

# 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](http://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, **Option 2**.
- 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:

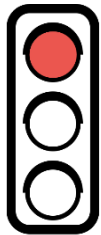
**(734) 477-6722, 24/7**

Frankel Cardiovascular Call Center:

**(734) 647-7321, Option 2**

**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

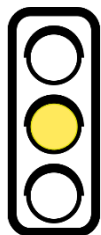
If you hit your head because of an injury or fall (even if it seems minor) you need to call the VAD emergency number at **(734) 477-6722**.

**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, **Option 2**, 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:**

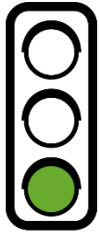
- Noticeable increase in weakness or fatigue
- New or increased shortness of breath
- Shortness of breath when lying flat in bed
- Persistent cough
- New or increased swelling in your legs, feet, ankles or abdomen
- Unplanned weight gain of 3 or more pounds in one day or 5 pounds in a week
- Loss of 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, **Option 2**.
- 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

**Option 2** 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

<b>Alarm:</b> An active yellow wrench alarm, red heart hazard alarm or red battery hazard alarm	Call VAD Emergency Number <b>(734) 477-6722</b>
<b>Bleeding:</b> severe or bleeding that you cannot control	Call VAD Emergency Number <b>(734) 477-6722</b>
<b>Bleeding, tenderness,</b> increasing <b>redness</b> or <b>swelling</b> near the incision site or driveline exit site	Weekdays call the Frankel CVC Call Center <b>(734) 647-7321, Option 2.</b> Weekends call the VAD Emergency number at: <b>(734) 477-6722</b>
<b>Breath-</b> new or increased shortness of breath	Weekdays call the Frankel CVC Call Center <b>(734) 647-7321, Option 2.</b> Weekends call the VAD Emergency number at: <b>(734) 477-6722</b>
<b>Breath</b> -shortness of breath not relieved by rest	Call VAD Emergency Number <b>(734) 477-6722</b>
<b>Breath-</b> shortness of breath when lying flat in bed	Weekdays call the Frankel CVC Call Center <b>(734) 647-7321, Option 2.</b> Weekends call the VAD Emergency number at: <b>(734) 477-6722</b>
<b>Change in VAD pump flows:</b> (increased/decreased flow of 2.0 or greater)	Call VAD Emergency Number <b>(734) 477-6722</b>
<b>Change in VAD pump watts:</b> (greater than 2.0)	Call VAD Emergency Number <b>(734) 477-6722</b>
<b>Chest pain:</b> Sudden onset of chest pain	Call VAD Emergency Number <b>(734) 477-6722</b>

<b>Chills</b> or excessive <b>sweating</b>	Weekdays call the Frankel CVC Call Center <b>(734) 647-7321, Option 2.</b> Weekends call the VAD Emergency number at: <b>(734) 477-6722</b>
<b>Concentration:</b> difficulty concentrating or decreased alertness	Weekdays call the Frankel CVC Call Center <b>(734) 647-7321, Option 2.</b> Weekends call the VAD Emergency number at: <b>(734) 477-6722</b>
<b>Confusion</b> or impaired thinking	Weekdays call the Frankel CVC Call Center <b>(734) 647-7321, Option 2.</b> Weekends call the VAD Emergency number at: <b>(734) 477-6722</b>
<b>Confusion</b> or trouble <b>speaking</b> or <b>understanding</b> others	Call VAD Emergency Number <b>(734) 477-6722</b>
<b>Coughing</b> up blood or blood clots	Call VAD Emergency Number <b>(734) 477-6722</b>
<b>Coughing:</b> persistent cough	Weekdays call the Frankel CVC Call Center <b>(734) 647-7321, Option 2.</b> Weekends call the VAD Emergency number at: <b>(734) 477-6722</b>
<b>Equipment</b> -noticeable damage to any parts of your equipment (i.e. cracks, exposed wires etc.)	Call VAD Emergency Number <b>(734) 477-6722</b>
<b>Feeling:</b> You believe you are experiencing a true emergency	Call VAD Emergency Number <b>(734) 477-6722</b>
<b>Feeling:</b> Vague feeling that something is wrong	Weekdays call the Frankel CVC Call Center <b>(734) 647-7321, Option 2.</b> Weekends call the VAD Emergency number at: <b>(734) 477-6722</b>

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

<b>Pain:</b> increasing pain	Weekdays call the Frankel CVC Call Center <b>(734) 647-7321, Option 2.</b> Weekends call the VAD Emergency number at: <b>(734) 477-6722</b>
<b>Pain:</b> flank pain (pain between the upper belly area and the back)	Call VAD Emergency number <b>(734) 477-6722</b>
<b>Smell:</b> foul smelling drainage near your incision site or drive-line exit site	Weekdays call the Frankel CVC Call Center <b>(734) 647-7321, Option 2.</b> Weekends call the VAD Emergency number at: <b>(734) 477-6722</b>
<b>Stool color:</b> red or black stools (that look like tar)	Call VAD Emergency Number <b>(734) 477-6722</b>
<b>Stomach pain</b> or bloating	Weekdays call the Frankel CVC Call Center <b>(734) 647-7321, Option 2.</b> Weekends call the VAD Emergency number at: <b>(734) 477-6722</b>
<b>Swelling in your legs, feet, ankles or abdomen</b> -new or increased	Weekdays call the Frankel CVC Call Center <b>(734) 647-7321, Option 2.</b> Weekends call the VAD Emergency number at: <b>(734) 477-6722</b>
<b>Temperature</b> of 100.5° F or higher, measured with a thermometer placed under the tongue	Weekdays call the Frankel CVC Call Center <b>(734) 647-7321, Option 2.</b> Weekends call the VAD Emergency number at: <b>(734) 477-6722</b>
<b>Trouble seeing</b> in one or both eyes	Call VAD Emergency Number <b>(734) 477-6722</b>
<b>Trouble walking</b> , dizziness, or loss of balance or coordination	Call VAD Emergency Number <b>(734) 477-6722</b>



<b>Urine color:</b> Dark/cola colored	Call VAD Emergency Number <b>(734) 477-6722</b>
<b>Urine color-</b> Pink or brown	Call VAD Emergency Number <b>(734) 477-6722</b>
<b>Weakness or fatigue</b> -noticeable increase	Weekdays call the Frankel CVC Call Center <b>(734) 647-7321, Option 2.</b> Weekends call the VAD Emergency number at: <b>(734) 477-6722</b>
<b>Weight gain:</b> unplanned weight gain of 3 or more pounds in one day or 5 pounds in a week	Weekdays call the Frankel CVC Call Center <b>(734) 647-7321, Option 2.</b> Weekends call the VAD Emergency number at: <b>(734) 477-6722</b>
<b>Vomiting</b> up blood or if your vomit looks like “coffee grounds”	Call VAD Emergency Number <b>(734) 477-6722</b>

## 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 Guide for Heart Failure & LVAD



**Y**our 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. This is very important to reduce your risk of further health problems.

