

Life After the Hospital



Follow Up Care After Your VAD

After you leave the hospital, you will have frequent follow up appointments with a member of our multi-disciplinary team. You will receive information about your first appointment on the day you are discharged from the hospital. After this first visit, your return appointments will be scheduled during your clinic visits or by a Nurse Clinical Care Coordinator. A copy of your scheduled appointments will be mailed to your home. It is very important you keep these appointments. We want to make sure you receive the best possible care to meet your individual needs.

How often will I have clinic appointments?

After you leave the hospital, you will have a follow-up visit within two weeks. After this first appointment, you will have routine appointments scheduled once a month for about 6 months. We may ask you to come in for an extra clinic visit if you are not feeling well or we are concerned about your health.

What type of tests will I have at my clinic appointments?

Your appointment will include several tests that will help your care team monitor your health status. The tests are as follows:

- Lab work
- Electrocardiogram (EKG)
- Chest X-ray at first follow-up appointment and then as needed.
- Echocardiogram (ECHO) as needed.
- Right Heart Catheterization as needed.

If you are in a research study, you may have additional tests during your clinic appointments

How can I keep track of my appointments?

Keeping a calendar of your appointments is important. A calendar can help you keep track of the dates and times you need to see your doctor or other health care providers. You can also review future appointments online using the patient portal www.MyUofMHealth.org

Under the “Appointments” tab in the patient portal, you can:

- View upcoming or past appointments
- Cancel appointments up to 24 hours before your scheduled time
- Schedule a new appointment by sending a request to the Nurse Clinical Care Coordinator.

When you request an appointment please include the following:

- The reason you want to be seen
- Times you are available

The request will be sent to the Center for Circulatory Support office, where the staff will review availability. When the staff finds an appointment time that works, you will receive a notification in your portal.

What should I bring to my clinic appointment?

Your healthcare team wants to be sure you are properly prepared for your clinic visit to ensure you get the care you deserve. We ask you bring the following with you when you come for your appointment:

- VAD equipment
 - Batteries
 - Backup controller
 - Emergency power supply
- Cell phone
- Log sheets, medication sheets and education binder
- List of any questions you have for your health care team

What can I expect at my clinic appointment?

Your initial visit will be comprehensive and last a long time. In addition, clinic days with testing can last as long as 6 hours. We suggest you bring a snack and drink with you, especially if you have diabetes. We also encourage you to wear comfortable clothes and shoes.

During most visits, you can expect your health care providers to do the following:

- Check your vital signs.
- Measure your weight.
- Review data on your log sheets: pump data, weights, and blood pressure.
- Check your VAD equipment.
- Review blood pressures and weights on your log sheets.
- Check your hands and feet for swelling.
- Check your driveline site.
- Perform a physical exam.
- Assist you in performing a 6-minute walk test (as needed).
 - The purpose of this test is for you to walk in the clinic hallway for 6 minutes while a staff member records how far you can go during this time period.
- Give you a copy of the Trail Making Assessment and Quality of Life Questionnaire to complete.

Your initial visit will be comprehensive
and last a long time.

Tele-Management: VAD Care by Phone

For your health and wellbeing, it is very important to stay in close contact with the members of the Center for Circulatory Support Staff. We work closely with you to monitor your health through regular phone calls. Our specially trained staff will provide consultation, emotional support, and helpful information during these phone calls. This way, you can remain in the comfort of your home while staying up-to-date on your condition and treatment plan.

Most VAD patients will have a visiting nurse when they are first discharged from the hospital. A visiting nurse works under the direction of the Center for Circulatory Support team. They provide the following services:

- Medication assistance and education
- Assessment of vital signs (blood pressure, heart rate, temperature and weight)
- Blood draws

If you have questions or there are concerns about your equipment or driveline dressing change, your visiting nurse will contact the Center for Circulatory Support team.

What is my role as a patient?

We think of you as a partner in care. We expect you to do the following to assist us so we can provide excellent care:

- Provide a reliable way to contact you.
 - Provide your current phone number.
 - Provide a backup phone number.
- Return our phone calls when we leave you a message.
- Complete all lab work.
 - All lab work needs to be done as early in the day as possible.
- Call us if you need to change your lab date.
- Keep all of your appointments.
 - Instead of canceling your appointment, call us if you do not feel well.
 - Contact us if you are having transportation issues that prevent you from getting to your lab appointments or clinic visits.

We think
of you as
a partner
in care.

