Ventricular Assist Device (VAD) Home Care

It is important to follow home care instructions to care for your ventricular assist device (VAD). Going home (*destination therapy*) with a VAD is becoming more common for people who:

- Are not candidates for heart transplantation and need a VAD to live.
- Have heart failure and need time to let the heart rest.
- Are awaiting a heart transplant. You must live within 2 hours of the transplant center.

PARTS OF A VAD

- **Pump.** This is implanted into the body.
- **System controller.** This consists of batteries and the electronics which control the device.
- **Drive line (*percutaneous lead*).** This connects the pump to the system controller.

The device is powered by an electrical wall outlet or by batteries.

DAILY CARE

- Inspect the drive line exit site at least once a day. Look for signs of infection such as:
  - Redness.
  - Swelling.
  - Drainage, such as pus or blood.
  - Bad odor.
  - Increased warmth at the site.
- Each day, record the following on your flow sheet:
  - Temperature.
  - Blood pressure.
  - Weight.
  - VAD speed (rpm).
  - Pulsatility index (PI).
  - Power.
  - Flow (L/min).

BANDAGE (*DRESSING*) CHANGES

- Change your VAD dressing as directed by your caregiver. You must use a germ free (*sterile*) technique. You will be taught how to change the dressing at the hospital before you go home.
  1. Wear a mask.
  2. Wash your hands.
  3. Put on gloves.
  4. Remove the old dressing.
  5. Remove the gloves. Wash your hands again.
  6. Set up the supplies using sterile technique.
  7. Put on sterile gloves.
  8. Clean the VAD site using the product your caregiver has instructed you to use.
  9. Gently dry the site with dry sterile gauze.
  10. Apply drain sponges to the site. Cover with a 4 in x 4 in (10 cm x 10 cm) gauze pad.
  11. Secure your dressing with tape, adhesive straps or another product as directed by your caregiver.
- To keep the drive line from moving, use a belly (*abdominal*) binder, tape, or anchor device as directed by your caregiver. The drive line must be kept secure to prevent:
  - Damage to itself.
  - Site irritation.
  - Infection.

ACTIVITIES:

It is important to follow your caregiver's instructions on what you can and cannot do regarding activities. Some restrictions include:

- **Do not** expose the VAD to water. This can cause pump failure.
  - **Do not** take baths or go swimming with an implanted VAD.
  - You may take showers as directed by your caregiver. You must use a shower bag to cover the VAD equipment. Protect the drive line dressing by covering it with plastic wrap. Your caregiver will show you how to cover the VAD parts. **Do not** get the connection between the percutaneous lead and the system controller (the silver connector) wet.
- **Do not** play contact or physically challenging sports with an implanted VAD.
- **Do not** jump up and down excessively.
- **Do not** lift more than 10 lbs (22 kg) for the first 6 weeks or as directed by your caregiver.
- **Do not** sleep on your stomach.
- **Do not** drive or operate heavy machinery as long as you have your VAD. When leaving home, make sure you take:
  - A spare system controller.
  - Extra batteries.

TRAVELING

- Notify your VAD coordinator before you travel and let him or her know:
  - Your travel dates.
  - How long you will be gone.
- Know where the nearest VAD center is when you travel.
  - Notify that center of the dates you will be in the area.
  - Have names and telephone numbers of who to contact in case of emergency.
- Get permission from your caregiver before you travel by air or train. Airline or train security will need to be contacted. To pass through security:
  - You will need a letter from your caregiver explaining your medical condition and life support equipment.
  - Security will need to inspect the drive console by hand. **Do not** go through the X-ray machine.

OTHER IMPORTANT TIPS

- Become familiar with your VAD. Be sure you:
  - Know all parts of the VAD and what they are for.
  - Are comfortable doing sterile dressing changes.
  - Know what to do in case of an emergency.
- Chest compressions should not be performed when you have a VAD.
- **Do not** smoke. Avoid places where you will be exposed to secondhand smoke. Smoking and secondhand smoke cause your arteries to tighten. This decreases blood flow and will make your pump work harder.
- Avoid being active in very hot or cold weather.
- Talk to your caregiver about drinking alcohol.
- Be careful around computers and TVs due to static electricity. Avoid touching TVs or computer screens. Use an anti-static spray as needed.
- **Do not** vacuum.
- If you require ambulance or emergency services, a trained caregiver should stay with you at all times.

LABS

- While you have VAD, you will be on blood thinner (*anticoagulant)* medication. You will need blood work done to monitor the anticoagulant.

CALL YOUR HEART FAILURE DOCTOR OR VAD COORDINATOR IF:

- The VAD flow rate is lower than your caregiver has instructed.
- PI is less than 3.5 or greater than 7.
- The power is greater than 8.
- You see any swelling in your ankles or your waistline. This may be a sign of water retention.
- You gain or lose 3 or more pounds (1.4 kg) in 1 day.
- You have pain at the drive line site or VAD.
- You have any VAD concerns.
- You notice any changes in how the VAD feels or works.

SEEK IMMEDIATE MEDICAL CARE FOR THE FOLLOWING:

- If the pump is not running properly, call your local emergency service (911 in the U.S.) and VAD coordinator **IMMEDIATELY** for the following:
  - Loss of power to the pump.
  - Any unexplained or unusual alarms.
  - Broken wires.
  - Damage to the pump motor or system controller.
  - Any health changes affecting your heart.
  - Red heart alarm.

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