Because your heart is not functioning normally, your body is not able to handle extra amounts of sodium or fluid. This means that you need to pay extra attention to your diet, particularly the amount of sodium you eat and the amount of fluid you drink.

This guide is a comprehensive resource that will help you do 2 things: transition to a low sodium diet and manage your fluid intake. You will learn about why these changes are vital for managing your heart failure.

Adopting a new diet can be a big change. You will make smaller changes over time, and soon your new heart healthy diet will feel normal and manageable. Until then, keep trying and don't forget we are here to support you through this change and beyond.

# Managing Sodium in Your Diet

As a part of managing your heart failure, you need to adopt a heart-healthy low-sodium diet. This is one of the most important self-care behaviors you can follow to prevent hospital stays and slow the progression of your heart failure.

## **The goal of this section is to help you learn:**

- How to follow a low-sodium diet
- Your sodium goals (daily and per meal)
- Ways to reduce sodium in your diet
- How to read a food label
- The sodium content of selected foods and condiments
- Substitutes for high-sodium foods and condiments
- How to track your sodium intake

## **Why is it important for me to follow a low-sodium diet?**

Too much sodium in your diet can make your heart failure worse. Sodium acts like a sponge that holds fluid in your body. This extra fluid makes your heart work harder and leads to fluid buildup in your body. One of the most effective ways to reduce extra fluid is to have less sodium in your diet. Following a low-sodium diet has the following benefits:

- Your body maintains a better water (fluid) balance
- Better management of your heart failure symptoms
- Protects your heart's pumping ability
- You may experience higher energy levels and better overall well-being

## **What happens if I don't follow a low-sodium diet?**

Eating a low-sodium diet is a priority for heart failure patients. Failure to manage the sodium in your diet may lead to severe symptoms, increased need for hospital stays, and a quicker progression of your disease.

Eating too much sodium may cause the following symptoms:

- Swelling in your feet, ankles, legs and belly
- Shortness of breath during activity
- Weight gain
- Cough
- Urinating less
- Decreased appetite
- Feeling full quickly/bloated when eating
- Worsening fatigue
- Trouble breathing when lying flat (need to sit in chair or use more pillows to sleep)

### **Who will work with me to understand my diet?**


Our Registered Dietitian Nutritionists (RDN) are food and nutrition experts who are available to discuss heart healthy food and nutrition choices with you. They provide sound, easy-to-follow nutrition advice. You have the opportunity to work closely with a dietitian and your nurses to discuss what foods to eat more of and what foods to avoid or limit.

### **What is the difference between sodium and salt?**


We often use salt and sodium as if they mean the same thing. But they aren't quite the same. Salt is made up of two minerals: sodium and chloride.


## Sodium and Salt - What's the Difference?

Here is a clear way to tell the difference between sodium and salt:



Sodium is a natural mineral found in many foods. It is also added to processed foods during manufacturing.





Salt is made up of two minerals, sodium and chloride. Salt is what we add to our food.

**The problem:**  
sodium increases the amount of fluid in the blood vessels



## Is there a health advantage to eating other forms of salt or salt alternatives?

Many forms of table salt are marketed as being “natural” or a “healthier alternative”: sea salt, rock salt, or pink Himalayan salt. Many people believe these forms of salt contain less sodium and must be better for them. **All of these salts contain comparable amounts of sodium and should be avoided.**

Garlic salt, onion salt and celery salt are also popular alternatives to table salt. Do not be fooled! Salt is salt. These products combine table, rock or sea salt with small amounts of dried garlic, onion or celery.

Use garlic powder or onion powder instead.

## How much sodium can I have?

The nutrition plan for people with heart failure limits the sodium you get from food and drink to 2,000 milligrams (2 gram) per day or less. This amount cannot be “saved” over several days. Your provider may change this limit at any time based on your specific nutritional needs.

### Daily Sodium Amount

Your doctor has recommended that you limit your sodium intake to:

2000 mg per day or less  
(equal to 2 grams)

To give you an idea of how much that is:

1 teaspoon of salt =  
approximately 2,300 mg  
of sodium





## Follow this general guide as a starting point:

- Eat less than 2,000 milligrams (2 grams) of sodium per day.
- Eat three meals each day, limiting each meal to 600 mg or less of sodium.
- If you are only eating half of your normal meals, try eating 4-6 small meals daily.
- Eat less than 140 mg of sodium per single serving of food.
- Limit your snacking throughout the day to less than 200 mg of sodium.

## How do I reduce sodium in my diet?

Follow these six general guidelines to reduce the amount of sodium in your diet:

**1**

### Read the Nutrition Facts label

The nutrition facts label on the back of the package will tell you how much sodium is in a food product. Learning this skill will help you make healthier food choices when grocery shopping or preparing food at home.

Nutrition Facts	
8 servings per container	
<b>Serving size</b>	<b>2/3 cup (55g)</b>
<b>Amount per serving</b>	
<b>Calories</b>	<b>230</b>
<b>% Daily Value*</b>	
<b>Total Fat</b> 8g	<b>10%</b>
Saturated Fat 1g	<b>5%</b>
Trans Fat 0g	
<b>Cholesterol</b> 0mg	<b>0%</b>
<b>Sodium</b> 160mg	<b>7%</b>
<b>Total Carbohydrate</b> 37g	<b>13%</b>
Dietary Fiber 4g	<b>14%</b>
Total Sugars 12g	
Includes 10g Added Sugars	<b>20%</b>
<b>Protein</b> 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 235mg	6%
<small>* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.</small>	

### Step 1:

Check the serving size and the number of servings in the package.

- The serving size tells you how much of this food product is in one serving.
- A package often contains multiple servings. Serving sizes vary a lot.

### Step 2:

Check the amount of sodium in one serving.

- Food labels list the amount of sodium in the food in milligrams (mg).




**Remember:** your sodium limit is 2,000 mg a day or less.

## 2

### Learn the meaning of sodium label claims

Food and beverage packages may have sodium label claims that are misleading. Food manufacturers use marketing terms such as “reduced sodium” or “light in sodium” to trick you into believing their foods are low in salt. Look for “low-sodium” on the food label. This term is federally regulated.

Understanding a labeling claim can help you quickly identify foods that contain less sodium. The table below is a guide to common sodium claims and what they mean:

Choose these:		
	Sodium free	One serving contains no more than 5 mg sodium.
	Very low sodium	One serving contains no more than 35 mg sodium.
	Low sodium	One serving contains no more than 140 mg of sodium.
Check the sodium content of these:		
	Light or Lite sodium	The sodium content has been reduced by 50% as compared to its regular version.
	Reduced or Less sodium	The sodium content has been reduced by 25% as compared to the reference food. You need to look at the actual mg of sodium because it still may be high.
Avoid these:		
	High sodium	One serving contains 480 mg sodium or more; or 20% Daily Value or more.

Food and beverage packages may have sodium label claims that are misleading.

