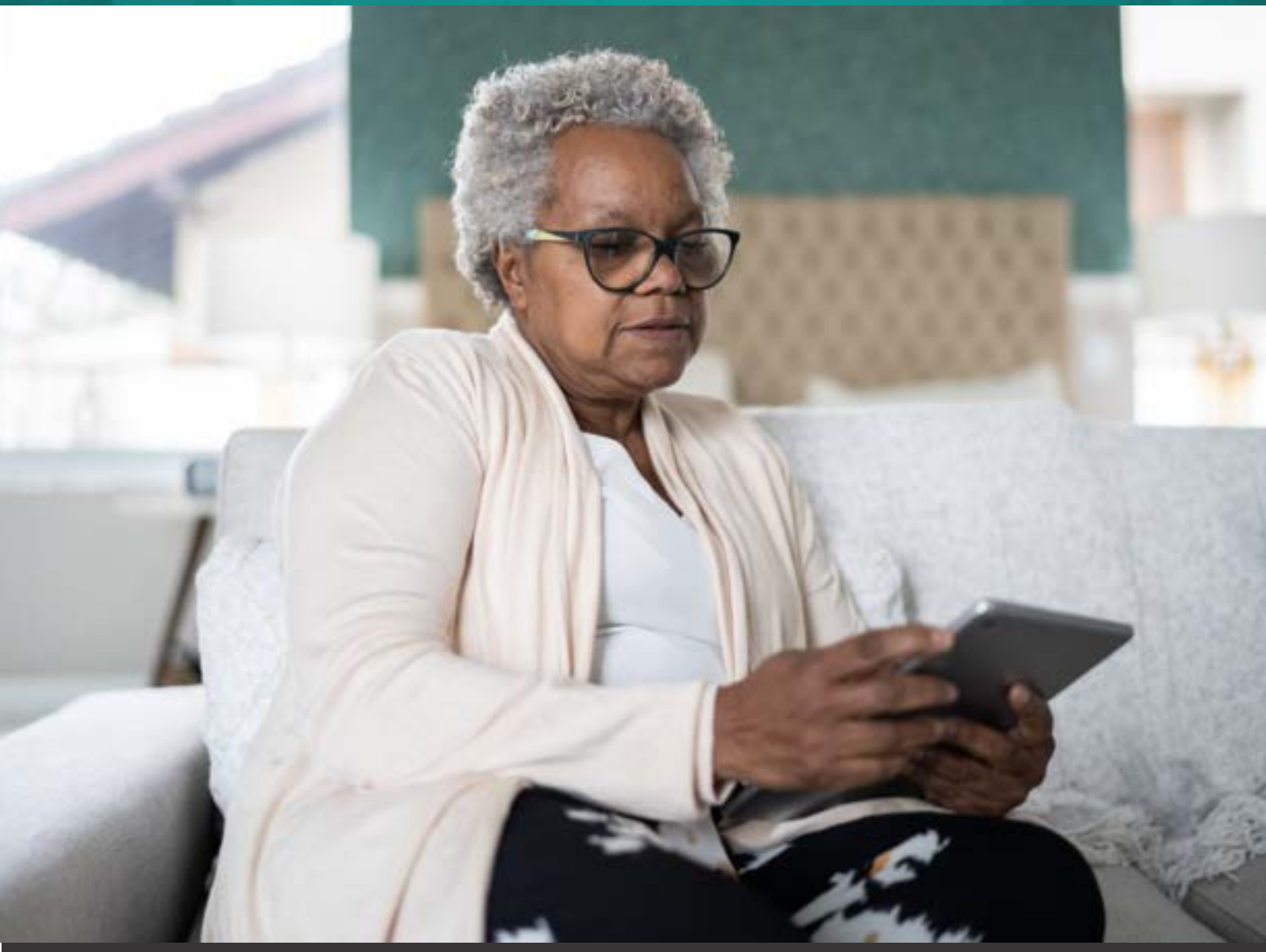
UNIVERSITY OF OTTAWA
HEART INSTITUTE
INSTITUT DE CARDIOLOGIE
DE L'UNIVERSITÉ D'OTTAWA

Heart Failure



A GUIDE FOR PATIENTS AND CAREGIVERS

About this guide

The contents of this guide aim to educate both patients and the members of their support system about heart failure, managing heart failure symptoms, when to contact the healthcare team, lifestyle interventions, and medications. If you have any questions about the contents of the guide or would like more information, please speak with your healthcare team.

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For more information about customizing this guide for the particular needs of your institution, please contact the department of communications at communications@ottawaheart.ca.

This document is also available in French under the title | *Cette publication est aussi disponible en français sous le titre* : *Insuffisance cardiaque*

UOHI 01 (last update: 2024)



IMPORTANT
You can call the nursing coordinator if you have symptoms or concerns throughout your recovery period. The nursing coordinator can be reached at any time of the day or night. Please note that this is not an emergency line.

Call 613-696-7000, press 0 and ask for the nursing coordinator.

Before leaving, make sure you have:

- ☐ Attended the Heart Failure Discharge Class. Please ask your nurse for details. You can also view the recorded webinars available on our website at ottawaheart.ca/heart-failure-patient-guide.
- ☐ Obtained the Heart Failure Daily Weight Tracker Tool. This is a tool you can use for the rest of your life to help monitor your heart failure symptoms and prevent re-hospitalization.
- ☐ Reviewed this guide with your support person.
- ☐ Received your prescriptions.
- ☐ Received your After Visit Summary (AVS). This is completed by your doctor and contains information related to your diagnosis and treatment, medications, follow-up plan, and your Guidelines Applied in Practice (GAP) Tool.
- ☐ Made an appointment to see your family doctor within the next two weeks. If you do not have a family doctor, please let your healthcare team know.
- ☐ Received information about or an appointment with the Cardiovascular Rehabilitation Program. Call 613-696-7068 to book your intake appointment.
- ☐ Informed your nurse or doctor if you have financial problems or any concerns about your discharge. We can make sure you meet with a social worker, who may be able to help you with these issues.
- ☐ Received information about your HBA1C level and what this means for you. If you are new to diabetes or have established diabetes but are not being followed by an endocrinologist, please call 613-696-7059 for an appointment at the University of Ottawa Heart Institute (UOHI) Diabetes Clinic for post-discharge follow-up.

