

Ventricular Assist Device and Nutrition

A ventricular assist device (VAD) is a mechanical device that helps the heart pump blood to the body. Nutrition plays an important role before and after VAD placement surgery. This handout will give you information about good nutrition before and after your VAD surgery.

If you have any questions,
please talk with your
physician.


Before VAD surgery

Healthy eating before surgery can help you recover better. It can also make you feel better after surgery. A dietitian on the VAD team will assess your nutrition. They will share what they find with you and your care team. The dietitian will meet with you in a cardiology clinic or when you are in the hospital.

The dietitian will ask you about your:

- › Health history
- › Diet
- › Current medications
- › Activity level
- › Eating patterns
- › Appetite
- › Weight history

They will talk with you about any nutrition-related lab values in your medical record.



A dietitian will guide you through medical nutrition therapy. Each person has different needs. They will teach you what you must know and do based on your needs.

There are many factors that go into the decisions you make about your diet. These may include:

- › Budget
- › Weight management
- › Food preferences
- › Cultural preferences
- › Diet guidelines for other health conditions you may have

Managing your weight

Your physician may ask you to lose weight in a healthy way before VAD surgery by working with a dietitian. Your dietitian will work with you by combining dietary changes, physical activity and healthy habits.

These are important parts of managing your weight:

- › **A balanced diet:** Eat a variety of foods from all the food groups. This will give you the nutrients you need while you watch your calories.
- › **Portion control:** Be mindful of portion sizes to prevent overeating. It can also help you feel better about food.
- › **Regular physical activity:** Do regular activity to burn calories and build muscle. This helps keep your body healthy and working well.
- › **Setting realistic goals:** Set goals that you can reach. This can help you stay motivated and on track.
- › **Lifestyle changes:** Know your triggers for unhealthy eating.
- › **Monitoring progress:** Track how much food you eat and how much activity you are doing. This can help you stay on track to reach your goals.

Heart failure and good nutrition

Heart failure may sometimes decrease your appetite because of:

- › Fluid retention
- › Nausea
- › Medication side effects
- › Feeling full




Decreased appetite could worsen overall health by leading to:

- › Unintentional weight loss
- › Loss of muscle mass and fat stores
- › Decline in your physical abilities
- › Weakness
- › Malnutrition

Working with a dietitian on the VAD team can help you manage your symptoms and find nutrient-dense foods that you want to eat.

Some people with heart failure may need the following to prevent or address malnutrition:

- › **Oral nutrition supplements:** These products are sometimes known as protein shakes and usually are high in calories and protein. You can choose to buy many brands over the counter, such as Ensure®, Boost®, Glucerna®, Premier Protein®, Orgain®, Core Power® and more. These are just to name a few. You can drink protein shakes with or between meals. They usually taste best with ice.
- › **Small, frequent meals and snacks:** Eat 4 to 6 small meals per day rather than 3 large meals.
- › **High-calorie, high-protein diet:** Focus on higher calorie and higher protein items for more “bang for your buck.” Choose items such as:
 - Nuts and nut butter
 - Eggs
 - Greek yogurt
 - Milk
 - Cheese
 - Beans and lentils
 - Meats, poultry and fish
 - Protein shakes
- › **Appetite stimulant:** There are medications that may help stimulate your appetite. Ask your physician if this is an option for you. Talk with them about possible side effects.

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- › **Short-term feeding tube:** If you are unable to take in enough calories and protein, your care team may recommend a temporary feeding tube to give you supplemental nutrition. A feeding tube is a thin tube that goes through the nose and to the stomach. The tube feedings pass nutrition into your stomach.

It is important to make sure you have adequate nutrition before VAD surgery to fuel your body for recovery.

After VAD surgery

A dietitian will continue to follow you throughout your hospital stay. They will:

- › Help you plan your diet
- › Make sure you are getting good nutrition
- › Teach you what you need to know before discharge

It is important to get good nutrition after surgery to:

- › Support your post-operative healing and recovery
- › Reduce possible complications
- › Give you energy to reach your physical therapy goals
- › Improve your quality of life

After surgery, it may take time for your appetite to return. To help you get the nutrition you need, try these things:


- › Drink oral nutrition supplements.
- › Eat small, frequent meals.
- › Add high-protein snacks to your diet.

Healthy diet guidelines

To keep you feeling your best once you are discharged home after the VAD surgery, follow the principles of eating a heart-healthy diet. These include:

- › **Low-sodium diet:** Follow a low-sodium diet. When your appetite returns to normal, limit sodium to 2,000 to 2,400 milligrams (mg) of sodium per day. Keep in mind that 1 teaspoon of table salt contains just over 2,300 mg of sodium.

- Review nutrition labels on items to check sodium content per serving.
- Think twice before eating or drinking foods with more than 200 mg of sodium per serving.
- In general, meals should contain no more than about 600 to 700 mg of sodium.
- Avoid adding salt (table salt, sea salt, Himalayan salt, kosher salt) to food.
- Limit processed foods and choose carefully when eating outside the home.
- Flavor your foods with lemon juice, herbs, spices or salt-free seasonings.
- › **Adequate lean protein intake:** Include a protein source every time you eat a meal or snack. You need protein in your diet to help prevent muscle breakdown and support your recovery. Healthy protein sources include:
 - Lean meats, poultry and fish
 - Dairy products
 - Eggs
 - Beans and lentils
 - Seeds, nuts and nut butters
 - High-protein grains (quinoa, teff, amaranth, spelt)
 - Soy products (seitan, tofu, tempeh, edamame)
- › **Medication-nutrient interaction:** Know how your medications interact with your diet. You may be taking the blood thinner warfarin (Coumadin®) after VAD surgery. If you are taking Coumadin, it is important to know how much vitamin K you are getting from food and dietary supplements. It is important to keep the same amount of vitamin K in your diet. Changing how much vitamin K you eat or drink can interfere with how Coumadin works for you.
- › Foods high in vitamin K include dark, leafy green vegetables such as:
 - Kale
 - Spinach
 - Broccoli
 - Collard greens

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- Mustard greens
 - Brussels sprouts
 - Cabbage
 - Lettuce
 - Asparagus

Tell your physician and pharmacist if you are taking any vitamin, mineral or dietary supplements because they sometimes contain vitamin K.

Follow-up

The dietitians on the VAD team are available for outpatient telehealth appointments. You can meet with them to talk about nutrition recommendations and counseling.

Topics may include:

- › Weight management
- › Poor appetite
- › Unintentional weight loss
- › Diet education about:
 - Low-sodium diet
 - Heart-healthy diet
 - Kidney diet
 - Carbohydrate-controlled diet
 - Medication/nutrient interactions

Speak with your VAD coordinator if you want to schedule an appointment with one of our dietitians.

For more information about Northwestern Medicine, please visit our website at [nm.org](https://www.nm.org).