## **What are some hidden sources of sodium?**

Sodium is found in:

- Table salt: 1 teaspoon contains 2,300 mg of sodium.
- Seasonings: onion salt, garlic salt, seasoning salt, seasoning blends.
- Leavening agents: baking powder (488 mg per teaspoon) and baking soda (1,259 mg per teaspoon).
- Additives and preservatives: brine, di-sodium phosphate, monosodium glutamate, sodium erythorbate, sodium benzoate, sodium hydrozide, sodium propionate, sodium sulfite, and sodium nitrite.
- Medications such as antacids, laxatives and antibiotics. Ask your pharmacist if you have questions.

**3**

### **Add flavor without adding sodium**

- Don't add salt to your food during cooking, baking or at the table.
- Try no-salt seasoning blends, herbs, or spices instead of salt.
- Avoid butter and broths with the word sodium or salt in the name or ingredient list.

**4**

### **Build a heart healthy pantry**

Remove high-sodium canned soups, sauces, mixes and boxed foods (including flavored rice, instant noodles, and ready-made pasta) from your pantry.

**5**

### **Choose low sodium versions or alternatives of your favorite foods**

Prepare your own foods. Use the low-salt resources found on page 11 of this section.

According to the Centers for Disease Control, more than 40% of the sodium we eat each day comes from only 10 types of food.

High-Sodium Foods	Low-Sodium Alternatives
Breads and rolls	Look for “No Salt Added” or “Low Sodium” products
Cheese (regular and processed)	Low-sodium cheeses, cream cheese, ricotta cheese, Swiss and mozzarella
Cold cuts and cured meats	Look for “No Salt Added” or “Low Sodium” products
Burritos and tacos	Use “No Salt Added” or “Low Sodium” seasoning
Mixed meat dishes (beef stew, chili, meatloaf) and mixed pasta dishes (lasagna, spaghetti with meat sauce and pasta salad)	Prepare meals from scratch. Season with fresh herbs and spices instead of salt
Pizza	Limit cheese, remove meat and add more vegetables
Poultry (frozen and processed)	Select a fresh product
Sandwiches (hamburgers, hot dogs, and submarine sandwiches)	Sandwiches made with unsalted roasted meat or poultry
Chips, crackers, popcorn, pretzels, and snack mixes	Unsalted crackers or chips, plain popcorn, unsalted nuts
Canned Soups	Homemade soup without added salt

## Did you know?

A processed food is any food that has been changed from its original, raw agricultural form. Heavily processed foods typically contain added sodium. Some examples include boxed foods, frozen meals and snack foods like chips and cookies.

# 6

## Decrease the number of times you eat restaurant food each week

According to the Center for Disease Control, more than 70% of the sodium you eat is from processed and restaurant foods.

## How do I track my sodium intake?

You need to keep track of how much sodium you eat and drink every day. You can use the log below to track what you eat.

Extra copies of this Sodium Tracking Log can be printed from the *Michigan Medicine Care Guides from Your Clinician* site:

<https://careguides.med.umich.edu/>

Type in the keywords **heart sodium log** and then download and print.

Meal	Food/Beverage	Sodium (mg) per Serving	Servings eaten	Total Sodium (mg)
<b>Example</b>	<i>1 can of Campbell's low sodium chicken noodle soup</i>	<i>120mg</i>	<i>1 serving of each</i>	<i>120+ 48 = 168mg</i>
	<i>Dannon Greek Vanilla Yogurt</i>	<i>48mg</i>		
<b>Breakfast</b>				
<b>Snack</b>				
<b>Lunch</b>				
<b>Snack</b>				
<b>Dinner</b>				
<b>Snack</b>				
<b>Total Daily Sodium (mg):=</b>				

There are smartphone apps to help you track too. Many of these apps have the nutritional information for a wide range of foods which makes it easier to track your sodium.

Below are some examples of free apps you can use:






MyFitnessPal	Fooducate	MyNetDiary	MyPlate	Lose It!
				



Photo credit: TasteOfHome.com

## What do I need to think about when meal planning?

- It is important to eat a well-balanced diet rich in vitamins, minerals, fiber and other essential nutrients you need.
- Eat a mix of foods across all food groups:
  - Protein foods:
    - Seafood
    - Lean meats and poultry
    - Eggs
    - Legumes (beans and peas)
    - Nuts, seeds
    - Soy products
  - Fruits and vegetables
  - Whole grains
- Break down the amount of sodium you eat by meal.
- Plan your meals ahead of time. Think about what you are going to eat throughout the week and shop for these items.
- Search the Internet for low sodium recipes.



## Below are some good websites for low sodium recipes:

American Heart Association Recipes:

<https://recipes.heart.org/en>

Calorie King Food Database:

[www.calorieking.com](http://www.calorieking.com)

“Don’t Pass the Salt” Recipes for Success:

[www.aahfn.org/resource/resmgr/Docs/awareness/cookbookpdf.pdf](http://www.aahfn.org/resource/resmgr/Docs/awareness/cookbookpdf.pdf)

Eat Right:

[www.eatright.org/health](http://www.eatright.org/health)

Keep the Beat Recipes: Deliciously Healthy Dinners:

[www.nhlbi.nih.gov/health-topics/all-publications-and-resources/keep-beat-recipes-deliciously-healthy-dinners](http://www.nhlbi.nih.gov/health-topics/all-publications-and-resources/keep-beat-recipes-deliciously-healthy-dinners)

### Did you know ?

The Mardigian Wellness Resource Center at the Frankel Cardiovascular Center has a great selection of low-sodium cookbooks you can check out for free from the lending library. You can return the resources in person or by mail with a pre-paid envelope.



### What are some shopping tips for lowering sodium?

- Make a list so you know what to buy before you go shopping.
- Shop from the outer aisles of the grocery store, where most of the fresh foods are found.
- Buy fresh, frozen or no-salt added fruits and vegetables.
- Read food labels carefully. Look at serving size and the sodium content per serving.
- Choose items labeled “No Salt Added” or “Low Sodium”.
- Avoid boxed items with seasoning packets, such as rice or pasta blends, as these are high in sodium.
- Buy fresh poultry, fish, pork, and lean meat.
- Avoid cured, salted, smoked, and other processed meat.
- Avoid “basted” or “self-basted” products which may contain injected broth with salt.
- Buy lunch meat labeled “No Salt Added” or “Low Sodium”.
- Look for low sodium cheeses, such as Swiss, Goat or Farmers cheese.
- Review food labels on condiments. Foods like ketchup, soy sauce, salad dressing, and seasoning packets are high in sodium.

### What are some cooking tips for lowering sodium?

- Making your own meals is a great way to eat less sodium, because you are in control of what goes into your food.
- Remove the salt from your favorite recipes.
- Don’t add salt to the water when you cook pasta or rice.
- Experiment with no-salt herbs, spices and seasoning mixes.
- Try a new low sodium recipe.
- If preserving your own food, salt is not necessary for safe canning or freezing of fruits and vegetables.