Table of contents

About this guide **2**

Before leaving, make sure you have **3**

What you should know about heart failure **5**

What is heart function? 5

What is heart failure? 5

What are the common symptoms of heart failure? 6

Nutrition guide for heart failure **10**

Salt 10

Fluids 15

Heart failure medications **18**

Heart failure and physical activity **26**

Emotions associated with heart disease **30**

Cardiovascular rehabilitation **33**

For family and caregivers **35**

Glossary **36**

Resources **38**

An invitation to the Heart Failure Support Group **39**

Women's heart health **40**

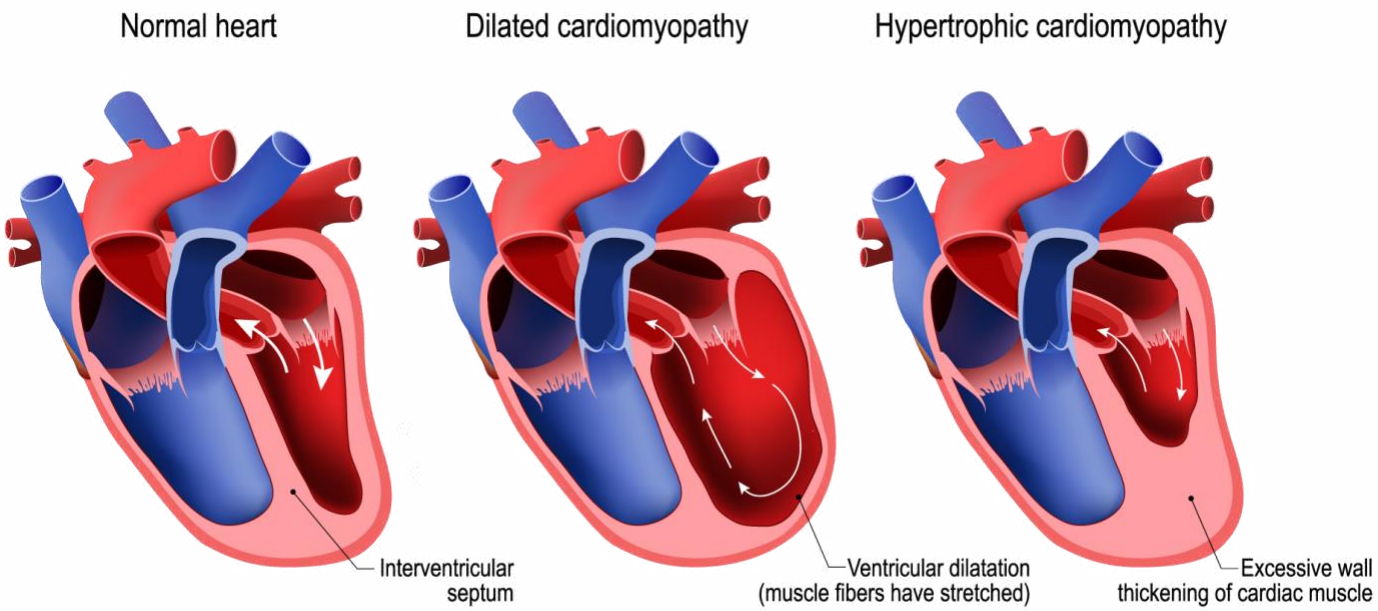
What you need to know about advance care planning **42**

Heart Institute Patient Alumni **43**

What you should know about heart failure

What is heart function?

Heart function is determined by many tests, including an echocardiogram (an ultrasound of the heart) that measures your heart's ejection fraction (EF). The EF is a measurement of the percentage of blood that leaves your heart (left ventricle) each time it beats. Normally, with each heartbeat, the heart pumps out about half the blood sitting inside it. A normal EF is between 50 and 60%. Many people with heart failure have a reduced EF. Your doctor will try to improve your EF, or heart-pumping power, over time with medications and lifestyle changes.



What is heart failure?

Heart failure is a common condition. Despite its name, heart failure does not mean that your heart will fail and suddenly stop working. It happens when there is an imbalance between what the body needs and what the heart can provide. It can occur with either a normal or a reduced ejection fraction.

What are the common symptoms of heart failure?

- Shortness of breath
- Fatigue
- Trouble lying flat or needing more pillows to sleep
- Weight gain. Day-to-day weight gain is usually caused by fluid retention, as opposed to eating too many calories. A sudden weight gain (2 lb. in one day, or 5 lb. in one week) may be an early sign of fluid buildup.
- Coughing
- Swelling in the abdomen
- Lack of appetite/nausea
- Confusion
- Swelling in the legs and ankles
- Waking at night short of breath



YOU MAY HAVE ONE OR MORE OF THESE SYMPTOMS.
Learn to recognize your symptoms of heart failure. Everyone is different!

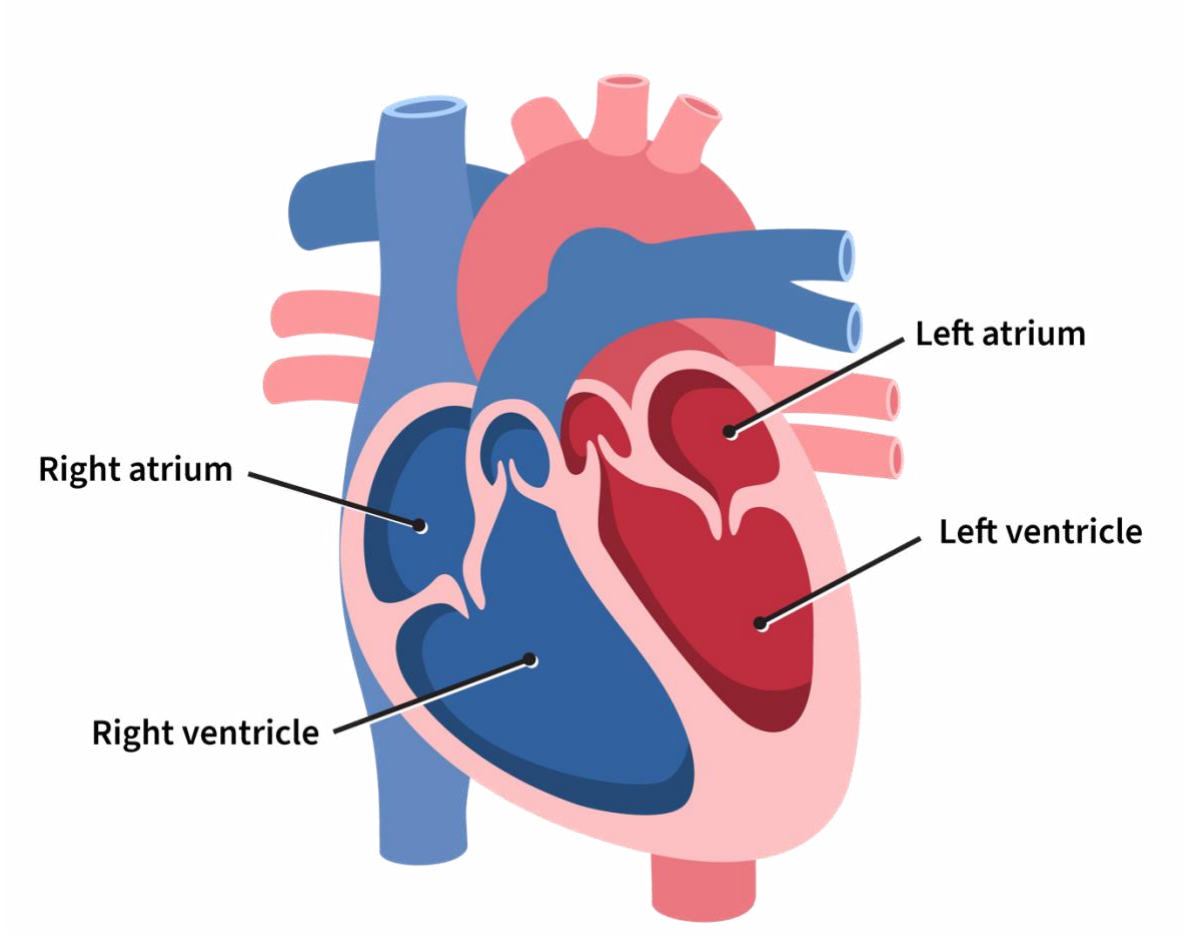
Potential causes of heart failure

- Heart attacks
- Blood clots or plaque in the arteries of the heart
- High blood pressure
- Alcohol or substance abuse
- Chemotherapy or radiation therapy
- Valvular heart disease
- Abnormal heart rhythms
- High blood glucose
- Family history
- Smoking
- Hyperlipidemia

Cardiac resynchronization therapy device

A cardiac resynchronization therapy (CRT) device is a specialized treatment for patients who continue to have heart failure symptoms despite being on heart failure medications. This also includes patients who experience a decrease in their heart function despite being on optimal medical therapy, and those who have conduction abnormalities on their electrocardiogram (ECG).