If you have a clinic visit, this information will be collected during your appointment.

- Tell the Nurse Clinical Care Coordinators about all medications you are taking (including over-the-counter drugs and supplements).
- Report any new or worsening changes in your health.
- Maintain regular visits with your Primary Care Doctor.

How often will I be contacted by the Center for Circulatory Support?

Initially, you will receive a weekly call from one of the Nurse Clinical Care Coordinators to collect information regarding your health status. The Coordinator will ask you for the following information:

- General well-being
- Weight
- Temperature
- Doppler blood pressure
- Pump data from your log sheet
- Activity level
- Driveline exit site status (e.g. drainage, odor, color)
- Medication prescription refill requests

What should I do if I am travelling?

If you are travelling, we would still like to be in contact with you. Please make sure that you give the clinical care coordinators your contact information so they can reach you while you are on vacation. Make sure you keep them informed when you don't feel well, even if it may be something as simple as a cold.

What is the number to call?

Non-Emergency

- Monday through Friday from 8am to 5pm: **Call** the Frankel Cardiovascular Call Center at **(734) 647-7321**
- After 5pm or on weekends or holidays: **Call** the VAD Emergency Number: **(734) 477-6722**

Emergency

- If you are experiencing an emergent alarm or emergency situation, **Call** the VAD emergency number at **(734) 477-6722**. A member of the VAD team is on-call 24 hours a day/7 days a week.

What steps should I take to monitor myself at home?

You will play an active role in monitoring your health at home. It's important to track your condition carefully at home. Be sure to write down the results of your home self-checks on your log sheets so you can share them with your health care team. A nurse clinical care coordinator will go over your self-check results with you during routine phone calls and at your clinic visits.

You will need to have the following equipment before you are discharged from the hospital:

- Weight Scale
- Oral Thermometer
- Doppler (provided by Michigan Medicine)
- Blood pressure cuff (provided by Michigan Medicine)

You will need to perform and record the following self-checks daily:

- Check your incisions and driveline exit site daily for signs of infection (increasing redness, tenderness, swelling, warmth or drainage).
- Take your temperature each morning before eating or drinking and at any time you think you may have a fever.
- Weigh yourself at the same time, on the same scale, in the same clothes, and in the same way each day.
- Check for swelling in your legs, feet, hands or abdomen.
- Check your blood pressure and heart rate in the morning 2 hours after you have taken your morning medications.
- Check your pump speed, pump flow and pulsatility index values on your system controller.
- Use the doppler and blood pressure cuff given to you in the hospital.

Best Practice Tip:

Get on the scale each morning, after you urinate but before you eat breakfast.

What Steps Should I Take When Checking My Blood Pressure (BP) at Home?

Before

**2
Hours**

2 hours before your BP is taken:



No Alcohol



No Eating

**30
Min**

30 minutes before your BP is taken:



No Tobacco



No Caffeine



No Exercise

**5
Min**

5 minutes before your BP is taken:



Have log sheet ready to record BP



Sit still and relax in a chair with a back and don't talk for 5 minutes

During (When taking your BP)

- Use correct cuff size for your arm
- Put cuff on bare upper arm
- Sit in a chair with your back straight and feet flat on the floor
- Support arm at heart level on a flat surface
- Do not talk while taking your BP



After (After checking your BP)

- Wait 1 minute and measure a 2nd time
- If your blood pressure is high you may repeat the reading a 3rd time and record the lowest of the two readings
- Record measurements in your BP log



What are other things I should keep in mind with a VAD?

You must be protected from infection for the rest of your life. You will need to take an antibiotic prior to any medical or dental procedure. Let your dentist and other doctors know you have a VAD.

You should contact the Center for Circulatory Support one week before any medical or dental procedures to get an antibiotic prescription. If you have any known allergies to medications, let the team know when you call.

Report any signs or symptoms of infection to the team immediately. Do not wait for these symptoms to disappear. You can have an infection even if you are taking an antibiotic.

If an infection is present, your care team will likely prescribe antibiotics and/or hospitalization. The signs and symptoms of infection include:

- temperature over 100.5° F
- chills
- night sweats
- joint aches
- redness, warmth or discolored foul smelling drainage near your driveline exit site or incisions.

You will need to have regular blood tests during the time you have your VAD. It is important to get your blood tested as ordered. Your clinical team uses your test results to identify problems early and to guide your treatment plan.

When Do I Need to Seek Medical Help And Whom Do I Call?