## **How can I follow a low-sodium diet when eating out?**

Eating out, whether it is at a restaurant, a friend's house, or a party for a special occasion, can be challenging. The following tips will help you follow a low-sodium diet when eating out:

### **At a restaurant:**

- Check to see if the restaurant has nutritional information posted on their website.
- You can also find restaurant nutritional information on these websites:
  - Calorieking.com
  - MyFitnessPal
- Ask to see nutritional information (available in all chain restaurants), and then choose lower sodium options.
- Ask for your meal to be prepared without salt.
- Ask for sauces and salad dressings to be served “on the side,” then use in small amounts.

### **When eating out, consider the following:**

#### **Appetizers:**

- Avoid pickles, cured meats, cheeses, and salted nuts.

#### **Main Courses: choose items that are:**

- Grilled
- Baked
- Broiled
- Roasted

#### **Ask that food be prepared without:**

- Salted butter
- Salt
- MSG
- Dressings
- Order condiments, sauces and dressings on the side

### **At fast food restaurants:**

Keep takeout and fast food as an occasional treat.

### **At a party:**

- Eat fresh fruits and raw vegetables.
- Limit the use of dips and party spreads.
- Avoid snack foods such as potato chips, salted popcorn, pretzels or peanuts.

### **What if I don't cook?**

- **Meal services** such as:
  - Meals on Wheels  
<https://www.mealsonwheelsamerica.org/>
  - Mom's Meals  
<https://www.momsmeals.com/>
  - Seattle Sutton meals  
<https://www.seattlesutton.com/>
- **Frozen Dinners** (look for meals with lower sodium) such as:
  - Healthy choice
  - Smart Ones



## What about potassium in my diet?

We talk a lot about sodium, but your body also needs potassium to work properly. Some heart failure medicines can cause potassium levels to go either up or down. Your provider will check your blood potassium level regularly and tell you if you need to change your diet to keep your potassium level normal.

### Foods high in potassium (more than 200mg/serving):



If you are told to limit potassium in your diet, be very cautious about using salt substitutes such as NuSalt®. Most contain some form of potassium.

Check with your provider or RDN before using a salt substitute.

# Fluid Management

When you drink too much fluid, your heart has to work much harder to pump the extra fluid around your body. This can make your heart failure symptoms worsen. Limiting fluid intake is key to preventing Emergency Room visits and hospital stays.

**The goal of this section is to help you learn:**

- Why you need to limit your fluid intake
- What is considered a fluid
- Your daily fluid goal
- How to measure and monitor your fluid intake
- Tips to help you with this lifestyle change

**What is a fluid restriction?**

A fluid restriction means you can only have a certain amount of fluid each day. Your provider will recommend **limiting fluids to 8 cups (2000ml or 2-liters) per day**. They may change this limit based on your specific plan of care.

**What should I count as fluid?**

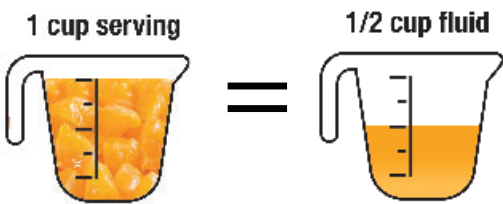
Fluid from both food and drink should be counted toward your daily fluid limit. Any food that is liquid at room temperature counts as fluid. If it melts or pours at room temperature it is a fluid.

Here are some examples of drinks and foods that count as part of your fluid total:

Any beverage you drink	
Water	Milk
Coffee	Liquid creamer
Tea	Juice
Soda pop	Fruit-flavored drinks, lemonade, punch
Sports drinks	Nutrition supplements like Ensure or Boost
Liquid medicine	Alcohol

Fluids that are part of a food	
Soup	Broth
Gravies	Sauces

Foods that melt down to a liquid (1 cup = ½ cup fluid)	
Jell-O®	Sherbet
Popsicles	Frozen yogurt
Ice cream	Ice cubes
Milkshakes/smoothies	
Juicy fruits or vegetables (1 cup = ½ cup fluid)	
Melons (watermelon, cantaloupe, honeydew, etc.)	Cucumbers Tomatoes
Oranges, Grapes, apples, peaches, berries	Applesauce



### How do I track my fluid intake?

Fluids can be measured in different ways. To help you measure, the chart below lists some common equivalent household amounts:

Tablespoon/Cup of fluid	Equivalent fluid ounce	Equivalent milliliters (ml)
1 tablespoon	½ fluid ounce	15ml
2 tablespoons	1 ounce	30 ml
½ cup	4 ounce	120 milliliters (ml)
1 cup	8 ounce	240 ml
4 cups	32 ounce	1000 ml (1-liter)
5 cups	40 ounce	1.2 liters
6 ¼ cups	50 ounce	1.5 liters
8 cups	67 ounce	2000 ml (2-liters)



2 liter bottle  
or pitcher

### Keeping track of your fluids- container method

There is an easy way to track your fluid intake using a water pitcher or 2-liter pop bottle:

1. Fill the container with 2 liters (2000 ml) of water.
2. Each time you eat or drink, count the amount of fluid coming from beverages and food. This includes fluid from each meal, snack, or beverage break.
3. Pour an equal amount of fluid out of the container after each meal, snack, or beverage break.
4. When the container is empty, you will know you have reached your fluid limit for the day.

### Keeping track of your fluids- written method

You need to keep track of how much fluid you have every day. You can use the log below to track your fluid.

Extra copies of this Fluid Tracking Log can be printed from the *Michigan Medicine Care Guides from Your Clinician* site:

<https://careguides.med.umich.edu/>

Type in the keywords **heart fluid log** and then you can download and print.

Meal	Food or beverage:	Fluid (ml) per serving:	Total fluid (ml):
<i>Example:</i>	Coffee Cantaloupe Ice chips	1 cup of coffee= 240ml 1 cup fruit (½ cup fluid) =120ml ½ cup (1/4 cup fluid) =60ml	240+120+60= <b>420ml</b>
Breakfast			
Snack			
Lunch			
Snack			
Dinner			
Snack			
Total Daily Fluid (ml) =			

## What are some helpful hints for fluid control?

Plan ahead. Spread your fluid allowance over the whole day. Don't drink it all at once. The chart below can help you plan your fluid amounts:

Menu Planner for Fluids			
For a 1.5 Liter (1500 mL) daily limit:		For a 2 Liter (2000 mL) daily limit:	
Breakfast:	1 ¼ cups fluid	Breakfast:	2 cups fluid
AM Snack:	1 cup fluid	AM Snack:	1 ¼ cups fluid
Lunch:	1 cup fluid	Lunch:	2 cups fluid
PM Snack:	1 cup fluid	PM Snack:	1 cup fluid
Dinner:	1 cup fluid	Dinner:	1 cup fluid
Night Snack:	1 cup fluid	Night Snack:	1 cup fluid

- Know how much fluid your cups, bowls, mugs, and glasses hold.
- Use small cups and glasses for beverages.
- Keep track of your fluid intake. A fluid log can help you record your fluids and add up your total each day (see previous page).