A CRT device has three wires (or leads) that are implanted in the heart. The first lead is positioned to pace the right atrium; the second lead is positioned to pace the right ventricle; and the third lead is positioned to pace the left ventricle. The CRT device sends electrical impulses through the leads to stimulate the left and right ventricles to pump in a coordinated fashion, which lets the heart work more efficiently. There are two types of CRT devices: CRT-P, which is a pacemaker only, and CRT-D, which is a pacemaker and a defibrillator. A visit with an electrophysiologist will help determine if a CRT is right for you.



Your participation is the key to managing heart failure!

- Take your medications as prescribed. Use a blister pack or a pill organizer to lower the risk of skipping or doubling up on a dose.
- Quit smoking and avoid second-hand smoke.
- Exercise! Some exercise is better than none, and more exercise is better than some. Try to exercise regularly, working up to 20-60 minutes at a time, 3-5 times a week.
- Avoid drinking alcohol. This is especially important if you have been told your heart failure is caused by the toxic effects of alcohol or if you are pregnant.
- Manage your blood glucose levels. Learn more about prediabetes and diabetes from Diabetes Central Ottawa at diabetesottawa.ca or 1-833-533-9487.
- Eat fewer salty foods.
- Weigh yourself daily.
- Know your signs of heart failure.
- Call your doctor if you have even one sign from the yellow zone in your Heart Failure Daily Weight Tracker/Stoplight Tool.

Smoking cessation

Tobacco

Tobacco products such as chewing tobacco, cigars, pipes, water pipes, and cigarettes impact the heart in several ways. The carbon monoxide in tobacco smoke forces your heart to work harder and prevents oxygen from circulating properly. The chemicals in tobacco damage the walls of the arteries in the heart, increasing plaque buildup.

Smoking and tobacco use also:

- Raise your LDL (**l**ousy) cholesterol.
- Lower your HDL (**h**ealthy) cholesterol.
- Speed up your heart rate.
- Increase your blood pressure.
- Make your blood sticky and more likely to clot.

If you use tobacco, you should quit.

- Quitting smoking is the most important thing you can do for your health.
- It is never too late to quit, and the benefits of quitting start in as little as eight hours.

Smoking is an addictive, habit-forming behaviour that is difficult to stop. Many people try to quit several times before they are successful. Taking part in a support program greatly increases your chances of quitting.

Vaping

While vaping is less harmful than smoking, it is not completely harmless. The long-term health effects of vaping are still unknown. Even with no combustion, heated vape liquids still produce toxic chemicals. Like smoking, vaping increases your heart rate and blood pressure and impairs normal blood vessel function. It also increases the risk of severe lung injury.

Cannabis

Cannabis use is not recommended for people with heart disease because it increases your heart rate and blood pressure. Cannabis may also interact with your medications, so speak with your doctor before using it and follow Canada's safe dosing guidelines. Above all, do not smoke it.

The UOHI's Quit Smoking Program provides one-on-one sessions with a nurse specialized in smoking cessation, who can offer you a plan tailored to your needs. Please visit us at ottawaheart.ca/quit-smoking-program for more information about our Quit Smoking Program.

Phone: 613-696-7069
Email: quitsmoking@ottawaheart.ca

Nutrition guide for heart failure

Following a low-sodium diet and limiting your fluid intake can help you feel better and improve the performance of your heart failure medications. A low-sodium diet may even keep you out of the hospital, but it is not an easy diet to follow. You may find eating with heart failure to be somewhat of a balancing act. While you do not want to eat too many high-sodium foods, you also need to make sure you are eating enough to maintain good nutrition.

Salt



The recommended salt intake is **2,500 mg** of sodium per day.

Salt is a mineral made of sodium and chloride. It is found in food, table salt, and sea salt. Sodium acts like a sponge, causing the body to retain water.

Eating too much sodium when you have heart failure may cause fluid to build up in your legs, stomach, and lungs, forcing your heart to work harder.

Most of the sodium we eat is hidden in foods. Even foods that do not taste salty can contain a lot of sodium.

You should restrict the amount of sodium you eat to 2,500 mg or less per day, depending on the restrictions issued by your doctor. Try to keep the sodium content of each meal to less than 600 mg. This helps spread out your sodium intake over the day to prevent excessive fluid retention.

There are a few things you can do to reduce the amount of sodium in your diet:

- Do not add salt when you cook or at the table.
- Learn to read food labels and choose more foods that are lower in sodium.
- Limit high-sodium foods.



DID YOU KNOW?
One teaspoon of salt is equal to 2,300 mg of sodium.
75% of the salt in the Canadian diet is hidden in processed foods.

How to read a food label for sodium content

Reading food labels is the best way to know how much sodium foods contain. The sodium content must be listed on the package; check the **Nutrition Facts** panel.

Follow these easy steps to read the label:



Nutrition Facts

Per 1/2 cup (125 mL)

Amount	% Daily Value
Calories 70	
Fat 0.5 g	**1** %
Saturated Fat 0 g + Trans Fat 0 g	**0** %
Cholesterol 0 mg	
Sodium 250 mg	**10** %
Carbohydrate 13 g	**4** %
Fibre 2 g	**8** %
Sugars 6 g	
Protein 2 g	

Vitamin A	1 %	Vitamin C	2 %
Calcium	0 %	Iron	4 %

Step 1: Look at the serving size.

Step 2: Look at the sodium per serving. Compare with the amount you will be eating.

Step 3: Choose foods with less than:

- 250 mg of sodium
- 10% of your daily value

This food contains 250 mg of sodium per ½ cup.

- This food follows the recommended guidelines.
- If you eat one cup of this food, you will be eating 500 mg of sodium.

Examples of low-sodium foods to choose



Fresh, frozen or canned fruit



Fresh fish and seafood



Fresh meats



Yogourt



Milk



Fresh & frozen vegetables



Canned beans and vegetables with no added salt or well rinsed



Lemon, oils & vinegars



Dried beans



Whole oats



Unsalted crackers



Eggs



Unsalted nuts and nut butters



Rice and pasta



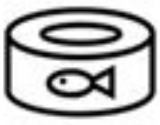
Herbs and spices



Onion and garlic



Homemade soup



Low sodium or well-rinsed canned fish



Bread



Frozen desserts

Examples of high-sodium foods to avoid


Salt/sea salt


Fast foods


Hot dogs/smoked meats


Pizza


Cheese


Canned pasta sauce


Sauces & seasonings


Snack foods


Salted crackers


Vegetable juice


Bouillon cubes or powders


Pickles/Olives


Restaurant food


Cold cuts (Ham)


Bacon


Sausages


Canned soups


Frozen meals


Salted nuts


Soy sauce

Tips for eating at home

- Reduce your salt gradually to give your taste buds time to adjust.
- Instead of adding salt to food when cooking or eating, season foods with fresh herbs and seasonings that do not contain salt.
- Avoid “instant” food that comes in a bag or a box.
- If you must eat canned foods, rinse well before cooking and eating.
- When grocery shopping, choose items from the outer aisles, where most of the fresh food is found.
- Plan your meals ahead of time (e.g., grill an extra chicken breast to use in sandwiches the next day).
- Make your own sauces or choose low-sodium versions.
- Make your own salad dressings using fresh garlic, herbs, olive oil, and vinegar.
- Add seasonings to soups during the last hour of cooking for maximum flavour.
- At the grocery store, choose items labelled “no salt added” or “low sodium.”

Finding low-sodium recipes

- Both Dietitians of Canada and the American Heart Association offer low-sodium cookbooks. The internet is also an endless source of low-sodium recipes.
  - Try searching for low-sodium versions of your favourite recipes.
  - Visit google.ca. Type “low-sodium recipes” into the search bar.
- Here are a few good recipe websites:
  - Dietitians of Canada: cookspiration.com
  - Unlock Food: unlockfood.ca
  - Heart and Stroke Foundation: heartandstroke.ca/get-healthy/recipes

Tips for eating out

- Ask for your food to be cooked without salt.
- Do not use the salt shaker.
- Avoid dishes with a lot of cheese or sauce.
- Avoid fried foods; choose grilled, baked, or steamed options instead.
- Choose oil-and-vinegar salad dressings.
- Avoid bacon, sausages, and ham.
- Ask for your food to be served without salty condiments or sides (e.g., avoid relish, mustard, ketchup, pickles, potato chips, sauces, and dressings). Ask for low-salt substitutions, such as tomatoes, cucumbers, lettuce, horseradish, oil and vinegar, and lemon.