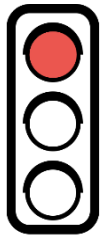
VAD Emergency number:

(734) 477-6722, 24/7

Frankel Cardiovascular Call Center:

(734) 647-7321, M-F 8AM-5PM

This material lists many symptoms that might occur when people live with a Ventricular Assist Device (VAD). Some symptoms are an **emergency**, meaning that if they occur you must call the VAD Program emergency number right away. Other symptoms are urgent, meaning you need to call the Center for Circulatory Support as soon as possible. For routine issues call the Center for Circulatory Support during business hours.



What symptoms are considered an emergency?

The following signs and symptoms need to be treated right away. Call the VAD emergency number at (734) 477-6722 if you have any of the following:

Signs that your heart pump is not working properly

- An active yellow wrench alarm, red heart hazard alarm or red battery hazard alarm
- Noticeable damage to any parts of your equipment (i.e. cracks, exposed wires etc.)

Signs and symptoms of a blood clot in your VAD pump:

- Dark/cola colored urine
- Flank pain (pain between the upper belly area and the back)
- Change in watts (greater than 2.0)
- Change in flows (increased/decreased flow of 2.0 or greater)

Signs and symptoms of a stroke:

- Sudden confusion or trouble speaking or understanding others
- Sudden trouble seeing in one or both eyes
- Sudden numbness or weakness of the face, arm, or leg, usually on one side of your body
- Sudden trouble walking, dizziness, or loss of balance or coordination
- Sudden or severe headache with no known cause

Signs and symptoms of bleeding:

- Bleeding that is severe or bleeding that you cannot stop
- Pink or brown urine
- Red or black stools (that look like tar)
- Coughing up blood or blood clots
- Vomiting up blood or if your vomit looks like “coffee grounds”

Any of the following signs or symptoms:

- Sudden onset of chest pain
- Shortness of breath not relieved by rest
- If your legs feel numb, tingly, cold or look blue
- Loss of consciousness
- You believe you are experiencing a true emergency

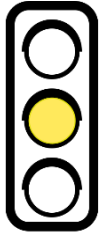
If you hit your head because of an injury or fall (even if it seems minor) you need to call the VAD emergency number at **(734) 477-6722**.

What happens when I call the VAD emergency number?

The VAD Emergency number **(734) 477-6722** is available 24 hours a day, 7 days a week to support you.

This is what will happen when you call:

1. A dispatcher will answer and ask questions to determine the nature of your emergency.
2. The dispatcher will contact your local 911 if needed and will connect you with the VAD Coordinator or Advance Practice Provider on-call to further assist you.



What symptoms are considered urgent?

The following signs and symptoms need to be treated before they become an emergency. Call the Frankel Cardiovascular Call Center at (734) 647-7321 if you have any of the following:

Signs and symptoms that may indicate an infection:

- Temperature of 100.5° F or higher, measured with a thermometer placed under the tongue
- Bleeding, tenderness, increasing redness or swelling near your incision site or driveline exit site
- Foul smelling drainage near your incision site or driveline exit site
- Increased pain
- Incisions that open up after you leave the hospital

Signs and symptoms of heart failure:

- Noticeable increase in weakness or fatigue
- New or increased shortness of breath
- Shortness of breath when lying flat in bed
- Persistent cough
- New or increased swelling in your legs, feet, ankles or abdomen
- Unplanned weight gain of 3 or more pounds in one day or 5 pounds in a week
- Loss of appetite
- Not urinating for more than 2 hours after taking your diuretic (water pill)
- Confusion or impaired thinking
- Difficulty concentrating or decreased alertness
- Rapid or irregular heartbeat

Other signs and symptoms:

- Nausea, vomiting or diarrhea
- Stomach pain or bloating
- Chills or excessive sweating
- A vague feeling that something is wrong

What is the number to call?

- Monday through Friday from 8am to 5pm: Call the Frankel Cardiovascular Center Call Center at (734) 647-7321
- After 5pm or on weekends or holidays: Call the VAD Emergency Number: (734) 477-6722



When do I need to call for other issues or concerns?