## What do I need to remember about fluids and taking medications?

- Remember to save some fluids to take with your medicine. Fluid you use to take medications must also be counted in your fluid restriction.
- Ask your pharmacist what medicines you can take with food.
- Save fluids from your meals to take pills. Some medicines say to take with a full glass of water- check with your nurse or provider first.

## **What if I get thirsty?**

It is very important to follow the fluid limit set by your provider. But it can be difficult. Try one of these tips if you feel thirsty:

- Chew sugarless gum or suck on hard sugarless candies or mints
- Snack on frozen fruit like grapes or strawberries (this still counts toward your fluid restriction)
- Gargle with alcohol-free mouthwash, rinse with cold water and spit out
- Suck on a lemon slice
- Chew on fresh peeled ginger
- Apply lip balm to your lips if they are dry
- Try artificial saliva products
- Breathe through your nose and not your mouth
- Use a humidifier to moisten the air

## **Action steps you can take:**

- Limit fluid intake to 8 cups per day
- Count the full volume of fluids
- Count half the volume of foods that melt
- Count half the volume of juicy fruits and vegetables
- Start tracking today





# 7 - Day Low Sodium Menu & Recipes

## How do I plan for a low sodium lifestyle?

We hope you find these sample menus and recipes helpful in planning your low sodium lifestyle. Here are instructions to help you plan your meals:

- Consume **2000 mg of sodium or less per day** including all meals and snacks
- Aim for **each meal** to contain **less than 600 mg of sodium**

Abbreviations & asterisks (these look like a star*) used in tables	
<b>tsp</b> – teaspoon	* recipe included
<b>Tbsp.</b> – tablespoon	** item high in potassium
<b>mg</b> - milligrams	*** tip included

## Day 1 menu:

Breakfast	Sodium mg
1 cup shredded wheat cereal	10
1 cup low-fat milk	130
½ medium banana**	0
1 Tbsp. unsalted nuts	0
Lunch	Sodium mg
½ cup tuna salad recipe*	160
2 cup shredded romaine lettuce	0
½ cup tomato slices**	0
6 low-sodium Triscuits <sup>®</sup>	50

1 cup soup (less than 400 mg sodium) Examples: <ul style="list-style-type: none"> <li>Amy's Organic light in Sodium Lentil vegetable (340 mg)</li> <li>Minestrone Soup recipe* (202 mg)</li> </ul>	About 250
½ cup canned pineapple in water	0
<b>Afternoon Snack</b>	<b>Sodium mg</b>
¼ cup unsalted almonds	0
1 small apple	0
<b>Dinner</b>	<b>Sodium mg</b>
3 oz. roasted chicken breast***	75
1 cup green beans	0
1 small baked sweet potato	0
1 tsp unsalted butter season with cinnamon	0
1 cup fat free or low fat milk	130
1 cup berries	0
<b>Evening Snack</b>	<b>Sodium mg</b>
6 oz. Greek yogurt	60
3 cups air-popped popcorn with 0.5 Tbsp. unsalted butter and no added salt	0
<b>Daily Totals</b>	
Total Sodium: 865 mg Total Calories: ~1800 Total Protein: 109 g	

\*\*\* **Tip:** Prepare extra chicken for lunch tomorrow

## Day 1 recipes:

### Tuna Salad

Makes 5 servings; Serving size: ½ cup

Ingredients	Directions
<ul style="list-style-type: none"><li>• 2 can (6 oz. each) tuna, water pack</li><li>• 1/2 cup raw celery, chopped</li><li>• 1/3 cup green onions, chopped</li><li>• 6 ½ Tbsp. mayonnaise, reduced fat</li></ul>	<ol style="list-style-type: none"><li>1. Rinse and drain tuna for 5 minutes. Break apart with fork.</li><li>2. Add celery, onion, and mayonnaise, and mix well.</li></ol>
Per Serving: <b>Calories:</b> 146; <b>Total fat:</b> 7 g; <b>Sodium:</b> 158 mg; <b>Total fiber:</b> 1 g; <b>Protein:</b> 16 g; <b>Carbohydrates:</b> 4 g; <b>Potassium:</b> 201 mg	

### Minestrone Soup

Makes 16 servings; Serving size: 1 cup

Ingredients	Directions
<ul style="list-style-type: none"><li>• 1/4 cup olive oil</li><li>• 1 clove garlic, minced (or 1/8 tsp powder)</li><li>• 1 and 1/3 cups onion, coarsely chopped</li><li>• 1 ½ cups celery with leaves, coarsely chopped</li><li>• 1 can (6 oz.) tomato paste</li><li>• 1 Tbsp. fresh parsley, chopped</li><li>• 1 cup carrots, sliced, fresh or frozen</li><li>• 4 ¾ cup cabbage, shredded</li><li>• 1 can (1 lb.) tomatoes, cut up</li><li>• 1 cup canned red kidney beans, drained, rinsed</li><li>• 1 ½ cup frozen peas</li><li>• 1 ½ cup fresh green beans</li><li>• Dash of hot sauce</li><li>• 11 cups water</li><li>• 2 cups spaghetti, uncooked, broken</li></ul>	<ol style="list-style-type: none"><li>1. Heat oil in 4-quart saucepan. Add garlic, onion, and celery, and sauté for about 5 minutes.</li><li>2. Add all remaining ingredients except spaghetti.</li><li>3. Stir until ingredients are well mixed.</li><li>4. Bring to boil and reduce heat, cover, and simmer for about 45 minutes or until vegetables are tender.</li><li>5. Add uncooked spaghetti and simmer for only 2-3 minutes.</li></ol>
Per Serving: <b>Calories:</b> 112, <b>Total fat:</b> 4 g, <b>Sodium:</b> 202 mg, <b>Total fiber:</b> 4 g, <b>Protein:</b> 4 g, <b>Carbohydrates:</b> 17 g, <b>Potassium:</b> 393 mg	

## Day 2 menu:

<b>Breakfast</b>	<b>Sodium mg</b>
1 cup cooked oatmeal (with water)	10
1 cup fat free or low-fat milk	130
2 Tbsp. raisins**	0
1 Tbsp. unsalted walnuts	0
<b>Lunch</b>	<b>Sodium mg</b>
¾ cup chicken salad*	127
2 slices multigrain bread	About 300
1 cup raw veggies of choice	20
2 Tbsp. hummus	150
1 medium peach	0
1 cup water	0
<b>Afternoon snack</b>	<b>Sodium mg</b>
1 Tbsp. unsalted sunflower seeds	0
1 large hard-boiled egg	65
<b>Dinner</b>	<b>Sodium mg</b>
½ cup low sodium pasta sauce** ex. Hunt's® no salt added sauce	20
1 cup whole grain pasta	0
3 Tbsp. low sodium parmesan	10
Spinach salad*	70
2 Tbsp. Vinaigrette Salad Dressing*	0
1 Pear	0
<b>Evening Snack</b>	<b>Sodium mg</b>
6 oz. Yogurt	135
3 cups air-popped popcorn with 0.5 Tbsp. unsalted butter and no added salt	0
<b>Daily Totals</b>	
Total Sodium: ~1040 mg	
Total Calories: 1900	
Total Protein: 99 g	