- Eat as many fresh foods as possible, because they are naturally low in sodium. Order your vegetables or fish grilled instead of battered and deep fried.
- Ask for dressings and sauces on the side so you can control how much you eat.
- A quick rule of thumb for fast-food dining is to limit your sodium intake to 600 mg per meal. Most restaurants have a guide listing the sodium content of their food items.
- Bring half your meal home with you.
- If you cannot avoid eating the occasional high-sodium meal, cut down on the portion size and make low-sodium choices for your other meals that day. For example, if you are celebrating a holiday and know your dinner will be higher than usual in sodium, make sure to choose low-sodium options for your other meals that day.

Fluids

The recommended fluid intake for patients with heart failure is **1.5-2.5 L/day** but will be determined by your doctor, particularly if you have recently been admitted to hospital with heart failure.

When you have heart failure, your doctor might ask you to reduce the amount of fluid you drink in a day. Talk to your doctor to determine the right amount for you.

What if your doctor decides it is best to reduce your fluid intake?

Any food or drink that is liquid at room and body temperature is considered a fluid. These items should be counted towards your daily fluid intake:

- Water
- Milk
- Juices
- Soft drinks
- Tea
- Coffee
- Alcohol
- Soup
- Ice cubes
- Jell-O®
- Ice cream
- Sorbet

Tips to reduce fluid intake

- Drain excess liquid from canned fruit.
- Use smaller cups, bowls, and glasses.
- If you can, swallow your pills with soft food, like yogurt or applesauce.
- Sip your fluids slowly.

Thirsty?

- Snack on a small piece of cold or frozen fruit, such as a frozen grape or cold orange slice.
- Brush your teeth often.
- Rinse your mouth with chilled, alcohol-free mouthwash.
- Suck on hard candies or chew gum; try sugar-free varieties.
- Add a few drops of lemon juice to your water.
- Use lip balm to keep your lips from drying out.
- Ask your pharmacist about artificial saliva.

Track your fluids

Measure your fluid intake over 24 hours until your fluid limit becomes routine. Fill a pitcher with water to equal your total daily fluid allowance. Every time you drink fluid, pour out an equal amount of water from the pitcher. The amount of water remaining is your fluid allowance for the rest of the day.

If your appetite is poor

Sometimes, when you are feeling sick, your appetite can decrease. You may lose muscle weight quickly and without trying. If you think this is happening, let your doctor know. You might need to be referred to a registered dietitian.

Here are some things that can help if your appetite is poor:

- Eat smaller meals more often; try eating every 2-3 hours.
- Eat more food when your appetite is strongest.
- Make every bite count. Eating half your meal is better than eating nothing.
- Eat nutritious snacks. Some ideas include whole grain crackers and peanut butter or hummus, a piece of fruit and some cheese, frozen berries with granola and plain Greek yogurt, or an egg-, chicken- or tuna-salad sandwich.
- Choose milk, milkshakes, yogurt beverages, or oral nutritional supplements, such as Ensure®, instead of low-energy fluids such as water, broth, tea, or coffee.

- Have easy-to-prepare meals and snacks on hand for when you do not feel like cooking. Suggestions include granola bars, unsalted nuts, Greek yogurt, pudding, or hummus and crackers.
- Think about using a meals-on-wheels service or ask friends and family to help you with grocery shopping and cooking.
- Add fats and oils at each meal. Top your salads, vegetables, pasta, or rice with a few teaspoons of liquid oil, such as olive or canola. Spread margarine or butter on your bread, vegetables, and potatoes. This will boost the calorie content of your food.
- If you are not eating a lot, make sure you are eating foods that are higher in calories. Avoid reduced-fat foods such as those labeled “light,” “low fat,” or “fat free.”
- Try adding powdered milk to your soups, breakfast cereal, puddings, or scrambled eggs for extra protein.

Heart failure medications

Your doctor has carefully chosen your medications and dosages based on your current condition. It is important to recognize not all patients with heart failure take the same medications.

Type of medication	Name of medication	Why you are taking this medication	Potential side effects
ACE (angiotensin-converting enzyme) inhibitors Drugs ending with "-pril"	Enalapril (Vasotec®) Lisinopril (Zestril®) Perindopril (Coversyl®) Ramipril (Altace®) Trandolapril (Mavik®)	Dilates (widens) blood vessels. Improves heart function. Improves symptoms. Helps people live longer. Reduces hospitalizations to treat heart failure.	Cough. Dizziness, light-headedness. Increased blood potassium level.
ARBs (angiotensin II receptor blockers) Drugs ending with "-sartan"	Candesartan (Atacand®) Valsartan (Diovan®)		Dizziness, light-headedness. Headache. Increased blood potassium level.

Type of medication	Name of medication	Why you are taking this medication	Potential side effects
ARNIs (angiotensin receptor-neprilysin inhibitors)	Sacubitril/valsartan (Entresto®)	Dilates (widens) blood vessels. Helps the body get rid of extra salt and water. Helps people live longer. Reduces hospitalizations to treat heart failure.	Dizziness, light-headedness. Dry cough. Increased blood potassium level.
Beta-blockers Drugs ending with "-lol"	Bisoprolol (Monocor®) Carvedilol (Coreg®) Metoprolol (Betaloc®, Lopressor®)	Improves symptoms. Helps people live longer. Reduces hospitalizations to treat heart failure. Lowers blood pressure and heart rate.	Fatigue/tiredness. Dizziness, light-headedness. Wheezing.

Type of medication	Name of medication	Why you are taking this medication	Potential side effects
MRAs (mineralocorticoid receptor antagonists)	Spironolactone (Aldactone®) Eplerenone (Inspra®)	Blocks a hormone, helping the kidneys get rid of fluid and salt and hold onto potassium. Helps people live longer. Reduces hospitalizations to treat heart failure.	Increased blood potassium level. Breast enlargement/ tenderness (only spironolactone).
SGLT2 (sodium-glucose cotransporter-2) inhibitors	Canagliflozin (Invokana®) Dapagliflozin (Forxiga®) Empagliflozin (Jardiance®)	Decreases reabsorption of sugar in the kidneys. Promotes sugar loss through the urine. Improves cardiovascular health and survival.	Bladder infections. Vaginal yeast infections. Rash/redness of the penis/foreskin. Do not take if unable to eat regular meals or drink fluids.

Type of medication	Name of medication	Why you are taking this medication	Potential side effects
I_f current inhibitor	Ivabradine (Lancora®)	Slows down heart rate, which can improve symptoms. Reduces hospitalizations to treat heart failure.	Vision changes with light. Blurred vision. Dizziness. Headache. High blood pressure.
Soluble guanylate cyclase (sGC) stimulators	Vericiguat (Verquvo®)	Helps relax and widen the blood vessels in the heart, allowing the heart to pump more blood and oxygen through the body. Reduces hospitalizations to treat heart failure.	Low blood pressure. Low red blood cells (anemia).

Type of medication	Name of medication	Why you are taking this medication	Potential side effects
H-ISDN (vasodilator)	Hydralazine (Apresoline®) Nitrates: • Isosorbide dinitrate (Isordil®, ISDN) • Isosorbide mononitrate (Imdur®, ISMN) • Nitroglycerin patch (Minitran®, Nitro-Dur®, Trinipatch®)	Lowers your blood pressure. Reduces hospitalizations to treat heart failure.	Headache. Dizziness.
Digitalis	Digoxin (Lanoxin®, Toloxin®)	Strengthens the heart's pumping action. Improves symptoms. Reduces hospitalizations to treat heart failure. Slows the heart rate in atrial fibrillation.	Nausea/vomiting.