Call the Frankel Cardiovascular Call Center at (734) 647-7321 between 8am-5pm Monday – Friday if you need:

- Lab results
- Prescription refills
- Prescription prior authorization

You also need to call us if you:

- Have questions related to your medications
- Can't go for your scheduled blood work
- Need to make, cancel or confirm an appointment

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Symptom Index

<p>Alarm: An active yellow wrench alarm, red heart hazard alarm or red battery hazard alarm</p>	<p>Call VAD Emergency Number (734) 477-6722</p>
<p>Bleeding: severe or bleeding that you cannot control</p>	<p>Call VAD Emergency Number (734) 477-6722</p>
<p>Bleeding, tenderness, increasing redness or swelling near the incision site or driveline exit site</p>	<p>Weekdays call the Frankel CVC Call Center (734) 647-7321. Weekends call the VAD Emergency number at: (734) 477-6722</p>
<p>Breath- new or increased shortness of breath</p>	<p>Weekdays call the Frankel CVC Call Center (734) 647-7321. Weekends call the VAD Emergency number at: (734) 477-6722</p>
<p>Breath -shortness of breath not relieved by rest</p>	<p>Call VAD Emergency Number (734) 477-6722</p>
<p>Breath- shortness of breath when lying flat in bed</p>	<p>Weekdays call the Frankel CVC Call Center (734) 647-7321. Weekends call the VAD Emergency number at: (734) 477-6722</p>
<p>Change in VAD pump flows: (increased/decreased flow of 2.0 or greater)</p>	<p>Call VAD Emergency Number (734) 477-6722</p>
<p>Change in VAD pump watts: (greater than 2.0)</p>	<p>Call VAD Emergency Number (734) 477-6722</p>
<p>Chest pain: Sudden onset of chest pain</p>	<p>Call VAD Emergency Number (734) 477-6722</p>

Chills or excessive sweating	Weekdays call the Frankel CVC Call Center (734) 647-7321. Weekends call the VAD Emergency number at: (734) 477-6722
Concentration: difficulty concentrating or decreased alertness	Weekdays call the Frankel CVC Call Center (734) 647-7321. Weekends call the VAD Emergency number at: (734) 477-6722
Confusion or impaired thinking	Weekdays call the Frankel CVC Call Center (734) 647-7321. Weekends call the VAD Emergency number at: (734) 477-6722
Confusion or trouble speaking or understanding others	Call VAD Emergency Number (734) 477-6722
Coughing up blood or blood clots	Call VAD Emergency Number (734) 477-6722
Coughing: persistent cough	Weekdays call the Frankel CVC Call Center (734) 647-7321. Weekends call the VAD Emergency number at: (734) 477-6722
Equipment -noticeable damage to any parts of your equipment (i.e. cracks, exposed wires etc.)	Call VAD Emergency Number (734) 477-6722
Feeling: You believe you are experiencing a true emergency	Call VAD Emergency Number (734) 477-6722
Feeling: Vague feeling that something is wrong	Weekdays call the Frankel CVC Call Center (734) 647-7321. Weekends call the VAD Emergency number at: (734) 477-6722

Headache - Sudden or severe with no known cause	Call VAD Emergency Number (734) 477-6722
Heartbeat: rapid or irregular	Weekdays call the Frankel CVC Call Center (734) 647-7321 . Weekends call the VAD Emergency number at: (734) 477-6722
Incisions that open up after you leave the hospital	Weekdays call the Frankel CVC Call Center (734) 647-7321 . Weekends call the VAD Emergency number at: (734) 477-6722
Legs feel numb, tingly, cold or look blue	Call VAD Emergency Number (734) 477-6722
Loss of appetite	Weekdays call the Frankel CVC Call Center (734) 647-7321 . Weekends call the VAD Emergency number at: (734) 477-6722
Loss of consciousness	Call VAD Emergency Number (734) 477-6722
Nausea, vomiting or diarrhea	Weekdays call the Frankel CVC Call Center (734) 647-7321 . Weekends call the VAD Emergency number at: (734) 477-6722
Not urinating for more than 2 hours after taking your diuretic (water pill)	Weekdays call the Frankel CVC Call Center (734) 647-7321 . Weekends call the VAD Emergency number at: (734) 477-6722
Numbness or weakness of the face, arm, or leg , usually on one side of your body	Call VAD Emergency Number (734) 477-6722

