.

CHECK BAG FOR LEAKS AND DO NOT USE IF IT HAS BEEN DAMAGED OR IS LEAKING. **SAVE BAG AND CALL NURSE TO REPORT.**

### **Attach tubing to medicine container:**

1. Remove the IV tubing from its wrapper
2. Remove the protective cover from the spike port of your TPN bag and remove IV tubing spike cover, **being careful not to touch the opening.**
3. With a twisting motion, insert the spike into the port, until it is all the way in.
4. To prime your tubing (get it full of fluid), lay it on its side and apply gentle pressure. If your tubing has a filter let the filter hang down as it fills. Let fluid fill to end of tubing.
5. Twist off yellow tab on bottom of yellow Flow-Stop.

### **Attach the Tubing Set to the Pump**

1. Open the top of the pump by lifting latch on top of door and pull door up and all the way to the right
2. Place the blue tab into the slot at the blue arrow
3. **Without pressing on the top of the Flow-Stop**, insert the Flow-Stop at an angle into the slot on the left side of the pump in the direction of the yellow arrow.
4. Push the tubing slightly into the black Air Detector slot.
5. Close the door of the pump by firmly pushing down the door and securing the latch

### **Flush the catheter and attach tubing to catheter.**

1. Have prepared normal saline syringe ready. Wipe off end of valve with alcohol prep pad.
2. Unscrew the cap from the syringe and screw normal saline syringe on valve. Inject saline using pulse flush.
3. Unscrew saline syringe and screw IV tubing on valve.

### **Turn the pump on**

1. Press the **ON/OFF** key. The pump will perform a self-test and beep three times. A series of screens will appear.
2. The first screen has a black bar across **PROGRAM**. Press **YES** key.
3. On the second screen, arrow down so the black bar is over **REPEAT RX**. Press **YES** key.
4. The pump will automatically scroll through confirmation screens.
5. When the **RUN** screen appears, press the **RUN** key.
6. The pump will now be running. There will be a flashing green light next to the **ON/OFF** key and the pump will rotate through infusion status screens during infusion.

### **Stop the infusion**

1. When the pump alarms and says **INFUSION COMPLETE**, press the **RUN/PAUSE** key.
2. Unscrew IV tubing from valve.

### **Flush the Catheter**

1. Wipe end of valve with alcohol prep pad.
2. Screw normal saline syringe on end of valve. Inject saline using pulse flush.
3. Unscrew saline syringe and screw new IV tubing on valve.
4. Press the **RUN/PAUSE** key, then press **YES** to choose **REPEAT RX**.
5. Pump will scroll through confirmation screens. Press **RUN/PAUSE** key. The pump will now be running.

## **Alarms**

When an alarm sounds you will hear a beep(s), the red alarm light will flash and the data screen will display the reason for the alarm.

To silence the alarm, press the **SILENCE** key. This will silence the alarm for one minute. After resolving the alarm press the **RUN/PAUSE** key and then resume the infusion by pressing **YES**.

<b>ALARM AIR-IN-LINE</b>	Air in tubing	Press <b>RUN/PAUSE</b> key. Open top of pump by lifting latch on top of the pump door and pulling door up and all the way to the right. Remove tubing and push down on the top of the Flow-Stop while applying gentle pressure on medicine bag until air is past the Flow-Stop. Put tubing back into pump and press <b>RUN/PAUSE</b> key to resume infusion.
<b>ALARM DOOR OPEN OR SET NOT PROPERLY INSTALLED</b>	The pump door is open or the tubing is not inserted correctly	Check placement of the tubing and close the pump door properly.
<b>LOW BATTERY ALERT</b>	Pump has a low battery and will beep periodically and display "Low battery message"	Shut pump off by pressing the <b>RUN/PAUSE</b> key and then the <b>OFF</b> key. Replace both batteries. Press <b>ON</b> key, press <b>YES</b> to <b>PROGRAM</b> , and <b>YES</b> to <b>RESUME</b> infusion. Press <b>RUN/PAUSE</b> key.
<b>ALARM EMPTY BATTERY</b>	Battery does not have enough power to run the pump.	Replace the batteries as stated above or shut pump off and connect to AC adaptor.
<b>INFUSION COMPLETE</b>	Infusion complete	Press <b>RUN/PAUSE</b> , add another IV bag and select <b>REPEAT</b> key to continue therapy or turn pump <b>OFF</b> by pressing the <b>RUN/PAUSE</b> key, then the <b>OFF</b> key.
<b>ALARM UP OCCLUSION (pump detects a blockage)</b>	Kink in upper tubing	Press <b>RUN/PAUSE</b> key, un-kink tubing and select "Resume" by pressing the <b>YES</b> key to resume your infusion <b>OR</b>

<b>between bag of fluid and pump)</b>		Arrow down to "Repeat Rx", press <b>YES</b> , then press <b>RUN/PAUSE</b> key to start infusion.
<b>ALARM DOWN OCCLUSION (pump detects a blockage between the pump and the patient)</b>	Tubing or line clamp is closed  Kink in lower tubing  Block in patient's IV line	Open clamp  Straighten tubing between the pump and the patient  Straighten arm Change body position. Call nurse
<b>ALARM HIGH UP PRESSURE</b>	Pump has detected pressure on the IV bag	Press <b>RUN/PAUSE</b> key, check for excessive pressure in the medicine bag, and relieve it. Select "Resume" by pressing the <b>YES</b> key.
<b>ALARM SET NOT INSTALLED</b>	The tubing set has not been correctly inserted into pump.	Check tubing to make sure it is inserted correctly
<b>ALARM REPLACE SET</b>	Pump has detected that the tubing must be replaced	Replace the tubing set
<b>ALARM UNATTENDED PUMP</b>	Pump is paused for more than two minutes.	Press <b>RUN/PAUSE</b> key to resume the infusion
<b>ERROR CODE</b>	Pump has detected an error	Turn pump off, then back on and resume infusion

**To replace batteries:** Open the door by depressing the recessed release pin with a small coin and sliding the battery door down.

**TIP:** Green light blinks when pump is running

Yellow light blinks when pump is paused

Red light blinks when there is an alarm