

# Living With the HVAD® System

## Important Reminders

The HeartWare® Ventricular Assist System (HVAD) Patient Manual will tell you about the system and how it works. It will also provide additional information on how to take care of the HVAD® System. In addition to the patient manual, your physician, nurse or VAD coordinator will provide you with instructions on operating your VAD and necessary medical care.

# HeartWare®

(continued from opposite side)

Static electric discharge (ESD) is the sudden transfer of electricity from one object to another. A mild shock to your skin won't affect your controller, but ESD to the controller or its connectors may cause your controller to function improperly.

### To reduce chance of ESD damage you should:

- Practice good power and battery connection techniques:
  - Do not touch the pins in the power port on the controller
  - Do not leave the power ports on the controller open for extended periods of time
- Be careful around electronic devices and activities that are prone to static electricity (e.g. TV and computer screens, removing clothes from the dryer, vacuuming, etc.)
- Use anti-static dryer sheets, fabric softener and a humidifier



### Power Sources

The controller requires two power sources for safety: either two batteries or one battery and AC adapter or DC adapter. Never disconnect both power sources; this would result in your pump stopping.



### It is important to be sure that when making power connections, it is done properly and safely.

- Connections for the power source were designed to lock into place
- Do not force connectors together without proper alignment; this may cause damage to the pins.

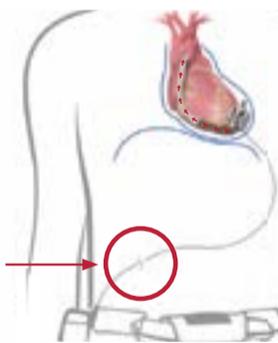
### To prevent damage:

1. Grasp the back of the connector
2. Align solid white arrow and white dot 
3. Gently push (do not twist) until connector locks in place

It is important to keep connectors clean, free of liquid, dust or dirt. When using the DC adapter, always check to be sure the DC adapter works in your motor vehicle. It may not fit all motor vehicles.

### Driveline and Exit Site

- The driveline is the cable that passes through the skin and connects the implanted pump and to the external HVAD System components.
- Do not disconnect driveline; this will result in your pump stopping.
- Don't pull, twist or kink the driveline, because this could result in damage.
- It is important to inspect the driveline for tears, punctures or breakdown and notify your VAD team if you notice any damage to the driveline or blood or drainage in the driveline.
- Since the driveline connects to the controller by exiting your skin, it is important to follow your VAD teams' recommendations for keeping the exit site dry and clean to prevent infection.
- One important measure to prevent infection is to protect the driveline from excessive movement. Always keep extra driveline length tucked under clothing and secured.
- Let your VAD team know promptly if there is new or worsening drainage, swelling or redness at the exit site or new trauma to exit site.



This guide is designed to help you safely operate your VAD, by summarizing some important Warnings, Cautions and Precautions about living with the HVAD System. Additional information related to the content in this guide is available in your HeartWare Ventricular Assist System Patient Manual.

**CAUTION:** Federal law (USA) restricts this device to sale by or on the order of a physician. Refer to the "Instructions for Use" for complete indications for Use, Contraindications, Warnings, Precautions, Adverse Events and Instructions prior to using this device. The IFU can be found at [www.heartware.com/clinicians/instructions-use](http://www.heartware.com/clinicians/instructions-use).

**WARNING:** Serious and life-threatening adverse events, including stroke, have been associated with use of this device. A user must fully consider the risks of this device with that of other treatment modalities before deciding to proceed with device implantation.

In the USA the HVAD System is intended for use as a bridge to cardiac transplantation in patients who are at risk of death from refractory end-stage left ventricular heart failure.

# HeartWare®

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Now that you have the HVAD System, it is important to remain knowledgeable about how the system works, how to care for the equipment and what to do in emergency situations. Especially for items that occur infrequently or after some time has passed since you have reviewed initial information.

### It is important to:

- Always take your anticoagulation and other medications as prescribed
- Report to your VAD team any new or worsening health issues; may include shortness of breath, chest pain, dizziness, swollen legs or ankles, weight gain of 3-5lbs (or 1.3-2.2 kg), signs of infection, and stroke symptoms of changes in speech, uneven smile, numbness or tingling in extremity, weakness or inability to move one side of the body, etc.
- Report to your VAD team any problems, issues or abnormal behavior of your VAD equipment (e.g. damage of equipment or driveline, medium or high priority alarms, batteries not retaining power).
- Always investigate and if possible correct the cause of any alarm



### Since the HVAD® Pump requires a controller and power to continue to run, you should:

- Always have spare equipment available in case of emergency, which should include spare controller and fully charged batteries
- Handle your equipment and back up equipment with care:



**Do not drop equipment.** Dropping could cause sudden stoppage of the pump. Dropped equipment should be reported and inspected. Also, do not use a damaged battery.



**Do not allow water or other fluids to enter the controller, power adapters, batteries, battery charger or connectors.** Do not submerge equipment in water. Do not swim or take a bath. Do not plug controller into AC wall outlet during shower.

Certain environments can cause damage to the equipment or cause the pump to stop.

### To prevent damage you should never:

- Have an MRI
- Play contact sports
- Undergo a procedure requiring high electrical treatment (e.g., diathermy)
- Be exposed to therapeutic levels of ultrasound (e.g., lithotripsy)
- Be exposed to ionizing radiation

### You should:

- Keep the HeartWare® Shoulder Pack and/or Waist Pack at least six inches (15cm) away from your pacemaker or ICD (they contain magnetic closures that could interfere with normal operation of the pacemaker or ICD)

SHOULDER OR WAIST PACK — 6in (15cm) — PACEMAKER OR ICD

You should read or re-review the Patient Manual in its entirety. This guide and these reminders are intended to supplement, rather than replace, the Patient Manual.

### HeartWare® Controller

The controller operates the pump and makes sure it is working correctly. The controller uses words, lights and sounds to tell you how the system is operating and when to seek additional help. Tell your doctor if you have vision or hearing problems and always check the controller display for information regarding an alarm when using loud machinery or in the vicinity of loud noises – alarms may not be audible.



The alarm adapter should NOT be attached to a controller that is connected to a running pump.

### To ensure the controller can function properly you should:

- Operate controller in temperatures greater than -4 F (-20C) and less than 122 F (50C)
- Keep mobile phones at least 20 inches (50cm) away from controller
- Avoid devices/conditions that may induce strong static discharge

 >-4F (-20C)  
<122F (50C)

 20in (50cm)