Pain: increasing pain	Weekdays call the Frankel CVC Call Center (734) 647-7321. Weekends call the VAD Emergency number at: (734) 477-6722
Pain: flank pain (pain between the upper belly area and the back)	Call VAD Emergency number (734) 477-6722
Smell: foul smelling drainage near your incision site or drive-line exit site	Weekdays call the Frankel CVC Call Center (734) 647-7321. Weekends call the VAD Emergency number at: (734) 477-6722
Stool color: red or black stools (that look like tar)	Call VAD Emergency Number (734) 477-6722
Stomach pain or bloating	Weekdays call the Frankel CVC Call Center (734) 647-7321. Weekends call the VAD Emergency number at: (734) 477-6722
Swelling in your legs, feet, ankles or abdomen -new or increased	Weekdays call the Frankel CVC Call Center (734) 647-7321. Weekends call the VAD Emergency number at: (734) 477-6722
Temperature of 100.5° F or higher, measured with a thermometer placed under the tongue	Weekdays call the Frankel CVC Call Center (734) 647-7321. Weekends call the VAD Emergency number at: (734) 477-6722
Trouble seeing in one or both eyes	Call VAD Emergency Number (734) 477-6722
Trouble walking , dizziness, or loss of balance or coordination	Call VAD Emergency Number (734) 477-6722

Urine color: Dark/cola colored	Call VAD Emergency Number (734) 477-6722
Urine color- Pink or brown	Call VAD Emergency Number (734) 477-6722
Weakness or fatigue -noticeable increase	Weekdays call the Frankel CVC Call Center (734) 647-7321 . Weekends call the VAD Emergency number at: (734) 477-6722
Weight gain: unplanned weight gain of 3 or more pounds in one day or 5 pounds in a week	Weekdays call the Frankel CVC Call Center (734) 647-7321 . Weekends call the VAD Emergency number at: (734) 477-6722
Vomiting up blood or if your vomit looks like “coffee grounds”	Call VAD Emergency Number (734) 477-6722

Living with a VAD



Returning to Everyday Activities

Physical activity is an important part of your recovery from surgery and ongoing health and wellbeing. You may be surprised to find that you are able to be more active with your LVAD than you were before. If you have questions about a specific activity, your care team can help you create a plan to fit your needs. Below are guidelines to help you know what kinds of activities and exercise you should and shouldn't do.

What are my activity restrictions?

- Do not lift any objects over 10 pounds after surgery. As a reference, a gallon of milk weighs about 8 pounds. Your doctor will let you know when this precaution is lifted.
- Do not push or pull heavy objects such as a vacuum cleaner, lawn mower or furniture.
- Avoid activities that may cause **static electricity** (i.e. vacuuming, dusting computer screens or TV screens).

How can I avoid static electricity?

- Use a dryer sheet or fabric softener when doing laundry to prevent static electricity.
- Use a humidifier in your home.
- Be aware of materials and devices that have static electricity (carpeted floors, silk fabric, TV screens, microwaves, laptops, and computer screens).

- Do not resume exercise at your local gym until you complete a cardiac rehabilitation program.
- Avoid biking as it may pull at your driveline and prevent healing of your driveline exit site.

These activities could cause bleeding or could damage your pump

- Avoid contact sports (soccer, basketball, martial arts, hockey or any other sport that involves contact with other players).
- Avoid activities with a high risk of injury or falls (downhill skiing, horseback riding, rollerblading, etc.).
- Avoid water sports (swimming, diving, snorkeling, etc).

Driving

- Your provider will discuss with you when you can drive again.
- You can ride as passenger in a car at any time.
 - If there is an air bag on the passenger side of the car, sit in the backseat until your incision is healed and your doctor has lifted your precautions.
 - Always wear your seatbelt.

What activities should I do?

- Use your breathing machine (incentive spirometer) four times a day (ten breaths each time) until you return for your first clinic visit.
- Walk every day (find an indoor setting during bad weather).
- You may climb stairs - limit the number of times until you are feeling well.
- Wear your support stockings (TEDS) during the day. You may remove them at night. You may stop wearing those four to six weeks after your operation.
- Elevate your feet as high as possible when sitting (toes higher than nose).
- Continue with the exercises assigned to you by physical therapy and occupational therapy in the hospital.
- Participate in daily activities such as meal preparation, washing dishes or light laundry.

How do I bathe?

At first, you must sponge bathe when you are at home. During your hospital stay, your occupational therapist will practice bathing and washing your hair with you. Below are some helpful tips to help you at home:

- Sponge bathe every day.
- Never take tub baths. Immersing your LVAD pump and body in water will cause your pump to stop working.
- Use a freshly laundered towel each time you bathe.

