



# Health Facts for You



Your ventricular assist  
device (VAD) implant  
surgery

**UW**Health



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This booklet is meant to help you understand the process of your VAD implant surgery. Included are the resources and education you will need for the rest of your life. Keep this booklet as a resource.

### The VAD Implant Surgery

#### Day of Surgery

A nurse will get you ready for surgery. When you are taken to the surgery area, your support persons may stay in the surgical waiting area or go back to the inpatient unit (B4/5). The OR nurses will provide your family with updates. After surgery, the surgeon will talk with your support persons.

The surgery takes about **5-8 hours**.



#### Keeping Support People Updated

It is a good idea to choose one person as the primary contact. This person can update other family members and friends about your status. Make sure the surgical team has that person's contact information.

### After Surgery

You will go back to the Cardiothoracic Surgery Unit (B4/5). Support persons may visit after a recovery period (1-2 hours).



You and your support persons will hear beeps and alarms of the equipment. The noises you hear are normal. Many patients who have had heart surgery tell us that they recall little of the first hours after surgery. This is normal.

### Equipment and Other Changes to Expect

You may need tubes, lines and monitors after surgery. Tubes remove fluid from your body. Lines give you fluid and medicine.



Monitors tell us how your heart and lungs are doing. Removal of tubes and lines is based on your progress. This is a list of common tubes, lines, and monitors:

- Ventricular assist device (VAD) driveline
- Intravenous catheter (IV)
- Chest tube
- Endotracheal tube (ET tube)
- Foley catheter
- Pulse oximeter (pulse ox)
- Safety equipment and restraints
- Sequential stockings
- Telemetry
- Temporary pacemaker

### Recovering After Surgery

Many doctors will visit you every day. The time of day may vary. They assess your recovery progress. They will update you and your support persons and answer any questions. You will usually be in the hospital for 2-3 weeks after surgery.

The nurses and therapy teams will help you get out of bed as soon as you are able. The goal is to have you moving soon after your breathing tube is removed.



### **Incision Care**

You will likely have stitches and glue on your incision. When you go home, you will be able to leave the incision uncovered. Your incision may burn easily in sunlight. Avoid direct sunlight to the area.

As your wound heals, you may notice some soreness, numbness, and itching. This is normal and should improve over time. Call your VAD coordinator for any increase in swelling, tenderness, redness, drainage, or if the wound opens.

### **Medicines After VAD Implant**

After your VAD implant, you will keep taking heart failure medicines. You will also be started on a medicine to prevent clots in your pump. You will be on this medicine for the rest of your life. The team will help you learn about the medicines you need, why you need them, and the dose prescribed for you. Not taking your medicines correctly can lead to device malfunction and other health problems.



### **Education and Visiting Hours**

#### **Education After Surgery**

You must learn about the care of your new VAD. Education sessions are **required with you and your primary support person** in order to be discharged. This may start any time based on how your recovery is going. You may have education sessions with your coordinator, pharmacist, dietitian, physical and occupational therapists (PT and OT), and diabetes care and education specialists.



Your primary support person should plan on being at the hospital for 3-5 days. Each session will be 2 hours at minimum for education. Some will need more sessions than this.

You and your support person also are encouraged to do education outside the scheduled sessions with your VAD team. Refer to the Helpful Resources section at the end for videos and other resources.

### **Guidelines for Visitors**

Visitors should check at the information desk or nursing unit before visiting. The main hospital phone number is **608-263-6400**.

### **Discharge Planning**

#### **What to Expect After Leaving the Hospital**

If able to go home after discharge, you need to stay within 45-60 minutes of the hospital for at least 3-5 days after discharge from the hospital. Your support person will need to stay with you 24 hours a day to help if there is an emergency or device alarm.

Some patients may require more time to recover and get stronger before going home. In these cases, the team will talk with you about going to a rehab facility.

#### **Finding Area Hotels**

UW Health Guest Services may offer discounts at local hotels. Many area hotels have shuttles available. The phone number to call Guest Services to make housing arrangements is **(608) 263-0315**. If you live within 45-60 minutes of the hospital, you may return home after surgery.