## Day 2 recipes:

### Chicken Salad

Makes 5 servings; Serving size:  $\frac{3}{4}$  cup

Ingredients	Directions
<ul style="list-style-type: none"><li>• 3 <math>\frac{1}{4}</math> cups chicken, cooked, cubed, skinless</li><li>• 1/4 cup celery, chopped</li><li>• 1 Tbsp. lemon juice</li><li>• 1/2 tsp onion powder</li><li>• 3 Tbsp. mayonnaise, low-fat</li></ul>	<ol style="list-style-type: none"><li>1. Bake chicken, cut into cubes, and refrigerate.</li><li>2. In large bowl, combine rest of ingredients, add chilled chicken and mix well.</li></ol>
Per Serving: <b>Calories:</b> 183, <b>Total fat:</b> 7 g, <b>Sodium:</b> 127 mg, <b>Total fiber:</b> 0 g, <b>Protein:</b> 27 g, <b>Carbohydrates:</b> 1 g, <b>Potassium:</b> 240 mg	

### Spinach Salad

Makes 1 cup; Serving size 1 cup

Ingredients	Directions
<ul style="list-style-type: none"><li>• 1 cup fresh spinach leaves</li><li>• <math>\frac{1}{4}</math> cup grated carrots</li><li>• <math>\frac{1}{4}</math> cup sliced mushrooms</li></ul>	<ol style="list-style-type: none"><li>1. Wash all ingredients before chopping.</li><li>2. Combine all ingredients in bowl, top with dressing of choice</li></ol>
Per Serving: <b>Calories</b> 36, <b>Total fat:</b> 0 g, <b>Sodium:</b> 50 mg, <b>Total fiber:</b> 2.5 g, <b>Protein:</b> 4 g, <b>Carbohydrates:</b> 6 g, <b>Potassium:</b> 167 mg	

### Vinaigrette Dressing

Makes 4 servings; Serving size 2 Tbsp.

Ingredients	Directions
<ul style="list-style-type: none"><li>• 1 bulb garlic, separated into cloves, peeled</li><li>• 1/2 cup water</li><li>• 1 Tbsp. red wine vinegar</li><li>• 1/4 tsp honey</li></ul>	<ol style="list-style-type: none"><li>1. Place garlic cloves into small saucepan and pour in enough water (about 1/2 cup) to cover them.</li><li>2. Bring water to boil, then reduce heat and simmer until garlic is tender (about 15 minutes).</li><li>3. Reduce liquid to 2 tablespoons and increase heat for 3 minutes.</li><li>4. Pour contents into small sieve over</li></ol>

<ul style="list-style-type: none"> <li>• 1 Tbsp. virgin olive oil</li> <li>• 1/2 tsp black pepper</li> </ul>	bowl. With wooden spoon, mash garlic through sieve. 5. Whisk vinegar into garlic mixture, then mix in oil and seasoning.
Per Serving: <b>Calories:</b> 33, <b>Total fat:</b> 3 g, <b>Sodium:</b> 0 mg, <b>Total fiber:</b> 0 g <b>Protein:</b> 0 g, <b>Carbohydrates:</b> 1 g, <b>Potassium:</b> 9 mg	

### Day 3 Menu:

<b>Breakfast</b>	<b>Sodium mg</b>
2 scrambled eggs	180
mixed with ¼ c veggies	20
1 slice multigrain wheat bread	About 150
1 tsp unsalted butter	0
1 cup melon (count 4oz fluid)	20
1 cup low fat milk	130
<b>Lunch</b>	<b>Sodium mg</b>
1 cup lentil soup (less than 400 mg sodium) ex. Health Valley Organic®	30
7 low sodium Triscuits®	190
Spinach salad*	70
2 Tbsp. Vinaigrette Salad Dressing*	0
1 Tbsp. unsalted almonds	0
1 small apple	0
<b>Afternoon Snack</b>	<b>Sodium mg</b>
1 cup baby carrots	190
¼ cup hummus	260
<b>Dinner</b>	<b>Sodium mg</b>
3 oz. beef, eye of round***	0
1 cup steamed mixed vegetables	0
1 tsp olive oil	0
1 small baked potato:	20
2 Tbsp. Lite sour cream	25
1 Tbsp. chopped scallions	0
1 cup water	0
1 cup raspberries	0

<b>Evening Snack</b>	<b>Sodium mg</b>
Granola bar ex. Fiber One® or Kashi® bar	105
¼ cup low sodium cottage cheese	230
<b>Daily Totals</b>	
Total Sodium: 1520 mg	
Total Calories: 2020	
Total Protein: 96 g	

\*\*\* **Tip:** Prepare extra beef and vegetables for lunch tomorrow

### Day 3 recipes:

None: see Day 2 Recipes for salad and salad dressing

### Day 4 menu:

<b>Breakfast</b>	<b>Sodium mg</b>
1 cup high protein wheat cereal Ex: Special K	210
1 cup fat free milk	130
1 ¼ cups strawberries	0
1 Tbsp. unsalted nuts	0
<b>Lunch</b>	<b>Sodium mg</b>
Beef sandwich:	
3 oz. eye of round	0
1 Tbsp. low sodium BBQ sauce	0
1 whole wheat bun	300
1 cup steamed or raw mixed vegetables	0
1 can canned peaches, packed in water	30
<b>Afternoon Snack</b>	<b>Sodium mg</b>
1 Tbsp. unsalted walnuts	0
6 oz. Greek yogurt	130
<b>Dinner</b>	<b>Sodium mg</b>
***4 oz. roasted Salmon*	240
1 cup Scallion Rice*	20
1 cup cooked broccoli with 1 Tbsp. shredded cheddar cheese	35
½ cup mandarin oranges	5

Evening Snack	Sodium mg
2 Tbsp. peanut butter, no salt added	0
1 slice whole wheat toast	150
Daily Totals	
Total Sodium: 1250 mg	
Total Calories: 1965	
Protein: 122 g	

\*\*\* **Tip:** Prepare extra salmon for lunch tomorrow

## Day 4 recipes:

### Roasted Salmon

Makes 2 servings; Serving size: 4-5 ounces

Ingredients	Directions
<ul style="list-style-type: none"> <li>• Two 5 oz. salmon fillets with skin</li> <li>• ½ lemon, juiced</li> <li>• 1/8 tsp garlic powder</li> <li>• Pinch of pepper</li> </ul>	<ol style="list-style-type: none"> <li>1. Preheat oven to 425 degrees. line baking sheet with foil.</li> <li>2. Place salmon fillets skin side down on foil. Sprinkle each fillet with lemon juice and garlic powder.</li> <li>3. Roast until fish is cooked through, about 12 minutes. Check with thermometer, should read 145 degrees for 15 seconds.</li> <li>4. Using metal spatula, lift salmon off skin, placing skinless fish on plate and discard skin. Sprinkle with additional lemon, garlic and pepper if desired.</li> </ol>
Per Serving: <b>Calories:</b> 208, <b>Total fat:</b> 8 g, <b>Sodium:</b> 239 mg, <b>Protein:</b> 31 g, <b>Carbohydrates:</b> 1 g, <b>Potassium:</b> 511 mg	