Follow these guidelines to care for your incision while bathing:

- Wash your surgical incision(s) with your usual bath soap and water every day. Pat dry and leave open to air.
- Do not put any creams, lotions, powders or ointments on your surgical incision(s) until they heal.
- Showering may be allowed, but only after your driveline exit site has healed and only with your doctor's permission. Do not shower without a doctor's approval.

CAUTION:

Do not shower until your care team gives your permission. If you are allowed to shower, a member of your care team will teach you how to use the shower bag to protect your LVAD equipment.

Returning to Work

Your ability to return to work will depend on a number of things:

- Your overall health
- The kind of work you do
- Your employers comfort

You will need to discuss this with your care team. Each situation will need to be addressed on an individual basis.

Traveling with a VAD

You will not be able to travel for pleasure for the first 6 months after your LVAD implant surgery. Once you have recovered from surgery and are strong enough, travel is allowed. Contact your care team before making **any** travel plans to be sure it is safe for you to travel.

Traveling with an LVAD will require planning and some extra preparation. You will need to contact the Center for Circulatory Support team to let them know so they can help you create a travel safety plan. We ask you give the team 14 business days' notification if you are traveling in the United States. This time is extended to 30 days if you are traveling outside the United States. Prior to your travel the LVAD Coordinators will:

- Notify the VAD centers nearest to your destination (and along your travel route, if you are driving) in the event of an emergency.
- Provide you with a travel packet (medical history, pump information, Center for Circulatory Support contact phone numbers, medical necessity letter for security checkpoints, and contact phone numbers for VAD centers nearest your travel).
- Provide you with approved power cords and/or equipment for international travel.

Can I go through a metal detector/body scanner at the airport?

No. These devices use types of energy that can interfere with your pump. You should request a hand search. Let the security agent know the location of your driveline to avoid accidental pulling at the exit site. Your care team will provide a medical necessity letter for security checkpoints to allow you to keep all LVAD-related equipment with you on the plane.

Be sure to arrive at the airport 3 hours before your flight to leave extra time for security.

- Keep all of your device equipment, including an extra set of fully charged batteries and your back-up controller, with you at all times.
- Bring all necessary medications and dressing change supplies with you.
- Do not put any of these items in your checked luggage.

For tips on airline travel for passengers with medical conditions, go to the TSA's website at:

<http://www.tsa.gov/travelers/airtravel/specialneeds/index.shtm>

Sleep & Rest

Many people have trouble falling asleep in the weeks after LVAD implant surgery. You may experience an inability to sleep because of:

- The effects of a long hospitalization where your sleep was continually interrupted
- The effects of medication
- Discomfort from surgery
- Stress associated with surgery
- Disruption to your daily routine

Try these tips to help you sleep:

- Take breaks in your normal activities to rest
- Avoid napping longer than 15-20 minutes
- If you have been prescribed pain medication, take it about 30 minutes before bedtime
- Take diuretics (water pills) early in the day
- If you feel anxious, talk to a trusted family member or friend
- Avoid caffeine in the evening (chocolate, coffee, tea or colas)
- Listen to relaxing music or a guided imagery audio program
- Ask your partner to give you a back rub
- Follow a routine for bedtime; rituals let your body know it is time to relax and sleep

If you have concerns about your sleep, talk to your health care team at your next clinic visit.

Follow a routine for bedtime; rituals let your body know it is time to relax and sleep

What precautions do I need to take when sleeping with my LVAD?

- Connect your device to a wall power outlet before going to sleep. This is very important, because you may not hear the controller's low-battery alarms when you are asleep.
- Check all electrical connections before you go to sleep to make sure they are tight and secure.
- Make sure that your controller is close to you, so it won't fall out of the bed and pull on your driveline.
- Sleep on your back or side opposite of your driveline exit site. Placing a pillow behind you back if you sleep on your side may be helpful. Do not sleep on your stomach as this can bend, move or pull your driveline.
- Arrange your clothing, sheets or blankets so they don't tangled in or pull on your driveline.
- Keep a backup controller, charged batteries and a flashlight in your bedroom while you sleep, in case of a power outage.

Check all electrical connections before you go to sleep to make sure they are tight and secure.

Returning to Sexual Activity after LVAD Implant

When can I return to sexual activity after my LVAD implant?

Intimacy is an important aspect of everyday life, and just because you have an LVAD doesn't mean you cannot continue to enjoy intimacy with your partner. Returning to sexual activity after LVAD implant can be intimidating, but you are encouraged to return to sexual activity when you are physically and emotionally ready. Talk with your care team if you have concerns about libido, medications, or other issues that may affect your ability to enjoy a healthy sexual life.