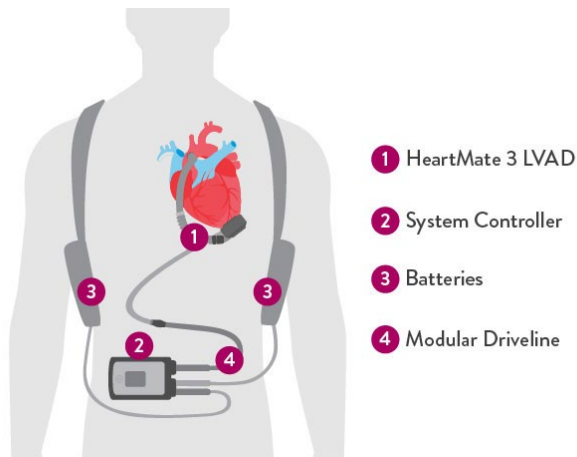
#### **Your First Weeks After Discharge**

When you return home, your support person should plan to stay with you **24 hours a day for 2 weeks**. This time allows you to settle into a routine at home, arrange your home in a way that is convenient to you and have access to someone to help with cares and transportation.

## Your VAD

Your VAD is a device that helps your heart pump blood. You will have the pump inside your body with a cord or “driveline” that comes out of your belly and connects to the controller (which is like the computer/brain) and the power sources (batteries or plug in that runs the pump).

You will learn to manage the equipment outside your body with the VAD team. The next pages provide detail about all parts of the device.



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## Your Vital Signs

Once you have a VAD, your body pumps blood differently. The VAD and your heart work together. Your heart is still beating, but the pump is helping. This means you do not have the same ways of checking your blood pressure or pulse.


A normal heartbeat has a “lub” and a “dub” because of your heart squeezing and relaxing to move blood through the heart. With a VAD helping your heart pump blood, you have a continuous flow of blood moving in your body. This continuous flow means that you may not have a pulse that you can feel.

The continuous flow of blood also means your blood pressure cannot be done with an automatic cuff. A doppler or ultrasound device is needed to listen for your blood flow.

Having a continuous flow is good. This means your body is getting the blood and oxygen it needs.

The VAD team will call your primary care provider and emergency department to discuss this. You may also need to remind them of the changes to your vital signs.

## VAD Equipment

Driveline			
<b>What is it?</b>		<b>Important to Know</b>	
<ul style="list-style-type: none"> <li>The cord that connects your pump to the controller and batteries</li> <li>A sterile dressing will be used to keep it clean and prevent infection.</li> <li>It has connection points for the controller.</li> </ul>		<p>You must protect your driveline.</p> <ul style="list-style-type: none"> <li>No scissors near driveline or cutting rubber coating</li> <li>Limit twisting or bending</li> <li>Prevent trauma to the driveline lead</li> <li>Avoid harsh cleaners, alcohol, or excessive moisture to driveline</li> </ul>	
The Controller			
<b>What is it?</b>		<b>Important to Know</b>	
<ul style="list-style-type: none"> <li>The controller is the computer that tells the pump what to do. It also helps you know what is going on with your pump.</li> <li>The controller connects the pump inside your body to the power sources outside your body. You will also have a backup controller with you at all times.</li> <li>There is also a backup battery that can run the pump for 15 minutes if there is no power source connected or the power goes out.</li> </ul>		<ul style="list-style-type: none"> <li>You will be taught how to change the controller in case you might need to direct someone to assist you in an emergency.</li> </ul> <p><b>Never disconnect or change your controller unless the VAD coordinator is present or on the phone.</b></p> <p><b>Controller buttons:</b></p> <ul style="list-style-type: none"> <li>Alarm silence button</li> <li>Square “toggle” button: VAD readings</li> <li>Battery/battery check</li> </ul> <p><b>Light indicators</b></p> <ul style="list-style-type: none"> <li>Yellow wrench</li> <li>Red heart</li> <li>Battery warning indicators</li> </ul>	
			
<p>Source: Abbott, HeartMate 3™ Left Ventricular Assist Device (LVAD); Reproduced with permission of Abbott, © 2024. All rights reserved.</p>			
VAD Numbers			
Speed	Flow	PI (Pulsatility Index)	Power
Set number by your medical team to your heart’s need for support	Estimated amount of blood circulated by the pump in L/min	Calculation of the changes to flow, power, and speed to estimate native heart function vs workload of pump	Required energy to keep the pump moving at set speed
<p>You will track you VAD numbers daily. Your usual numbers (or “baseline”) will be unique to you. Report changes to your coordinator if your <b>flow or power</b> is more than 2.0 from baseline. (Example: Flow normally 5.2, but today it is 2.8.)</p>			

## Power Supply Options

### Batteries with Clips

- Batteries will be the primary way you will power your device. You will receive 8 lithium-ion batteries to rotate through use.
- You must have two batteries connected when on battery power. Each pair of batteries will drain at the same time and last about 12-18 hours.
- The batteries all have a button to show the amount of battery life left. They are connected with clips to the controller.
- Clips hold the batteries and keep them connected to the controller. You will receive 4 clips.