Many of these drugs are also available as combination pills (e.g., perindopril and indapamide, candesartan and hydrochlorothiazide, spironolactone and hydrochlorothiazide). If your medication is not listed here, or if you want more detailed information about your specific medications, ask your pharmacist.

Managing your medications safely

When you are discharged, you will be given a prescription for your new medications.

1. Make sure your doctor knows all the medications and supplements you were taking previously, so you can both feel confident that you are getting the right prescription.

2. When you receive the prescription, make sure you ask:
   - The name of the medication.
   - Why it is being prescribed.
   - When and how it should be taken.
   - How long you will need to take it for.
   - What side effects you should expect.
   - What you should do about the side effects.

3. When you pick up your prescription, ask your pharmacist to:
   - Explain the best way to take the medication.
   - Explain what is written on the labels.
   - Provide written information about the medication.

4. Try to use the same pharmacy for all your prescriptions. It is important for your pharmacist to have a complete list of all your medications so they can evaluate whether all your medications can be taken together safely.

5. Carry your list of medications with you. Make sure it includes:
   - All your medications, as well as any vitamins, supplements, and herbal supplements you are taking.
   - Your allergies, immunizations, and pharmacy phone number.

6. Review the list regularly with your doctor or pharmacist.

7. If you have trouble remembering to take your medications, the following tips are “tried and true”:
   - Take your medications at the same time each day.
   - Associate taking your medications with daily activities like brushing your teeth, mealtimes, or bedtime.
   - Use a pill organizer with different compartments for different times of the day.
   - Ask your pharmacy if they can organize your pills in blister packs.
   - Keep a one-day supply of your medications in your handbag or at the office.
   - If your medications are complicated, ask your doctor if something simpler can be prescribed.
   - Make a note on your calendar to remind you to pick up your prescription refills.

8. Do not store your medications in hot or humid places, such as the bathroom or the glove compartment of your car. These conditions will shorten the lifespan of your medications.

9. Take your medications as prescribed by your doctor. If you have concerns about taking medications, discuss them openly and honestly with your doctor. If you experience troublesome side effects, your doctor may be able to prescribe a different kind of medication.

10. Always ask your doctor or pharmacist before taking any medications or herbal products you can buy without a prescription. Over-the-counter medications include pain relievers, antacids, laxatives, and cough medicines.
    - Nonsteroidal anti-inflammatory drugs (NSAIDs), such as **ibuprofen (Advil®, Motrin®)** and **naproxen (Aleve®)**, may worsen your symptoms and/or make your prescription medication less effective.
    - **Acetaminophen (Tylenol®)**, regular or extra strength, is safe to take for general aches and pains.

11. With certain medications, your doctor may request blood tests to check the functioning of your kidneys and the levels of sodium and potassium in your blood.

12. If you are worried about the cost of your medications, ask your doctor if less expensive substitutes are available, or check with the Trillium Drug Program for possible assistance:
    - Phone: 1-800-575-5386
    - Website: ontario.ca/page/get-help-high-prescription-drug-costs

If you have diabetes or prediabetes

How glucose affects your heart

Type 2 diabetes is a progressive disease. Even before you are diagnosed with diabetes, you may have high blood glucose (blood sugar) levels after you eat. This is called prediabetes. This can lead to insulin deficiency. Insulin is a hormone that unlocks the body's cell doors so that glucose can be let in as fuel. Abnormal blood glucose levels lead to an inflammatory response in the vessel walls. This can allow plaque to build up in the arteries (atherosclerosis), which may cause instability and plaque rupture.

How to keep your blood glucose levels healthy

- Take your medications as prescribed by your doctor.
- Join a diabetes education program to learn how to manage glucose.
- Monitor and track your blood glucose.
- Try to eat a healthier diet.

- Be active every day and follow your physical activity plan.
- Work towards your personal “best” weight while living a healthy lifestyle.
- Visit your family doctor or diabetes specialist regularly.

Meal-planning tips

- Eat three meals per day at regular times, and space meals no more than six hours apart. Eat a healthy snack if meals are more than four to six hours apart.
- Eat breakfast every day.
- Limit sugars and sweets, such as soft drinks, fruit juice, desserts, candies, jam, syrup, and honey.
- If you are thirsty, drink water or sugar-free drinks. Drinking regular soft drinks and fruit juice will raise your blood sugar. Remember to follow the fluid limits prescribed by your doctor.

More information about diabetes and prediabetes

It is natural to have questions about what foods to eat. A registered dietitian can help you make healthier food choices.

If you have diabetes and are taking insulin, speak with your family doctor. You may need to see an endocrinologist.

Find a community diabetes education program near you

- **Diabetes Central Ottawa:** diabetesottawa.ca or call 613-238-3722
- **Diabetes Québec:** diabete.qc.ca/en (province of Quebec)
- **Diabetes Canada:** 1-800-BANTING (226-8464) or email at info@diabetes

Heart failure and physical activity

Exercise is an important part of controlling your heart failure. Regular physical activity helps you to:

- Feel less tired.
- Feel less short of breath.
- Sleep better.
- Manage glucose levels.
- Have more energy to do what you love.
- Feel happier.
- Have less difficulty with daily activities.
- Feel more confident and in control.

How to start a walking program

Exercise should be fun, easy to do, and become part of your everyday life. Walking is one of the best exercises for improving your health. Begin with short periods at a slow pace. Gradually increase the length of time before increasing your speed. Below are some suggested options:

Option 1

	Duration of walk
Week 1-2	5-10 minutes per day
Week 3-4	10-15 minutes per day
Week 5-6	15-20 minutes per day
Week 7-8	20-30 minutes per day

Option 2

If you are unable to walk for five minutes without stopping, you would benefit from interval training. Alternate two to five minutes of walking with two to five minutes of rest. Repeat this pattern as many times as you can. Gradually decrease the amount of time you rest between intervals.



Aim to work up to 20-30 minutes daily, as you are able.

Exercise guidelines

- Light conversation should be possible while exercising.
- Do activities that you enjoy or can pair with something you enjoy doing. For example, listen to your favourite music as you walk, listen to a podcast or an audiobook, or watch a TV show while walking on a treadmill or riding a stationary bike.
- Start/finish with a warm-up/cooldown (e.g., slower walking, seated or standing exercises).
- Walk on level ground and avoid hills.
- Wait at least one hour after a meal before exercising.
- Exercise at a time of day when you feel rested, generally in the morning rather than the afternoon.
- Avoid extreme heat or cold. Consider walking indoors in a mall, using a treadmill (with no incline), or riding a stationary bike (with little or no tension).
- If you have been asked by your doctor to limit your fluid intake, count the liquids you drink during exercise as part of your daily allowance.
- Avoid heavy lifting or pushing.
- Avoid activities that involve positioning your arms above your head.
- Avoid exercises that cause you to strain, grunt, or hold your breath.
- You should reach your resting state within 10 minutes of stopping. If not, reduce the time or intensity the next time you exercise.

When to stop an activity

Always listen to your body. Any of the symptoms below are signs you should stop and rest:

- Shortness of breath while carrying on a conversation.
- Weakness or dizziness.
- Feeling sick to your stomach (nauseated).
- A pounding or racing heartbeat.
- Discomfort.

If these symptoms persist, call 9-1-1.

Tips for staying active

- Include a variety of activities you enjoy.
- Any amount of activity is better than none.
- Stick with it until it becomes a habit.
- Wear comfortable clothing and shoes.
- Invite a friend to join you for a walk.
- Schedule exercise into your day.
- Set reasonable goals for yourself.
- Keep an exercise journal to track your progress.