What can I expect when I resume sexual activities?

You can view sexual activity like any cardiovascular exercise. Typically, sex requires an effort similar to brisk walking, heavy household cleaning, or mowing the lawn. Most people experience a slight increase in heart rate and blood pressure, which is normal. You may notice that your flow and power increase on your controller, which is normal.

Some general guidelines for resuming sexual activities include:

- Plan ahead for sexual activity and consider trying new positions.
- Pick a time when you are content, relaxed and happy.
- Wait two hours after eating a meal.
- In the early weeks, **avoid** activities that cause pressure on your chest or tension on your arms or chest. This includes pushing, pulling, or lifting your own or your partner's body weight.
- Place a pillow across your chest to support your incision if you are lying down.
- Remember that it is normal for your breathing and heart rate to increase during sex and that these should return to normal shortly afterward.
- Because of the increased effort sexual activity requires, make sure you do a thorough warm-up with foreplay. This prepares your body for sexual intercourse or any other sexual activities in which you may participate.

- Stop and rest, if you experience shortness of breath, chest pain or heart palpitations. If these symptoms continue after rest, let your doctor know.
- Perform a cool down to allow your heart rate and blood pressure to return to normal. After sex, this can include cuddling, kissing, or talking with your partner.

It's important to keep in mind there are other intimate activities that you can do outside of sex, such as kissing, holding hands, or massage, to express your feelings to your partner. Your occupational therapist can discuss any specific concerns you and your partner may have.

Will sexual activity damage my LVAD?

You will need to consider the safety of your controller and batteries during sex. Make sure they are securely placed on a stable surface so they do not fall or pull. Also make sure your driveline doesn't get pulled, caught or bent.

Some VAD patients have shared concern that their heart pump may turn off or they may suffer a cardiac arrest during sexual activity. Risk of these events are very low and should not stop you from a full and meaningful sexual life.

Can I become pregnant with an LVAD?

If you are a woman of childbearing years, you **must not** become pregnant with an LVAD for many reasons:

- There is no way to safely manage your blood thinner medication while pregnant.
- Blood thinners such as warfarin are not safe to take during pregnancy because they may cause birth defects.
- A growing fetus could dislodge your pump, resulting in internal bleeding or even death.

It is extremely important for you to use birth control if you are sexually active. If you do become pregnant, tell your LVAD team immediately.

Emotional Aspects of Recovery

Recovering from your LVAD implant surgery also involves your emotional healing. Living with an LVAD creates a lot of changes in your life and change can be a hard adjustment. Many patients report feeling significant stress after receiving their LVAD.

It is common for people who have had LVAD surgery to:

- Experience mood swings
- Feel depressed or gloomy
- Cry easily for no apparent reason
- Feel afraid, nervous or anxious
- Feel helpless
- Feel lonely
- Lack energy or motivation
- Get easily frustrated
- Be irritable or angry
- Be unable to concentrate or focus
- Have good days and bad days
- Feel more emotional or sentimental than normal

How do I handle my emotions after I get home?

Once you are home, even though you may be drained physically and emotionally, it is important that you practice good self-care.

Here are some things you can do to help yourself recover:

- Get dressed every day
- Walk daily within your limits
- Get plenty of rest
- Resume hobbies and social activities that you enjoy (family celebrations, reading, etc.)
- Share your fears, frustrations, pain, concerns and successes with a support person
- Journal, or keep a regular record of your experiences and feelings, especially as they relate to your recovery
- Learn and use stress-reduction techniques (meditation, prayer etc.)
- Join the Michigan Medicine VAD Patient and Family Support Group

How do I know when to seek help?

No matter what problems you are dealing with, help is available. If you find yourself feeling unmotivated, unusually fatigued, weepy, angry, hopeless, sad, or if you have thoughts of hurting yourself, we encourage you to reach out to your LVAD Social Worker or Nurse Clinical Care Coordinator.

Emotional Impact on the Caregiver

The availability of technology such as the LVAD has allowed people to live longer but has also created the need for caregivers, approximately 43.5 million in the United States alone. And for those who find themselves in this role, life changes, often in ways they could have never imagined. Most caregivers find the role rewarding but few say that it's easy. Caring for a loved one is not easy, nor is it something most of us are prepared to do. It comes with new responsibilities, in addition to the overall demands of regular life.