### Mobile Power Unit (MPU)

- The MPU is the “plug in” or wall charger. It is the size of a small box.
- You must use your MPU to power your VAD when you are sleeping.
- The MPU has a speaker that makes your alarms louder as you sleep so you are more likely to hear them.
- It has AA batteries in the bottom that run the extra alarms. A yellow light on top of the MPU means you need to change the batteries.

### Universal Battery Charger (UBC)

- The UBC is used to charge your external batteries which power your pump. The UBC can hold 4 batteries at a time.
- The UBC can also be used to calibrate your batteries. Battery calibration is required when your batteries have been used a certain number of times (about 150 times). The UBC LED screen will light up with a symbol that looks like a battery with a number in it. The number shows you which number button to push to start calibration. Push and hold the number button for about 10 seconds to start the process.
- During calibration your batteries will drain all the way to dead and then recharge. This is good for the batteries and will help them work longer. This will take about 12 hours. Be sure you do not need that battery for at least that time before starting the calibration.
- If your UBC asks to calibrate the battery and you do not want to, simply ignore the message and it will prompt you the next time you charge it.

### Power Loss/Outage

- Your VAD requires electricity to either power the MPU or the UBC to charge your batteries. In the event of a power outage, you will immediately switch to battery power. Remain on battery power until the power comes back on.
- If the power will be out for a while, plan to go to a friend or family’s house who has power to charge your batteries. You can also go to your local hospital, fire department, or police station to charge batteries.
- Do not use a home generator due to risk of a power surge. This could damage your VAD or VAD equipment.

### Charging Every 6 months

Charging your back up controller and replacing your MPU batteries must be done every 6 months. To charge your back up controller, plug into MPU until the LED screen says “Charge Complete.” To change the MPU batteries unscrew bottom battery compartment and change them.

### **Backup VAD Equipment**

You must carry backup equipment at all times including:

- Back-up controller
- 2 fully charged batteries and clips

Without this backup equipment, the VAD can stop in cases of power failure and controller/pump failure.

Call the VAD Coordinator On-Call for 24/7 device support.

### **Static Electricity**

In the winter, air may be drier and increase risk of static electricity. If your pump is exposed to static electricity, it may stop. Do not wear sweaters or vacuum. Use dryer sheets and humidifiers in the dry months.

### **Equipment Cleaning**

To clean your VAD equipment, it is best to avoid harsh chemicals (like house-hold cleaners, bleach, or alcohol). Damp cloth or mild soap and water is enough. Any other cleaners may break down your equipment and cause damage.



## **Alarm Troubleshooting**

### **VAD Alarm Troubleshooting**

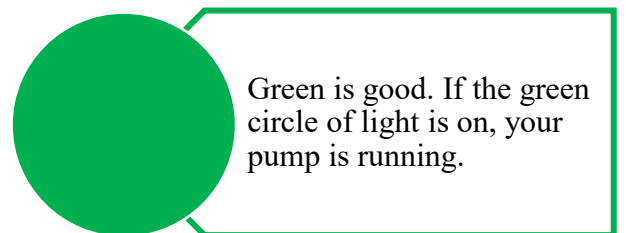
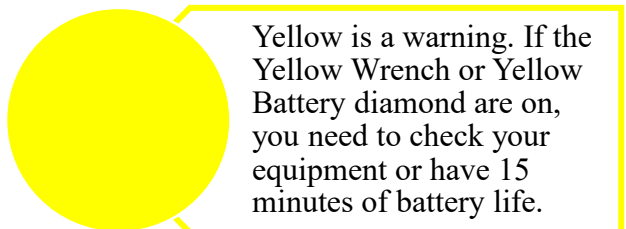
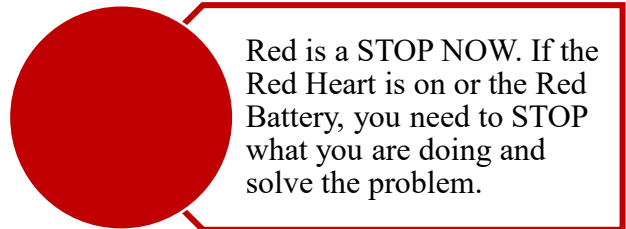
The device will alert you of a problem with the pump inside your body or the equipment outside your body. Each alarm has a different “beep” or sound from the controller. The screen on your controller will also give a short description of what the problem is. Most alarms can be addressed with proper equipment handling and maintenance, such as changing power sources before they get low. If an alarm is

more serious, you will have a 24/7 VAD coordinator on call to help you.