## Scallion Rice

Makes 5 servings; Serving size: 1 cup

Ingredients	Directions
<ul style="list-style-type: none"> <li>• 4 ½ cups cooked brown rice (cooked in unsalted water)</li> <li>• 1 ½ tsp bouillon granules, low sodium</li> <li>• ¼ cup scallions (green onions), chopped</li> </ul>	<ol style="list-style-type: none"> <li>1. Cook rice according to directions on the package.</li> <li>2. Combine the cooked rice, scallions, and bouillon granules and mix well.</li> <li>3. Measure 1 cup portions and serve.</li> </ol>
Per Serving: <b>Calories</b> 200; <b>Total fat</b> 2 g; <b>Sodium</b> 18 mg; <b>Protein</b> 5 g; <b>Carbohydrate</b> 41 g; <b>Potassium</b> 92 mg; <b>Fiber</b> 3 g	

## Day 5 menu:

Breakfast	Sodium mg
1 whole grain English muffin	210
1 Tbsp. peanut butter, no salt added	0
2 tsp sugar free jelly	0
1 med orange	0
1 cup low fat milk	130
Lunch	Sodium mg
3.5 oz. salmon on bed of:	185
2 cup romaine lettuce	5
½ cup tomatoes	0
⅓ cup black beans, low sodium	90
2 Tbsp. Vinaigrette Salad Dressing*	0
7 low-sodium Triscuits®	190
1 cup cantaloupe	About 25
Afternoon Snack	Sodium mg
¼ cup unsalted almonds	0
Dinner	Sodium mg
***3.5 oz. turkey meatloaf*	69
1 cup steamed broccoli	30
1 cup steamed winter squash with	50
1 tsp unsalted butter - season w/nutmeg or thyme	0

1 cup water	0
1 small apple	0
<b>Evening Snack</b>	<b>Sodium mg</b>
1 large hard-boiled egg	65
<b>Daily Totals</b>	
Total Sodium: 1295 mg	
Total Calories: 1970	
Protein: 102 g	

\*\*\* **Tip:** Prepare extra meatloaf for lunch tomorrow

## Day 5 recipe:

### Turkey Meatloaf

Makes 12 servings; Serving size: 1 slice (~3.5 ounces)

Ingredients	Directions
<ul style="list-style-type: none"> <li>• 1 small onion (finely chopped)</li> <li>• 1 medium bell pepper, finely chopped</li> <li>• 1 tsp vegetable oil</li> <li>• 2 clove minced, fresh garlic OR</li> <li>• 1 tsp jarred, minced garlic</li> <li>• 2 Tbsp. fat-free, skim milk</li> <li>• 1/3 cup quick-cooking oats</li> <li>• 1.5 lb. extra-lean, fat-free ground turkey (can substitute extra lean ground beef or pork)</li> <li>• 2 eggs (beaten)</li> <li>• 1 Tbsp. Dijon mustard</li> <li>• 8 oz. canned, no-salt-added tomato sauce (divided use)</li> <li>• 1/4 tsp. black pepper</li> <li>• 1 tsp dried parsley</li> </ul>	<ol style="list-style-type: none"> <li>1. Preheat oven to 350 degrees.</li> <li>2. Place onions and bell pepper in a glass 9x5 loaf pan, drizzle with oil and toss to coat.</li> <li>3. Cover loaf pan with a plate and microwave on high for 3 minutes (<b>note:</b> if you are using a metal loaf pan <b>do not</b> put it in the microwave.) Allow vegetables to cool slightly.</li> <li>4. In a medium bowl, combine vegetables, minced garlic, milk, oats, turkey meat, eggs, mustard, 2 tablespoons of tomato sauce, pepper and parsley - mix well with hands.</li> <li>5. Spray loaf pan with cooking spray.</li> <li>6. Shape meat mixture into loaf and place in loaf pan.</li> <li>7. In the medium bowl, mix remainder of tomato sauce and cider vinegar, pour over loaf.</li> </ol>

<ul style="list-style-type: none"> <li>• 1 tsp cider vinegar</li> <li>• Non-stick cooking spray</li> </ul>	8. Bake for 50-60 minutes until internal thermometer reads 165 for poultry and 160 for beef or pork. Let stand for 5-10 minutes and slice.
Per Serving: <b>Calories</b> 161; <b>Total fat</b> 2 g; <b>Sodium</b> 69 mg; <b>Protein</b> 20 g; <b>Carbohydrate</b> 15 g. Recipe modified from: American Heart Association Meatloaf	

### Day 6 menu:

<b>Breakfast</b>	<b>Sodium mg</b>
1 Oat Bran and Jam Muffin*	17
6 oz. Greek yogurt	130
½ cup berries	10
<b>Lunch</b>	<b>Sodium mg</b>
3.5 oz. turkey meatloaf	69
1 slice whole wheat bread	About 150
2 cups romaine lettuce	5
2 slices of tomato	0
½ cup sliced cucumber	0
¼ cup baby carrots	50
2 Tbsp. Vinaigrette Salad Dressing*	0
1 cup low fat milk	130
1 peach	0
<b>Afternoon Snack</b>	<b>Sodium mg</b>
1 Tbsp. peanut butter, no salt added	0
1 small apple	0
<b>Dinner</b>	<b>Sodium mg</b>
1 ½ cup Chicken and Spanish rice*	86
¼ avocado sliced	5
1 cup asparagus	20
¾ cup blueberries	0
<b>Evening Snack</b>	<b>Sodium mg</b>
6 low sodium Triscuits®	160
1 Tbsp. hummus	85

1 large hard-boiled egg	65
<b>Daily Totals</b>	
Total Sodium: 982 mg	
Calories: 1750	
Protein: 97 g	

## Day 6 recipes:

### Chicken and Spanish Rice

Makes 5 cups; Serving Size: 1.5 cups

Ingredients	Directions
<ul style="list-style-type: none"> <li>• 1 cup onions, chopped</li> <li>• 1/4 cup green peppers</li> <li>• 2 tsp vegetable oil</li> <li>• 1 can (8 oz.) No Added Salt tomato sauce</li> <li>• 1 tsp parsley, chopped</li> <li>• 1/2 tsp black pepper</li> <li>• 1 ¼ tsp garlic, minced</li> <li>• 5 cups cooked rice (in unsalted water)</li> <li>• 3 ½ cups chicken breast, cooked, skin and bone removed, diced</li> </ul>	<ol style="list-style-type: none"> <li>1. In large skillet, sauté onions and green peppers in oil for 5 minutes on medium heat.</li> <li>2. Add tomato sauce and spices. Heat through.</li> <li>3. Add cooked rice and chicken, and heat through.</li> </ol>
Per Serving: <b>Calories:</b> 406; <b>Total fat:</b> 6 g; <b>Sodium:</b> 86 mg; <b>Total fiber:</b> 2 g; <b>Protein:</b> 33 g; <b>Carbohydrates:</b> 52 g; <b>Potassium:</b> 527 mg	