Most caregivers find the role rewarding
but few say that it's easy.

Above all, know you are not alone. There are other caregivers out there who are going through this experience.

Strategies for Caregivers

As the caregiver, it is easy to put your needs second to those of your loved one. It is important to be sure to pay attention to your own needs, or you may not be able to effectively care for your loved one.

Below are some tips to help you on your caregiving journey:

- Don't neglect your own needs. Eat well, stay active and get plenty of rest.
- Be patient– it is not unusual for your loved one to have good and bad days.
- Stay connected to friends and family.
- Identify and acknowledge your feelings, you have a right to ALL of them.
- Share your feelings with a close friend, family member or religious leader you trust.
- Ask for help if you feel overwhelmed. Be specific about your needs such as meals, chores, time alone, etc.
- Do something you enjoy and find relaxing.
- When appropriate, use humor to lighten and soften the situation.
- Establish a daily routine to help you stay organized and focused.
- Encourage the LVAD recipient to perform tasks or activities they can safely manage.

Above all, know you are not alone. There are other caregivers out there who are going through this experience. Your social worker will check in with you during your loved one's routine clinic visits. You may also wish to call or schedule time with your social worker to focus on your needs.

Diet and Nutrition

Your diet and nutrition is very important for your recovery and for achieving good health after a LVAD implant surgery. You will work closely with a registered dietitian to discuss what foods to eat more of and which foods to avoid or limit.

We recommend an eating plan that includes the following:

- Eat smaller, more frequent meals.
- Include protein rich foods in each meal. Examples include meat, fish, eggs, beans, nuts, seeds, lentils and edamame.
- Follow a Low-Sodium Diet.
- Reducing the amount of sodium in your diet may help reduce your blood pressure, heart failure symptoms and prevent swelling in your abdomen, legs, ankles, or feet.

How much sodium can I have each day?

A low-sodium diet includes eating less than 2,000 milligrams (mg) of sodium per day. Your doctor may give you a different sodium goal based on your health history.

What are some hidden sources of sodium?

Sodium is found in:

- Table salt: 1 teaspoon contains 2,300 mg of sodium
- Seasonings, condiments, and sauces: onion salt, garlic salt, seasoning blends, ketchup, mayonnaise, mustard, soy sauce, teriyaki sauce
- Pre-packaged foods: canned foods, frozen foods, smoked meats, deli meat, sausage, crackers, seasoned rice packets, and potato mixes

How do I reduce the amount of sodium in my diet?

- Choose fresh or largely unprocessed foods without added salt or sodium-containing preservatives.
- Read food labels carefully. Look at the serving size and the sodium content per serving.
- Choose “unsalted”, “No Added Salt” or “Low Sodium” versions of your favorite foods.
- Stay away from boxed pasta and rice mixes with seasoning packets since many of them contain over 600 mg sodium per serving
- Buy fresh meat instead of processed meat. When buying lunch meat, look for “No Salt Added” or “Low Sodium” products.
- Look for low sodium cheeses, such as Swiss, goat or farmers cheese.
- All fruit is generally low in sodium. Be aware that dried or canned fruits may be higher in sodium.

What are some ingredients I can use in place of salt?

- Use a variety of salt-free herbs, spices and spice blends (ex: Mrs. Dash) to flavor foods.
- Add different types of vinegar (dark balsamic, white balsamic, apple cider vinegar, etc.)
- Use lemon or lime juice, grated rind, dried lemon or citric acid.
- **Limit** your total fluid intake.

How much fluid can I have in a day?

Your doctor will tell you how much fluid you should have each day. Typically, no more than **2 liters of fluid per day (64 ounces)** is recommended.

Why do I need to restrict my fluids?

- To prevent excess fluid from building up in your body.
- Reduce symptoms such as shortness of breath and swelling.
- Proper fluid balance puts less stress on your heart and kidneys.

What counts towards a fluid restriction?

Any food or drink that is liquid at room temperature. This includes water, ice, milk, juices, soft drinks, soups, gelatin desserts, and ice cream.

What are some helpful tips if I get thirsty?

- Snack on frozen grapes or strawberries.
- Try sugar-free hard candies or chew sugar-free gum. Chew on fresh peeled ginger.
- Apply lip balm to keep your lips moist.
- Try artificial saliva.
- Gargle with alcohol-free mouthwash. Mouthwash with alcohol can increase dryness. Swish with water and spit it out.