### **Types of Alarms**

Different alarms include the Yellow Wrench and the Red Heart. You can tell the difference by which light indicator on your controller is on. The sound might also be louder for Red Heart versus the Yellow Wrench.

The alarms follow the same rules of a traditional stoplight.



You are not expected to know all the different alarms, but you must know about red and yellow alarms. You should call your VAD coordinator for any alarms.



## Alarm Troubleshooting: **Red Heart**

**Call 911**



This allows them to be in route to you to help as soon as possible. The only alarm you can wait to call 911 is “Low Flow,” the following steps first and discuss with the VAD coordinator on call.

**Check LED screen and light indicators**



- What does the screen say and what is lit up.

**Check driveline dressing**



- Do you see any bleeding, drainage, or concerns with the dressing?

**Check your driveline**



- Follow the cord checking for any rips, tears, or kinks and that the modular cable connector and latch guard are in the locked or secure position.

**Check each power source**



- Do this one at a time assessing cable for any rips, tears, or kinks. Then check the black or white connection port for any lint, debris, bent pins. Reconnect to power source. Repeat for other power source.

**Check clip (if on battery power)**



- Ensure good connection with battery and that there is no corrosion, lint, or debris. Reinsert battery.

**Change power source to a set of fully charged batteries**



- Check batteries are fully charged and change them one at a time.

**Complete self test**



- Hold down battery button until the lights and sounds start on your controller.

**Call on call coordinator**



- Monday-Friday, 8:00 am-4:30 pm: 608-265-7579 or 608-265-7589
- Evenings, weekends, and holidays: 608-263-6400. Ask for the heart VAD coordinator on call

**Get back up equipment**



- Make sure at least two fully charged batteries and back up controller are on your person. You may want to take a dressing kit with you too.

## Alarm Troubleshooting: **Yellow Wrench**

**Check Controller  
(LED screen and  
light indicators)**



What does the screen say and what is lit up?

**Check driveline  
dressing**



- Do you see any bleeding, drainage, or concerns with the dressing?

**Check your  
driveline**



- Follow the cord checking for any rips, tears, or kinks and that the modular cable connector and latch guard are in the locked or secure position.

**Check each power  
source:**



- Do this one at a time assessing cable for any rips, tears, or kinks. Then check the black or white connection port for any lint, debris, bent pins. Reconnect to power source. Repeat for other power source.

**Check clip (if on  
battery power):**



- Ensure good connection with battery and that there is no corrosion, lint, or debris. Reinsert battery.

**Change power  
source to a set of  
fully charged  
batteries:**



- Check batteries are fully charged and change them one at a time.

**Complete self test:**



- Hold down battery button until the lights and sounds start on your controller.

**Call on call  
coordinator**



- No matter if the alarm resolves or not, call your VAD Coordinator.
- Monday-Friday, 8:00 am-4:30 pm: 608-265-7579 or 608-265-7589
- Evenings, weekends, and holidays: 608-263-6400. Ask for the heart VAD coordinator on call

## VAD Dressing Changes

### Sterile Technique

The bandage or dressing covering your driveline site requires special training called “sterile technique.” Sterile technique is used to prevent infections. You will be given sterile gloves, a sterile supply kit, and learn how to do it at home.

Using sterile technique is important because germs still can live on surfaces even after proper handwashing or if using normal hospital gloves. Those germs can get into the area and cause an infection if sterile technique is not used. Infections can be on the surface or go deeper into your skin or blood stream. This can be life-threatening or require life-long antibiotics. You and your caregiver must ensure sterile technique is done right to prevent infection.

### Steps for Dressing Changes

1	Clean table with sanitizer. Wash hands.
2	Apply mask to everyone in the room. Put on non-sterile clean gloves.
3	Open dressing kit.
4	Unlatch driveline from securement device “driveline anchor.”
5	Remove old dressing. Remove gloves.
6	Wash hands. Put on sterile gloves.
7	Clean around driveline for 30 seconds with ChloroPrep applicator. Use gentle friction to scrub, <b>moving from the driveline outward</b> . Allow to dry completely. Repeat this step with a second ChloroPrep applicator for 30 seconds.
8	Open saline wipe completely and lay over driveline cord. Gently drag wipe downward away from the exit site making sure to not pull-on cord.
9	<b>If doing daily dressing change:</b> Apply split gauze over insertion site with notch perpendicular to the driveline. Apply second gauze over insertion site. <b>If doing bi-weekly dressing change:</b> Apply BIOPATCH protective disk, blue and printed side up.
10	Apply skin prep to areas around the driveline where the top dressing will be placed. Allow to dry completely for 1-2 minutes.
11	Center the dressing over the insertion site and apply. Apply closure piece (called “pants”) under the driveline and over the edge of the dressing.
12	Re-apply securement device, replace this only as needed.

