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Ventricular Assist Device (VAD) for Heart Failure

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Overview

A ventricular assist device (VAD) helps pump blood from your heart to the rest of your body. It's used when your heart is not able to pump enough blood on its own.

The device consists of a pump, tubes that connect the pump to the heart, a control system, and a power source. A thin cable connects the pump with the control system. This cable, also called a lead or driveline, comes out of your belly through a small cut in your skin called an exit site.

Your doctor may recommend that you get a VAD if:

- You are waiting for a heart transplant.
- Your heart needs long-term help to pump blood.
- Your heart is healing from an injury or illness and it needs help until it can pump on its own.

VADs come in different shapes and sizes. You will receive the type of device that works best for your needs.

How does a VAD work?

The device pulls blood from the heart and pumps it into the aorta. The aorta sends blood to the rest of the body. Most of the blood that your heart would normally pump is pumped by the device instead.

Most of these devices can adjust to different levels of activity. For example, if you begin to walk, the device increases how much blood it pumps. Your doctor will tell you if your device does this.

Why is it used?

A ventricular assist device (VAD) can be used as a temporary or long-term treatment for severe heart failure. A VAD may be used for only a short time if a person's heart gets strong again and is able to pump blood well enough by itself. VADs may be used to help people who are waiting for a heart transplant. In some cases, VADs can be used long-term along with other heart failure treatments like medicines.

What are the benefits of having a VAD?

A ventricular assist device (VAD) used before a heart transplant can help people live until they receive the transplant.

VADs used for long-term therapy may help lower the risk of death compared to medical treatment alone. And a VAD might help a person feel better and be able to do better with daily activities.

What are the risks?

Risks from VADs include problems like stroke, excessive bleeding, infection, device malfunction, and blood clotting. These complications may need hospital care.

What about quality of life?

Most people with a VAD feel better and have a better quality of life. They can be active, drive, work, be social, and enjoy hobbies.

If you have a VAD, you will have a team of specialists who will help you. They will see you regularly at follow-up visits. They will teach you how to care for your VAD at home and how to prevent problems. Self-care that you might do at home includes checking the device and changing the dressing.

How can you plan for the future?

Some people decide to turn off their VAD near the end of life. Making this decision can be easier after you, your doctor, and your family or friends have talked about what you can expect from your life now and in the future. When you schedule your next doctor visit, ask if you can have time to talk about your end-of-life wishes.

Credits

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