Going Home with the HeartMate II LVAD

While living at home with your ventricular assist device (VAD), it is vital that you follow these instructions. You must know and understand the warnings and cautions that go along with having a VAD. Be sure that you are aware of the guidelines for safe VAD function.

Daily Care
1. Dressing Change  
   a. Change the driveline exit site dressing at least once a day. Be sure to use the sterile technique in the attached instruction sheet.  
   b. Keep the driveline from moving around with tape or an anchoring device discussed with you in the hospital. This prevents infection.  
   c. Take a good look at the driveline exit site at least once a day. Do this during the dressing change. Look for signs of infection.  
      - Redness  
      - Swelling  
      - Drainage (blood or pus)  
      - New drainage where there was not any before  
      - Increased tenderness during dressing change  
      - Foul odor  
      - Increased warmth at the site  
      - Temperature of 10° F
2. Each day, record these on your flowsheet.  
   a. Temperature  
   b. Weight  
   c. LVAD speed (rpm)  
   d. Pulsatility index (PI)  
   e. Power (watts)  
   f. Flow (L/min)
3. Perform a system check on the controller while on power module.

Every Night
- Inspect the system controller connections to the driveline to make sure they are secure. Do not disconnect either of these.  
- Check both the white and black connections to the power cords for damage.  
- Look at the latch guard. Make sure it is in the locked position at all times.
Weekly
- Inspect batteries for physical damage. Clean battery terminals and inside contacts of battery clips with an alcohol swab. Do not use or pour liquids. This prevents build-up. If there is physical damage, please notify your VAD coordinator.
- Remember to rotate and fully charge all batteries.
- If you have a problem with a battery, mark it and set it aside. Contact your VAD coordinator during daytime hours to let them know that you need a new one.
- Check your power lead connections during power changeover for any bent pins while maintaining one power lead connected to power at all times. Notify VAD coordinator with any bent pins.
- Clean the outside surfaces of your HeartMate system as needed with a damp cloth.

Every Six Months
- Charge backup battery in backup controller.

Other
You must know and understand the warnings and cautions that go along with having an LVAD. Be sure that you are familiar with the guidelines for safe LVAD operation.
- No MRI
- No Chest Compressions

System Upkeep
- Do not block or kink your driveline. Do not get your driveline caught on door handles, drawers or anything that could snag it.
- Keep water/moisture or debris from your controller.
- Do not use a tool to tighten any connections.
- Be careful around computers and TV’s due to static electricity.
- Do not clean or try to fix any connections on the LVAD. If there is something wrong, call LVAD coordinator or heart failure attending on call.
- Do not plug power module into an outlet controlled by a wall switch.
- Remember: At least one system controller cable must be connected to a power source (battery, power module at all times). Disconnecting both power cables at the same time will cause the pump to stop!

Activities
- Do not take baths or go swimming while implanted with the pump.
- You may shower once your doctor says that it is okay to do so. Do not take showers without using the shower kit.
- Avoid any activity with the potential for immersion into water. This can cause pump failure.
• Do **not** play contact sports while implanted with the LVAD.

• Avoid jumping up and down.

• Do **not** lift more than 10 pounds for at least 8 weeks.

• No vacuuming.

• No driving until approved by your physician/surgeon. Until then sit in the back seat to prevent possible trauma to your chest bone from airbags or the dashboard.

• Keep the system controller next to you while you sleep. When you go to sleep, you need to be on the power base unit. The pocket controller will get warm if you cover it with blankets.

• Do not sleep on your stomach.

**Pain**

• When you go home, you should not have a large amount of pain. You may feel sore.

• Your doctor may order medicine to relieve any pain that you may have. Take these as ordered.

• Call your Doctor or LVAD coordinator right away for any new pain or if the pain gets worse.

**Lab Tests**

You will be on a medicine called Coumadin® (Warfarin). It is a blood thinner. You will have to have blood tests done at your local lab and will be monitored by the Heart Failure team. The blood test drawn is called INR (international ration which monitors Coumadin®).

**Diet**

• Follow your heart healthy diet given to you by your dietician.

• Keep sodium intake to 2000mg total for one day.

• Keep total fluid intake to 2000ml per day.

• If you have diabetes, be sure to discuss nutritional supplements, carbohydrate counting and meal planning with your doctor.

**Smoking and Tobacco Products**

Do **not** smoke. Avoid places where you will be exposed to second hand smoke. Smoking and second hand smoke cause your arteries to tighten and will decrease blood flow. This will make your pump work harder. Smoking and second hand smoke also lowers your ability to fight off infection.
Alcohol
Do not drink alcohol. It can hinder or interact with certain drugs. Alcohol is a diuretic. It can cause you to dehydrate. Your LVAD depends on enough blood supply to work best. It is important that your non-alcoholic routine be maintained. Drinking alcohol may impair judgment and ability to react to system alarms.

Weather
Avoid being active in very hot or cold temperatures. If you go outdoors, during very hot or humid weather, be sure to drink lots of water and non-alcoholic drinks. When putting on heavy coats or jackets, before going outside in the cold, take care to avoid kinking or bending your LVAD cables.