### Daily Dressing Changes

The dressing must be changed every day. Since you will not be able to reach the dressing site, your trained support person needs to do this.

Read the instructions inside the dressing kit which may vary slightly. Maintain sterile technique.



Daily Dressing



Bi-weekly dressing

## Dressing Supplies

Before discharge from the hospital, the social work team will make sure you have a plan for dressing change supplies. It is typical that you would have a dressing supply company. You are responsible for contacting your supply company as needed for your VAD dressing kits or supplies.

If you run out of supplies, it is unlikely that you will be able to find sterile supplies. Make sure you check how many dressing supplies you have to ensure you do not run out.

## Sensitive Skin

If you have sensitive skin, you may need to use tape and gauze instead of a dressing or a different type of cleaner. Talk to your coordinator if you are noticing open skin or redness at your dressing site.

## Signs or Symptoms of Infection

Watch your driveline site for signs or symptoms of infection. Signs of infection include:

- Temperature of 100.5°F or higher
- Redness
- Tenderness
- Irritation
- Changes to drainage



Some drainage may be normal. You will get to know what is normal for your site. If you notice a change, call your VAD coordinator.

## Driveline Anchor

Another way to protect your driveline from infection is using a driveline anchor. A driveline anchor is a sticker which holds your driveline in place when you drop or tug your driveline. This sticker can remain in place until it is falling off. Most people change it every 7-14 days.

## Home Care

### Keeping Records at Home

When you go home, you need to keep a record of your weight, temperature, VAD numbers, warfarin dose, and follow up appointments. You will be provided with a logbook to help you.

These tracking numbers are key to watching your health and your new device. Bring VAD logbook to each clinic visit. We will look for trends or changes in your numbers. We may make changes to your medicines based on your numbers.

### Daily Temperatures

- Take once a day at the same time each day. Do not eat or drink anything 30 minutes before you take your temperature.
- Normal oral temperature is 98.6°F or 37.0°C.
- If you have a temperature of 100.5°F or higher or 3 degrees higher than your normal, call the VAD coordinator.

### Daily Weights

- Make sure to empty your bladder before weighing yourself.
- Weigh at the same time each day before breakfast.
- Wear the same amount of clothing each time you weigh yourself.
- Call the VAD Coordinator if you notice weight gain (3 pounds a day or 5 pounds in one week).
- If you cannot see the scale number, you may want to get a talking scale.



## Daily Safety Checks

Safety checks for your device and body are important to make sure your VAD works properly. It is important to check the connections and controller.

### Do a Self-Test

The self-test is a way for your controller's internal software to run a or reset or test all programs. This does not turn off your device. The lights, sounds, and functions of your device are turned on for a few seconds to ensure they work.

If all the sounds and lights turn off at the end of your self-test, this is good. If any remain on or a message is displayed on the LED, call your coordinator.

### Check the Latchguard

The latchguard is the connection point at the back of the controller where the driveline plugs in. Check that it is in the locked position (no red showing) every day. This can prevent accidental disconnection. If you find it unlocked, close it. **Disconnecting the driveline will cause the pump to stop.**

### Check the Modular Cable

The modular cable is a connection point in the middle of your driveline. This allows the VAD coordinator to replace a portion of your driveline if there is damage. Check that it is in the locked position (no yellow showing) every day. If you find it unlocked, close it. **Disconnecting the modular driveline will cause the pump to stop.**

## Steps for Showering

There are some steps you should take to keep your VAD safe when showering.

### Getting Ready

- First, switch to battery power. Make sure batteries are fully charged.
- Make sure you have everything you need for the shower before you start.

### Cover Your Driveline

- Use saran wrap or Glad Press-n-Seal to cover the driveline.
- When you cover the driveline, make sure your belly is stretched out to avoid having folds or gaps in the covering. Laying down or sitting in a reclined position while doing this may be helpful.
- Use Microfoam tape, Blenderm tape, or white athletic tape to tape the edges of the covering.
- You do not need to cover the anchor, but you can if it fits.



### Place your VAD in the shower bag.

- Unclip the first layer of the shower bag. Then unzip the second layer.
- Remove your controller and batteries from your carrier. Place your controller into the designated slot. Place the batteries side-by-side in the lower section of the shower bag.
- Zip the bag closed. Make sure that **only** the driveline is coming out of the red slot.
- Close the top layer of the bag and clip to secure.