### Oat bran and jam muffins

Makes 12 muffins; Serving size: 1 muffin

Ingredients	Directions
<ul style="list-style-type: none"> <li>• 2 ¼ cups oat bran, dry</li> <li>• ¼ cup brown sugar, packed</li> <li>• 1 Tbsp. sodium-free baking powder</li> <li>• 1 tsp granulated white sugar</li> <li>• 2 tsp ground cinnamon</li> </ul>	<ol style="list-style-type: none"> <li>1. Preheat oven to 425 degrees. Insert paper baking cups into muffin pan.</li> <li>2. Mix together the oat bran, brown sugar, baking powder, granulated sugar, and cinnamon.</li> <li>3. Stir in the milk, egg whites, apple juice concentrate, and applesauce until smooth.</li> </ol>

<ul style="list-style-type: none"> <li>• 2 egg whites</li> <li>• ½ cup milk, nonfat</li> <li>• ¾ cup apple juice concentrate</li> <li>• 2 Tbsp. no-salt applesauce</li> <li>• 12 tsp sugar-free jam</li> </ul>	<ol style="list-style-type: none"> <li>4. Fill each muffin cup half way. Then add 1 teaspoon of jam to each muffin cup and cover with more batter until completely topped.</li> <li>5. Bake for 15-16 minutes. Remove muffins from oven and allow to cool in the pan for about 10 minutes. Remove muffins from pan and allow them to cool completely.</li> <li>6. The muffins can be refrigerated or frozen to store.</li> </ol>
Per Serving: <b>Calories</b> 104, <b>Total fat</b> 1 g; <b>Sodium</b> 17 mg; <b>Protein</b> 4 g; <b>Fiber</b> 3 g; <b>Carbohydrate</b> 27 g; <b>Potassium</b> 334 mg	

### Day 7 menu:

<b>Breakfast</b>	<b>Sodium mg</b>
Yogurt Parfait:	
1 oz. Nature Valley Protein Oat N' Honey® granola	75
6 oz. fat free yogurt	135
1 cup blueberries	0
1 Tbsp. almonds or walnuts, unsalted	0
<b>Lunch</b>	<b>Sodium mg</b>
Hummus Sandwich:	
¼ c hummus	260
4-inch whole wheat pita	225
2 large romaine lettuce leaves	0
2 slices of tomato	0
¼ avocado sliced	5
½ cup sliced cucumbers	0
1 pear	0
<b>Afternoon Snack</b>	<b>Sodium mg</b>
Granola bar ex. Fiber One® or Kashi® bar	105

1 cup low fat milk	130
<b>Dinner</b>	<b>Sodium mg</b>
3 oz. spicy baked fish*	93
½ cup Lemon Rice*	41
1 ½ cups mixed steamed cup mixed steamed vegetables with 1 tsp olive oil	0
1 cup melon	25
<b>Evening Snack</b>	<b>Sodium mg</b>
3 cups fresh, air popped popcorn with 1 tsp unsalted butter and no added salt	0
<b>Daily Totals</b>	
Sodium: 1095 mg	
Calories: 1620	
Protein: 72 g	

## Day 7 recipes:

### Spicy baked fish

Makes 4 servings; Serving size: 1 piece (3 ounces)

Ingredients	Directions
<ul style="list-style-type: none"> <li>• 1 lb. cod (or other fish) fillet</li> <li>• 1 Tbsp. olive oil</li> <li>• 1 tsp commercial spicy seasoning, salt free, or Hot 'N Spicy Seasoning mix (see recipe)</li> <li>• Nonstick cooking spray as needed</li> </ul>	<ol style="list-style-type: none"> <li>1. Preheat oven to 350 °F. Spray casserole dish with nonstick cooking oil spray.</li> <li>2. Wash and dry fish. Place in dish. Drizzle with oil and seasoning mixture.</li> <li>3. Bake uncovered for 15 minutes or until fish flakes with fork. Cut into 4 pieces.</li> <li>4. Serve with rice.</li> </ol>
<p>Per Serving: <b>Calories:</b> 134; <b>Total fat:</b> 5 g; <b>Sodium:</b> 93 mg; <b>Total fiber:</b> 0 g; <b>Protein:</b> 21 g; <b>Carbohydrates:</b> less than 1 g; <b>Potassium:</b> 309 mg</p>	

### Hot N' Spicy Seasoning

Makes 1/3 cup; Serving Size: ½ tsp

Ingredients	Directions
<ul style="list-style-type: none"><li>• 1 ½ tsp white pepper</li><li>• 1/2 tsp cayenne pepper</li><li>• 1/2 tsp black pepper</li><li>• 1 tsp onion powder</li><li>• 1 ¼ tsp garlic powder</li><li>• 1 Tbsp. basil, dried</li><li>• 1 ½ tsp thyme, dried</li></ul>	1. Mix all ingredients together. Store in an airtight container.
Per Serving: <b>Calories:</b> 1; <b>Total fat:</b> 1 g; <b>Sodium:</b> 0 mg; <b>Protein:</b> 0 g; <b>Carbohydrates:</b> less than 1 g; <b>Potassium:</b> 4 mg	

### Lemon Rice

Makes 4 servings; Serving size: ½ cup

Ingredients	Directions
<ul style="list-style-type: none"><li>• 1 cup long grain rice</li><li>• 1 Tbsp. unsalted butter</li><li>• ½ lemon, zested (optional)</li><li>• 1 tsp dried basil</li><li>• 1 tsp dried oregano</li><li>• 1 cup Bone Broth (chicken) 2 cups if cooking on stove</li><li>• ½ lemon juiced, about 1 Tbsp. lemon juice</li></ul>	<p>Rice Cooker or Pressure Cooker:</p> <ol style="list-style-type: none"><li>1. Combine rice, butter, lemon zest, dried basil, oregano and stock (1 cup) in a rice cooker.</li><li>2. Cook using the 'white rice' function or as otherwise directed via machine.</li><li>3. Stir in the lemon juice after cooking and serve.</li></ol> <p><b>Stove Top</b></p> <ol style="list-style-type: none"><li>1. In a medium pot, combine the rice, lemon zest, dried basil, oregano and stock (2 cups).</li><li>2. Cover and bring to a boil; reduce heat and simmer (covered) for 15 minutes.</li><li>3. Remove from heat and let sit for another 10 minutes before adding the lemon juice and stirring up.</li></ol>
Per Serving: <b>Calories:</b> 86; <b>Total Fat:</b> 3 g; <b>Sodium:</b> 41 mg; <b>Protein</b> 3 g; <b>Carbohydrates:</b> 12 g; <b>Potassium:</b> 25 mg	

**Notes:**

- Fruits may be interchanged based on your preference.
- Consider an individual consult with a Registered Dietitian for more assistance with planning meals to fit your tastes or if you have additional health concerns.

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