Home Safety
Once you are at home, you and your caregiver need to be sure that your surroundings are safe. Please minimize area rugs or tripping hazards. Please use a mat in the bathtub if used as a shower to prevent falling if possible. If you have any questions or concerns about your home environment, call your LVAD coordinator. If you are not comfortable testing your home’s electrical system, you can hire an electrician to do it for you.

Leaving Home
Do not drive or operate heavy machines for as long as you have a VAD. Do not sit in the front seat in a car, truck, or SUV with airbags. Wear your seatbelt.

When leaving home for a few hours, be sure to take these items with you:
- Backup system controller.
- Extra batteries and clips.

Traveling
There are no restrictions for airplane (fixed-wing aircraft), train or bus travel. Notify your VAD coordinator prior to any travel. You need permission from your doctor before you travel via air or train. Airline or train security will need to be called. You may need documentation detailing your LVAD and its components. Arrangements need to be made to have the power module inspected by hand instead of going through the x-ray machine. Do not go through the security arch but rather have them use the wand. Your LVAD coordinator or heart failure doctor on call will give you information about the LVAD center nearest to your destination. That hospital’s LVAD team may be notified of the dates you will be in the area. You will need to put the equipment in a suitcase that will fit under the seat in front of you or in the overhead bin. Your LVAD will not interfere with the radar system.

To prevent equipment loss, you must carry:
- Power module/monitor/cable
- Battery charger
- Backup controller
- Batteries and battery clips
Returning To Work
You cannot return to work until cleared by your doctor.

Phone Numbers
Call the LVAD coordinator during weekday hours of 8 am-4:30 pm at the below office numbers or by calling paging at 608-263-6400 and ask for the VAD coordinator on call any time of day:
   Margaret Murray, RN, DNP  608-262-0773
   John Blabaum APNP     608-261-0962
   Michele Gruenenfelder, MPA-C 608-263-4786

You may also call the Heart Failure attending on call (after hours, weekends, holidays) at 608-263-6400 with any concerns.

If you live out of the area, call 1-800-323-8942.

---

Call your heart failure attending or VAD coordinator if:

- The LVAD flow rate is below the threshold given to you on your daily sheets
- PI less than 3 or greater than 8.
- Power > 8w.
- You gain or lose more than 2 pounds in 1 day or 5 pounds in 7 days
- You see any swelling in your ankles or changes in your waistline. This may be a sign of water retention.
- Have any signs of infection at the driveline site or concerns about appearance of driveline site. Temperature is greater than 101.5°F.
- Have any LVAD concerns including alarms or if you need to change the controller.
- Have pain at the driveline site or LVAD itself.
- Go to the Emergency Room and/or admitted to a hospital.
- Have LVAD failure
- Call your heart failure Doctor or LVAD coordinator right away if you notice any changes in how the LVAD feels, work sounds, or if you feel different.
An Emergency occurs any time the heart pump cannot pump enough blood. Call 911 for all emergencies. Make sure 911 is available and works in your area before relying on it. When to call 911:

- Loss of power to the pump.
- Broken wires.
- Damage to the pump motor or system controller.
- Health changes affecting your heart.
- Red Heart Alarm or pump stoppage

Call 911 with any signs of stroke:

- Changes in speech
- Numbness or tingling in one extremity only
- Weakness or unable to move one side of body
- Uneven smile

In an emergency: Stay calm….

If the Pump is Running:

- Check all cable connections.
- Reconnect any loose or disconnected cables.
- Call LVAD coordinator, Heart Failure doctor or “911.”
- Refer to trouble shooting guide.

If the Pump is Not Running, Call 911 right away.

- Refer to trouble shooting guide.
- Check connections, change power source.
- Switch to back-up system controller with another person.
- One family member/friend may need to ride in the ambulance with you to nearest hospital.
- Make sure that emergency backup supplies are with you for your ride.
- Someone needs to call your Heart Failure doctor to alert us you are coming to the nearest hospital.
Daily LVAD Driveline Management Tray

For in-patient care: please follow facility dressing policy in addition to the following instructions.

1. Wash hands.
2. Put on clean (unwrapped) gloves.
3. Apply mask to self.
4. Remove old dressing.
5. Sanitize hands with sanitizer packet provided.
6. Put on sterile (wrapped) gloves.
7. Prep a wide area with Chloraprep® applicator, using 60-second gentle friction scrub, moving from driveline outward. **Allow to dry completely.**
8. Apply skin prep to area around driveline where dressing will be placed. **Allow to dry completely.**
9. Apply gauze over insertion site with notch perpendicular to driveline.
10. Apply second gauze over insertion site with notch on opposite side.
11. Center dressing over insertion site and apply.
12. Apply closure piece under driveline and over edge of dressing.
13. Apply securement device.

Chloraprep® is a registered trademark of Carefusion or one of its subsidiaries. Contact manufacturer for complete directions for use and product information. Use in accordance with the policies and procedures of your hospital.