### During the Shower

- **Wear the shower bag the entire time you are in the shower.** Do not have someone hold it for you. Set it on a shower seat or counter or hang it on a shower hook.
- Make sure the shower bag is on the same side of your body as your driveline exit site is located. This will help prevent pulling.
- Watch your position carefully. While it is ok to get the covering wet, do **not** point the shower stream directly onto the driveline covering.
- If you have an alarm during your shower, finish promptly, dry off, and call your coordinator as instructed.

### After the Shower

- Find a dry place to sit and place your shower bag.
- Carefully remove your tape and covering from the driveline.
- Dry around the driveline with a clean towel.
- Dry off the shower bag and remove the VAD from the bag. Leave the bag open and hang it on a hook to dry.
- Place the VAD in your regular carrier.
- Change driveline dressing.

### Activity Guidelines

You can slowly increase your activity level after VAD implant. Walking and climbing stairs are good for you. Increase what you do each day. Some people need physical and/or occupational therapy (PT/OT) when going home. This therapy helps build your strength.

Cardiac rehabilitation will be scheduled when you go home. The goal of cardiac rehab is to build endurance. A member of

the rehab team will visit with you after your VAD. They will start exercises with you as soon as possible. Even if you are exercising at home, we still recommend that you participate in cardiac rehabilitation.

Keep in mind, each person recovers differently. Your plan will be made to meet your needs.

### Activity

Over time, most patients can go back to their normal activity with minor changes. It takes time to gain strength and endurance. Keeping up with an exercise routine is the best way to manage your weight and improve your well-being.

You will have some activity restrictions in the first **8 to 12 weeks** after your VAD implant surgery. After that you can return to your normal routine.

#### Restrictions



Do not drive until cleared by the surgery team. This typically occurs with your surgery clinic visit about 8-12 weeks after implant. Always wear a seatbelt. Sit in the back seat of the car for 8-12 weeks.



**10+ pounds**

Do not lift, push, or pull more than 10 pounds (like a milk jug) for 8-12 weeks.



Talk with your VAD team before you travel or take a long trip.

## Sexual Activity

Once home, you may engage in sexual activity as you feel able and have the desire.

For the first 8-12 weeks after surgery, avoid positions that strain your healing sternum (breastbone).

The peak effort with sex is equal to climbing stairs at a moderate pace. That would likely be "somewhat hard" on the exertion scale.

Some heart medicines can affect your sexual drive and ability. If you have questions or concerns about this, please talk with your doctor or VAD team.

You should talk to your doctor about birth control. Some of the medicines you take after implant may be harmful to the fetus. If you are planning to get pregnant, please discuss this with your VAD team.

## Going Back to Work

We encourage patients to return to work after having a VAD implanted. You may not be able to do the same duties as before your surgery. It depends on the type of work you do, but that doesn't mean you can't work at any job.

Your VAD team will talk with you about returning to work. They will help you with paperwork or questions you may have.

**Always notify your VAD team of any current or future insurance changes or updates.**

## Follow-up Care

### Commitment to Follow-Up Care

Your care after a VAD implant surgery is for your entire lifetime. This long-term care includes:

- Frequent clinic visits at UW Health in Madison, WI
- Echocardiograms
- VAD equipment evaluations or interrogations in clinic
- Labs, at least weekly (Can be done locally)
- Daily medicines
- Daily to bi-weekly dressing changes
- General device maintenance

### Keeping the Commitment

For VAD implant surgery to be a success, you need to commit to the following things:

- Follow the treatment plan.
- Follow the support expectations.
- Call about any new problems or symptoms related to your heart failure or your VAD or about any new medicines or tests you have.
- Take all prescription medicines as directed.
- Follow the diet and exercise plan advised by your doctor.
- Go to your clinic visits.
- Get your lab drawn.
- Continue to live a healthy lifestyle by avoiding alcohol, smoking, and nonprescription drugs.
- Follow up primary care doctor for routine health maintenance.
- Stay near UW Health for at least 3-5 days after discharge from the hospital with your support person.
- Plan to have a support person with you 24/7 for at least 2 weeks after discharge from the hospital.



### **Medical Alert Bracelet**

We require all patients wear medical alert bracelets after VAD implant. The social work team will help connect you with resources for a bracelet or necklace alerting others about your heart pump.

### **Local Doctor Visits**

You must have a primary care provider to follow your care. Plan to see your local doctor within a month after discharge. We rely on the local doctor to address routine health issues such as diabetes and minor infections. We will work closely with your doctor to give you the best care. The VAD team will manage your VAD medicines. The VAD team will also address any issues about your new device.