How to balance activity and rest

If you are tired the day after an activity, you probably tried to do too much. The following strategies can help you save energy for the activities you plan to do in the following days or week.

- **Prioritize.** Consider which tasks can be done by someone else or removed from your schedule. Learn to recognize your personal limits.
- **Plan.** Space out activities. Alternate easy activities with ones that are more demanding. Do activities that require the most energy at the time of day when you are feeling your best. Some people find they can do more if they rest for an hour during the day. Napping, listening to music quietly, or reading a book are all examples of restful activities. Consider it catch-up time for your heart.
- **Pace.** Break down hard jobs into smaller tasks and take regular breaks. Learn to anticipate fatigue so you can rest before you feel tired.
- **Position.** If you sit to perform a task, you will use 25% less energy than if you stand. Avoid unnecessary bending or overhead reaching.

A good night’s sleep

Sleep is important to your well-being. The following will help you sleep well at night:

- Limit daytime sleep to one hour so it does not impact your sleep at night.
- Take your water pill before 5 p.m. to reduce your need to wake up to use the bathroom.

If you are not sleeping well, mention this to your doctor as it might require further investigation.

Sexual activity

It is normal for people with heart failure (and their partners) to feel anxious about resuming sexual activity. Sexual activity is not dangerous for your heart. In general, if you can walk up two flights of stairs or walk briskly, you can resume your regular sexual activity. The following tips may be helpful:

- Engage in sex when you are well rested and relaxed.
- Avoid sex after eating a big meal or drinking alcohol.
- Have sex in a comfortable room that is not too hot or too cold.
- Choose less strenuous positions and techniques.

Returning to work

Not everyone who is diagnosed with heart failure needs to stop working. In fact, continuing to work may help both your health and your mood by keeping you challenged, letting you spend time with other people, and maintaining your income. However, it is usually best to wait until your symptoms are stable and your medications have been optimized before considering a return to work.

The type of work you do will also affect your decision to return to your job. You are more likely to return to your job sooner if you work at a desk than if you have a physically demanding position. It may also be more difficult to return to a job that is mentally demanding or stressful. It is always a good idea to return to work gradually. It will be less tiring if you can start working part time, at least at the beginning.

Your doctor or career counsellor can help you decide if you are ready to go back to work and capable of performing your regular duties safely. These professionals, as well as a social worker, can help you file for disability insurance and benefits from your employer, or for social assistance if your doctor decides that you are unable to return to work.

Emotions associated with heart disease

Patients with heart disease may experience a variety of emotions after being diagnosed or treated for the disease. For example, more than two-thirds of patients may experience anxiety, depression, confusion, memory problems, irritability, and/or anger in the weeks or months after bypass surgery.

Emotional reactions are influenced by several factors (e.g., work or family stress, type of heart problem or treatment, medication side effects, poor sleep, emotional health before being hospitalized).

Understanding your health condition and treatment, participating in cardiovascular rehabilitation, engaging in exercise, and talking about your experience with peers, significant others, and/or health professionals are all things that help with recovery.

Do not hesitate to call the UOHI Cardiac Rehabilitation Centre (613-696-7068) for information about programs that might help (e.g., Stress Management, Managing Emotions, and Women@Heart programs).

The good news is that, for most patients, these overwhelming emotions resolve over time. For some people, however, emotions such as depression and anxiety persist, but they can be managed.

Depression

Depression is an understandable and common reaction among people with heart problems. About one in five patients (20%) experience clinical (or major) depression. If you are experiencing at least five of the symptoms listed below for a two-week period or longer, you may be developing depression and may need to speak to your doctor, nurse, or mental health professional.

- Sad feelings
- Loss of interest in activities that you usually enjoy
- Changes in appetite
- Significant unintentional weight loss or weight gain
- Sleep problems
- Loss of energy
- Difficulties with concentration or memory
- Decrease in normal social activities or withdrawing from friends and family
- Feelings of worthlessness, helplessness, or hopelessness
- Changes in sexual desire
- Thoughts about death or suicide

How depression affects your heart

Depression can affect your heart in two ways: directly and indirectly. Depression affects your heart directly by increasing the risk of blood clots, plaque buildup, and atherosclerosis. Depression also negatively affects your immune system, so you are less able to fight off germs and viruses.

Depression can affect your heart indirectly by influencing some of the decisions you make. People with depression often find it difficult to make healthy choices about quitting smoking, exercising, eating, or taking medications as prescribed. They may also find it difficult to find the drive or energy to make healthy lifestyle changes.

Anxiety

Anxiety is one of the most distressing emotions that people feel. At some point in time, most cardiac patients will experience varying degrees of fear or nervousness related to their health condition.

Anxiety describes a number of problems including generalized anxiety (a combination of worries felt most of the time), panic attacks (intense and sudden feelings of anxiety when people may feel like they are going to die), and posttraumatic stress disorder (repeated memories of traumatic experiences with high levels of fear). Like depression, about one in five patients living with heart disease experience significant anxiety symptoms. These symptoms may include:

- Uncontrollable worry
- Feeling “on edge” or restless
- Feeling irritable
- Muscle tension
- Light-headedness
- Sleep problems
- Being easily fatigued
- Difficulty breathing
- Increased heart rate
- Headaches
- Sweating
- Gastrointestinal (stomach) problems

How anxiety affects your heart

Anxiety may play a role in cardiac problems by increasing the risk of an irregular heartbeat and triggering spasms; both of these responses may lead to cardiac complications. Anxiety may also lead to unhealthy behaviours such as smoking, overeating, poor sleep, and decreased physical activity.

What to do if you are feeling depressed or anxious

Talk to your doctor or a mental health professional (social worker, psychologist, or psychiatrist) about proven treatments for depression and/or anxiety.

Participate in a cardiovascular rehabilitation program, which has proven benefits for both physical and mental health.

Check out our Top 10 Tips for Healthy Sleep and Top 10 Tips for Emotional Health at ottawaheart.ca/rehab-top-10-tips. Getting a good night's sleep helps you manage your emotions.

Websites

- Canadian Mental Health Association: cmha.ca
- Canadian Psychological Association: cpa.ca
- Anxiety Canada: anxietycanada.com

Cardiovascular rehabilitation

Your next step to a heart-healthy lifestyle

What is cardiovascular rehabilitation?

Cardiovascular rehabilitation (CR) is a program made up of education, exercise, counselling, and support that will help you to make healthy living a part of your everyday life. The program also helps you understand how to take care of your own heart health after leaving the hospital, which can help prevent a future hospitalization and reduce your chances of having another cardiac event.

You can choose from a variety of programs that will be personalized to meet your needs. Our programs are offered by phone, computer, and in person at the Heart Institute.

For those living outside of Ottawa, the Heart Institute partners with several cardiovascular rehabilitation programs throughout the Eastern Ontario region. These programs allow patients to access services closer to home.

To see a list of programs and their contact information, read our brochure (ottawaheart.ca/cardiovascular-rehabilitation-brochure), visit the website (ottawaheart.ca), or call the Heart Institute Cardiovascular Rehabilitation program and ask about the program nearest to you: 613-696-7068.

Your cardiovascular rehabilitation appointment



If your cardiovascular rehabilitation appointment is not indicated in your discharge letter, please contact us as soon as you are discharged from hospital at 613-696-7068.

Free webinar: While you wait for your cardiovascular rehabilitation program

"While You Wait for Your Cardiovascular Rehabilitation Program" is a free webinar open to anyone who wants to learn more about cardiovascular rehabilitation and what to do at home before starting a CR program. It is taught by a registered nurse and a physiotherapist. Classes are available weekly, online, and by telephone. No registration required. You can confirm the meeting time and video link (if applicable) on the Heart Institute's online event calendar. Visit ottawaheart.ca/calendar.