### **Clinic Visits and Echocardiograms**

Your follow-up appointments will be scheduled before discharge from the hospital. The follow-up schedule is intense for the first few months to year. You will have frequent echocardiograms with your clinic visit. During the echocardiograms, an ultrasound is used to assess the hearts chambers and optimize the device. Your support person is encouraged to come to all appointments.



Clinic visits are done:

- 2-3 days after discharge
- Every 2 weeks for first month
- Every 4 weeks for first 6-12 months
- Every 6-8 weeks after the first year depending on your healing

### **What to Bring to Clinic Visits**

- A list of your current medicines
- Logbook of your weight, temperature, VAD numbers, and warfarin dose
- A snack or something to drink
- A list of questions

### **Arrive Early for Clinic Visits**

Plan to arrive at the clinic at least 30-60 minutes before your scheduled appointment time. You need time to register, check in, and obtain labs which are needed to program your pump and change your medicines.

### **When You Leave the VAD Visit**

Obtain an After Visit Summary (AVS). This includes an updated medicine list, your lab results, and any follow up instructions.

### **Coping After Surgery**

During the process, it is common to feel anxious, depressed, or frustrated. Stress can cause these feelings and so can your medicines. Talk with someone about your feelings. The VAD team can help you cope with these emotions and help you find a mental health provider if needed. Sharing your feelings with your loved ones and others may also be helpful. Below are some websites which may be helpful in coping after implant.

<https://www.healthjourneys.com/>

<https://www.mindfulnesscds.com/>

### **Nutrition and Fluid Restriction**

#### **Nutrition**

Nutrition plays a key role in the healing process. Before VAD implant surgery eating well and being at a healthy weight may help you recover faster from surgery. After surgery good nutrition plays a key role in maintaining heart function and your overall health.



#### **Nutrition After VAD Implant**

After surgery, your body needs enough nutrition to promote healing, fight and prevent infection, and gain back weight you may have lost. You may have a lower appetite or change in your sense of taste due to medicines you will be taking and



anesthesia. Even though you may not feel hungry, you will need to eat.

### Tips

- Eat small, frequent meals or 3 meals with 2-3 snacks in between.
- Include high calorie, high protein foods like yogurt, pudding, cottage cheese, nuts, peanut butter, shakes, lean meats and eggs.
- Use nutritional supplement drinks such as Boost<sup>®</sup>, Ensure<sup>®</sup>, or Carnation Breakfast Essentials.

### Long-term Nutrition Guidelines

After VAD implant, you will need to develop and maintain a healthy lifestyle. Weight gain can happen after initial post operative time after surgery due to an increased appetite from unhealthy eating habits, lack of exercise, and family history of obesity. Making healthy food choices can help prevent these problems.

### Choose Low Sodium Foods

A diet low in sodium can help control blood pressure and prevent fluid retention.

To lower your sodium intake:

- Avoid adding salt to your foods. Use herbs, spices, or blends such as Mrs. Dash<sup>®</sup> instead of salt.
- Avoid foods with large amounts of sodium such as processed foods like ham, bacon, sausage, cheese, canned vegetables and soups, and boxed meals.
- Avoid salt substitutes with potassium.
- Read food labels to find out if foods are high in salt.

### Carbohydrates

If you have diabetes or high blood sugars, you may need to eat a diet that has a consistent amount of carbohydrate at each meal.

### Dietary Supplements

- Avoid herbal or dietary supplements unless approved by the VAD team.
- Avoid potassium supplements or salt substitutes that contain potassium.

### Fluid Volume

It is important to know how much fluids you should drink at home. You may need to drink more fluids or restrict your fluids depending on your health. Most patients have a fluid restriction of 2 liters per day after VAD implant.



### Dehydration (Dry)

Dehydration is when your body loses fluid. This happens when you don't drink enough fluids. It can happen if you lose fluid through diarrhea or vomiting. High blood sugars or fevers can also cause dehydration.

Signs of dehydration:

- Decrease in weight (loss of 3 pounds a day or 5 pounds in a week)
- Decrease in blood pressure when standing
- Increase in pulse when standing
- Lightheaded or dizzy when standing
- Decrease in urine output
- Muscle cramps

### What to Do If You Are Dehydrated

Call your coordinator. Drink fluids. Avoid caffeine and alcohol. If you exercise, increase your fluids so you do not get dehydrated. If you have a lot of vomiting or diarrhea, you may need more fluid or IV fluids. Your blood pressure and pulse should be close to the same when you are lying down and when you are standing.