Heartwise exercise

Phone: 613-696-7387
Email: HeartWise@ottawaheart.ca
heartwise.ottawaheart.ca

HeartWise Exercise partners with community organizations to develop programming and designate facilities, programs, and classes where individuals can exercise regularly to prevent or limit the effects of living with a chronic health condition. Ideally, this program would supplement a formal cardiovascular rehabilitation program, but could also be an alternative if cardiovascular rehabilitation is not an option.

There are a variety of HeartWise Exercise program options to choose from. Select the program that suits your needs. There are walking programs, free exercise options, and a variety of gym settings. All programs offer training workshops and have a defibrillator onsite. To find a location near you, visit the Locations tab of the HeartWise Exercise website: heartwise.ottawaheart.ca/locations.

For family and caregivers

How family members and caregivers feel

When a loved one is diagnosed with heart failure, it can also have a big emotional impact on family members and caregivers, who may feel frightened, angry, and even guilty.

At any time during your hospital stay, it is important to discuss these feelings with a doctor or a nurse. We can help you get support from an advanced practice nurse, clergy member, social worker, or other healthcare professional who specializes in providing families with this type of emotional support.

At any time of the day or night, you can speak with a nursing coordinator who can help answer your questions and provide support.

Caring for yourself

As a caregiver, it is important that you take time to look after yourself. You need to get proper nutrition and rest both during and after the hospital stay. The additional stress of supporting your loved one through a cardiac event can make you even more tired and possibly more susceptible to catching a cold or other illness.

Sometimes family members feel obliged to be with their loved one around the clock at the hospital. But this is actually the best time for you to get some rest and prepare for your family member to return home. Rest assured that the attending doctor or nurse will contact you if there is any change in your loved one’s condition.

Helpful tips for family members and caregivers

- Take care of yourself.
- Seek and accept outside help.
- Do things that you enjoy.
- Connect with others through support groups.
- Stay informed and organized.
- Bond with your loved one.
- Be open to change.
- Talk about and plan for the future.
- Acknowledge your strengths.

Glossary

Here is a glossary of common terms used when discussing heart failure with your healthcare team.

Arrhythmia: An irregular heart rhythm that can originate in the upper chambers (atria) or lower chambers (ventricles) of the heart.

Atrial fibrillation: A heart rhythm disorder that causes the upper chambers (atria) to beat out of sync, resulting in an irregular and sometimes fast heartbeat.

Cardiomyopathy: A general term meaning there is something wrong with the heart (cardio-) muscle (-myopathy). When the cause is known, another term may be added, for example, viral cardiomyopathy (heart muscle damage due to a virus) or hypertensive cardiomyopathy (damage due to high blood pressure, or hypertension). Dilated idiopathic cardiomyopathy refers to a heart that is enlarged (dilated) and weak, due to an unknown cause (idiopathic).

Congestive heart failure (CHF): A term or diagnosis used commonly in the past to describe heart failure. Because not all patients with heart failure are congested, the term “heart failure” is preferred today.

Coronary artery disease (CAD): A disease caused by blocked or clogged heart arteries leading to poor blood supply to the heart.

Diastole: The relaxing of the heart muscle as it fills up with more blood and prepares for the next heart contraction, or squeeze (see systole).

Echocardiogram (ECHO): A test that uses ultrasound to look at the size, structure, and function of the heart.

Edema: Fluid under excessive pressure that leaks out of the blood vessels into the surrounding tissue. Edema is commonly seen in the lower legs and in the tissues of the lower back and belly. When this fluid leaks into the lung tissue, it can be heard through a stethoscope; this is called “crackles” or “rales.”

Electrolyte panel: A blood test that measures sodium, potassium, and chloride. This test is required and repeated frequently if you are on a drug that decreases potassium (e.g., furosemide, or water pill) or increases potassium (e.g., spironolactone).

Heart failure with mid-range EF (HFmEF): Left ventricle ejection fraction (EF) of 41-49%.

Heart failure with preserved EF (HFpEF): Left ventricle EF 50% or higher. This type of heart failure occurs when the left ventricle becomes stiff and loses its ability to relax. This results in the heart not being able to fill with blood during the resting period between each heartbeat.

Heart failure with recovered EF (HFrecEF): Patients who have previously had HFrEF and now have an EF greater than 40%.

Heart failure with reduced EF (HFrEF): Left ventricle EF 40% or less. This type of heart failure results in a reduced EF. It happens when the left ventricle loses its ability to pump blood with enough force to the rest of the body.

Hemoglobin A1C (HbA1C or A1C): This non-fasting blood test measures the percentage of glucose, or sugar, that has “stuck” to your red blood cells over the past three months or 120 days. The HbA1C level is used to diagnose diabetes: normal = HbA1C at less than 6%; prediabetes = HbA1C at 6.0 to 6.4%; and diabetes = HbA1C at 6.5% or more.

Hyperlipidemia: Another term for high cholesterol. This is when you have a high amount of lipid/fats in your blood.

Multigated acquisition (MUGA) scan: A nuclear imaging test that helps determine the ejection fraction, or pumping ability, of the heart.

Myocardial infarction (MI): The medical term for a heart attack. The cause is a blocked coronary artery that prevents blood from reaching the heart muscle.

Orthopnea: The sensation that breathing is difficult when you lie flat. The doctor may ask you how many pillows you need to lie in bed comfortably without being short of breath.

Paroxysmal nocturnal dyspnea (PND): Dyspnea is the sensation of being short of breath. PND is the sensation of shortness of breath that occurs suddenly (paroxysmal) at night (nocturnal). People with heart failure accumulate extra fluid that is pushed into the tissues (feet, legs, and belly) during the day. At night, when they lie down, this extra fluid can back up into the lungs and cause congestion. Typically, PND occurs 30 to 60 minutes after lying down. A patient may wake up coughing and gasping and may have to sit on the side of the bed to recover.

Right-sided heart failure: This type of heart failure means that the right side of the heart is not pumping blood to the lungs as well as it should. When the right side loses pumping power, blood can back up into the body causing swelling of the legs, ankles, or stomach.

Systole: The contraction of the heart as it squeezes blood out of the ventricles (the two lower chambers of the heart) to the major organs and tissues in the body.

Systolic heart failure: A pumping problem in which the left side of the heart does not pump enough blood to the organs in the body. This is due to a weak muscle.

Target weight: Refers to a “dry” weight when there are no signs of fluid retention in the tissues. Often the hospital discharge weight can be used as a guide.

Resources

Library and resources: Check out the Heart Institute's Prevention & Wellness Centre library located on the second floor.

Visit these websites

University of Ottawa Heart Institute: ottawaheart.ca

- **Heart failure videos:** In the online Heart Failure Patient Guide at ottawaheart.ca/heart-failure-patient-guide
- **Prevention & Wellness Centre:** Click on "Prevention & Wellness"

Canadian Heart Failure Network: chfn.ca

- Click on "Patients and Caregivers"

American Association of Heart Failure Nurses: aahfn.org

- Click on "Patient Education"

Heart Failure Society of America: hfsa.org

- Click on "Education" > "HF Educational Modules on Heart Failure"

Heart and Stroke Foundation of Canada: heartandstroke.ca

- Click on "Health Information" > "Healthy Living"

Diabetes Canada: diabetes.ca

Community Diabetes Education Program of Ottawa: diabeteseducation.ca

An invitation to the Heart Failure Support Group

The Heart Failure Support Group is free and open to all patients diagnosed with heart failure and their support person. The meetings are an opportunity to interact with other heart failure patients in an informal setting. While this group is designed to allow individuals to share their stories, many sessions feature guest speakers on a variety of heart-health topics who will be available to answer questions.