## Overhydration (Wet)

Overhydration is when your body has too much fluid. This may be because of side effects of medicines or something could be wrong with your kidney.

Signs of overhydration:

- Increase in weight (gain of 3 pounds in a day or 5 pounds in a week)
- Swelling
- Shortness of breath
- Waking up gasping for air
- Getting full faster when you are eating

## What to Do If You Are Overhydrated

Limit your fluid intake. Call your VAD coordinator.

## Things to Remember After Your VAD Implant

**Take medicines as directed.**

- Your blood thinning medicines and doses will be specific to you. The VAD doctors will order the medicines they feel will best fit your needs.
- Do **not** miss doses of these medicines.
- Do not change your medicine doses or stop taking any medicine without talking with the VAD team.
- Please call the VAD team before starting any new medicines including over-the-counter medicines or supplements.

**Labs**

- Complete labs as instructed.
- If you are scheduled to have labs done on a holiday, it is OK to have them completed the next day instead.
- A lab test, called an international normalized ratio (INR), measures

how well your blood thinning medicine is working. The test will be done with your other labs.

- Your INR goal and dose will be unique to you. This protects you from having too much or too little medicine in your body.

## Home Care

**Every day:** Check your temperature, weight, and VAD numbers. Call your coordinator if you have:

- Fever of 100.5°F or higher or 3 degrees above your normal.
- Weight gain of 3 pounds in one day or 5 pounds in one week.
- Change of more than 2.0 in your flow or power from your baseline. (Large changes in PI are normal.)

## Sign Up for MyChart

MyChart is an internet-based service that lets you access your medical and health plan information. **MyChart is not for urgent needs.** Call your coordinator for urgent needs or call 911 for emergencies.

- Get test results quickly. View lab orders in the letters section.
- View your instructions (“After Visit Summaries”).
- Send secure messages to your coordinator and providers.
- Access paperless billing.

The MyChart app is available for both Apple and Android mobile devices. The mobile app provides access to many MyChart features, but it does not replace the web-based application. Certain features are only available on the web site.



## Helpful Resources

The resources below may be helpful for heart failure and VAD patients and their families.

### HeartMate3 Education

We encourage you and your support person to keep learning outside the scheduled sessions with your VAD team. The company that made your VAD offers resources including:

- **Videos:** This series of short videos match topics that you will learn about throughout your VAD education. They are best viewed on your smart phone, tablet, or computer. Access by using this QR code or website address:

<http://abbott.com/understandheartmate3>



- **Daily text messages:** The QR code below lets you send a text message of “HOPE” using your phone. This enrolls you in interactive lessons during your evaluation period. This is best used on a cell phone. You can send a “STOP” message at any time to unenroll.



### Caring Bridge

Free on-line resource to update your family and friends.

<http://www.caringbridge.org>

### VAD Forum and Support Group

<http://mylvad.com>

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 3/2024 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing HF#8343

## Who and When to Call

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### VAD Coordinator

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Call for:

- Medicine refills
- Lab results
- Questions about VAD medicines
- Changes or new symptoms or other questions related to your VAD
- Fever of 100.5°F or higher or 3 degrees above your normal or chills
- Nausea, vomiting or diarrhea for more than 24 hours
- Blood in urine or problems urinating
- Blood in your stool
- Other urgent symptoms related to your VAD

Contact:

- **Monday-Friday**, 8:00 am-4:30 pm: 608-265-7579 or 608-265-7589
- If call goes to voicemail, please leave a detailed message as to why you are calling. Staff may be on the phone or away from our desk. We return calls based on priority.
- **Evenings, weekends, and holidays:** 608-263-6400. Ask for the heart VAD coordinator on call.

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### Social Worker

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Call for:

- Dressing supply
- Questions about insurance
- Returning to work paperwork
- Payment assistance
- Options for community services if needed
- Any changes in support plan

Contact:

- **Monday-Friday:** 8:00 am-4:30 pm, 608-262-9878 or 608-287-1535
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### Local doctor/ health care provider

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- Problems not related to your VAD
- Refills of non-VAD related medicines

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### Call 911 or go to the nearest emergency room

- Trouble breathing
  - Heavy bleeding or bleeding you can't stop
  - Chest pain
  - Fainting or passing out
  - High blood pressure with headache or vomiting
  - Unable to take medicines for 24 hours
  - Seizure or stroke
  - Severe pain
  - Anything else you think might be an emergency
  - If you are in a local emergency room or hospital, call your VAD Coordinator or coordinator on call depending on time of day.
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