The exact dates and times are listed on the calendar on our website: ottawaheart.ca/calendar.

Contact: hfsupport@ottawaheart.ca

Women’s heart health

Women’s experience with the management of their health differs from men in many important ways, and heart health is no exception.

Women face a unique array of risk factors predisposing them to heart and vascular disease. In addition to risk factors, such as diabetes, smoking, high cholesterol, physical inactivity, stress and anxiety, and hypertension, women are vulnerable to heart disease due to menopause, pregnancy-related complications, and potentially certain birth control medications.

Women may also experience a distinctive set of symptoms that often go unrecognized. For instance, women are more likely than men to have heart attack symptoms unrelated to chest pain, such as neck pain, jaw pain, shoulder pain, upper back or abdominal discomfort, unusual fatigue, nausea, shortness of breath and more.

As a result, women are less likely to recognize the signs of heart disease and to seek help early. Ongoing research continues to evaluate diagnosis, treatment, and prevention strategies tailored to the unique needs of women.

Know your connections

Provided with the right resources and actions, it is possible to prevent heart disease or improve the outcomes of your diagnosis, allowing you to lead a healthy life.

Women’s Heart Health Clinic

The **Women’s Heart Health Clinic** at the University of Ottawa Heart Institute (UOHI) aims to guide women toward understanding their risk factors, symptoms, treatments, and outcomes.

The clinic assesses patients with microvascular coronary artery disease, myocardial infarction with non-obstructive coronary arteries (MINOCA), ischemic heart disease without any occlusion of coronary arteries (INOCA), spontaneous coronary artery dissection (SCAD), unexplained chest pain; it also evaluates the cardiovascular risk in women with hypertensive disorders of pregnancy or gestational diabetes.

If you wish to be seen at the Women’s Heart Health Clinic, speak with your doctor about obtaining a referral.

Cardiovascular Rehabilitation Program

Following a cardiac event, cardiovascular rehabilitation is the next step on the road to recovery. You are eligible to take part in the **Heart Institute's cardiovascular rehabilitation** program if you are a patient who has had a cardiac event, such as a heart attack, coronary artery bypass graft (CABG) or other heart surgery, heart failure, heart transplant, angioplasty, and others.

Please visit our website to learn more: ottawaheart.ca/cardiac-rehabilitation-program.

Canadian Women's Heart Health Centre

A lack of social support after a cardiac event affects prognosis, particularly in women. The **Canadian Women's Heart Health Centre** at the UOHI also offers the **Women@Heart** program, a peer support program led by women with heart disease, for women with heart disease.

Women@Heart provides women with heart disease, in every community, with access to emotional support, educational support, and a caring environment for a better recovery after a cardiac event. You do not need a referral from a doctor to participate in the Women@Heart program. If you are interested in participating, please visit our website: cwhhc.ottawaheart.ca/womenheart-program.

You can also join the Women's Heart Health Clinic's patient education groups virtually. Each session focuses on a specific subject pertaining to women's heart health and is presented by specialists. To register, please call 613-696-7000, extension 15429.

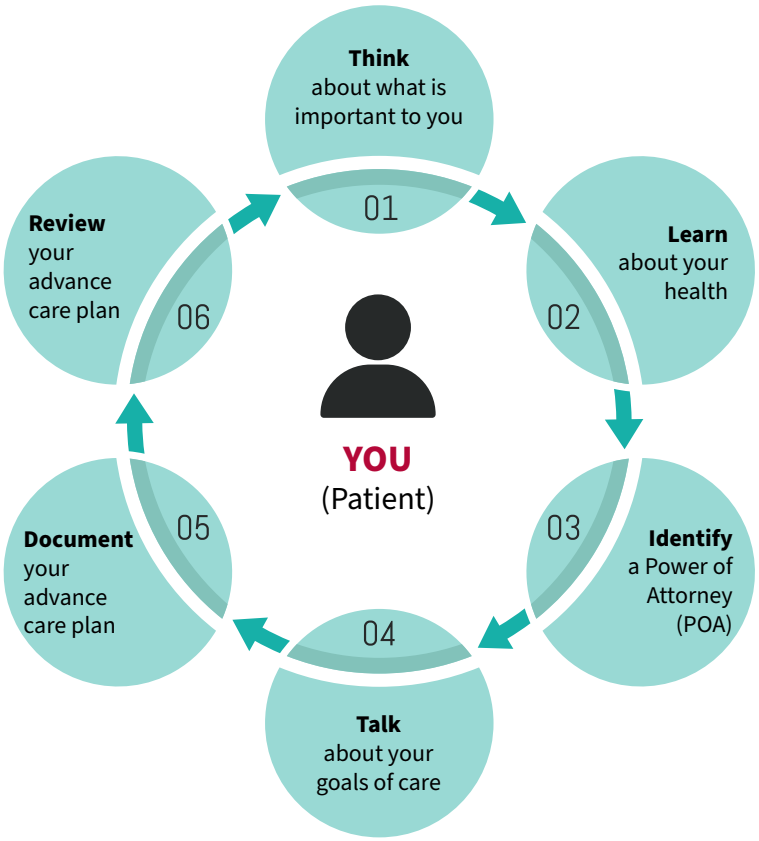
What you need to know about advance care planning

Advance care planning is the process of thinking about and planning for future medical care. Early advance care planning reduces hospitalizations and visits to the emergency room and improves quality of life and decision-making at the end of life.

There is no pressure to make a final decision today, or all at once. Rather, the advance care planning process is designed to help patients and their families express their values and preferences for medical treatments needed in the future.

The six steps to advance care planning

1. **Think.** Prepare to make decisions as situations arise. This is decisional readiness. While you are healthy and well, think about what you might want if you were to become unwell. Understand your preferences may change over time.
2. **Learn.** Consider your individual and overall health, as well as your preferences regarding major decisions, such as cardiopulmonary resuscitation and intensive care admission.
3. **Identify.** Designate a substitute decision-maker or power of attorney and involve this person early and often throughout the advance care planning process.
4. **Talk.** Although you may find these conversations difficult, the earlier and more often you have them, the better your substitute decision-maker or power of attorney is positioned to help you when you need it. You can start these conversations any time. You should also tell your health care team about your goal of care decisions.



5. **Document.** Record your goals of care, the name and contact information of your substitute decision-maker or power of attorney, and your wishes for major health decisions. Refer to the Speak Up campaign (advancecareplanning.ca) or the Plan Well Guide (planwellguide.com) for help.
6. **Review.** You may change your mind about your advance care plans at any time. Review your decisions to ensure they align with your goals of care.

Heart Institute Patient Alumni

We can help. We've been there.

The Patient Alumni is a diverse community of current and former University of Ottawa Heart Institute patients, their families, friends and caregivers. We support the Heart Institute by sharing information about the prevention and treatment of heart disease, and by helping to fund projects and services to improve patient comfort and care. By joining the Alumni, you will become part of a very unique community!

The Heart Institute is the only hospital in Canada that has formed an alumni group to stay in contact with discharged patients and their families. For over 40 years, the Heart Institute has delivered world-class care to thousands of patients. Our goal is to stay in touch, stay informed, and contribute to the Institute's quality of care and future success.

Why join the Alumni?

Joining is free, thanks to the partnership and financial support of the Heart Institute and its fundraising Foundation.

As an Alumni member, you'll get up-to-date information through our:

- E-letters
- Websites
- Lectures, courses, and special events

For more information and access to free membership, visit our website:
https://ottawaheartalumni.ca/

Or contact us at:
Email: alumni@ottawaheart.ca
Tel: 613-696-7241

UNIVERSITY OF OTTAWA HEART INSTITUTE
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PATIENT ALUMNI
ASSOCIATION DES ANCIENS PATIENTS

