



Heart

Heart failure

Also called congestive heart failure

What is heart failure?

Heart failure is a chronic condition caused by the heart not functioning as it should or a problem with its structure. It can happen if the heart is too weak or too stiff, or both. This can lead to fatigue, swelling in the legs and abdomen and shortness of breath which can be from fluid in the lungs.

It is estimated that about 750,000 Canadians are living with heart failure.

Congestive heart failure is on the rise as more people survive heart attacks and other acute heart conditions. As people with damaged hearts are living longer, they become more susceptible to heart failure.

Heart failure is a serious condition. There is no cure. However, with lifestyle changes and treatment options, you can manage your condition very well. Many patients can lead a full and normal life. Learning about your heart failure is an important first step in managing your condition.

Causes

Heart failure has many causes or underlying risk factors. The most common are damage to the heart muscle caused by a **heart attack** (myocardial infarction) and **coronary artery disease**.

Another common cause of heart failure is **high blood pressure** (hypertension). If left undiagnosed and untreated for a long period, high blood pressure can lead to heart failure. It is important to get your blood pressure checked at least once every two years or more often if your physician recommends you do so.

Less common causes include:

- heart valves that are not working properly by being too narrow or leaky (**heart valve disease**)
- **congenital heart disease**
- infection causing inflammation of the heart muscle (myocarditis)
- heart muscle disease of unknown causes
- **heart rhythm disorders** (arrhythmia)
- other medical conditions such as thyroid diseases or anemia

Who is at risk?

Risk factors for heart failure are conditions or habits that make it more likely that you will get heart disease.

- **diabetes**

- **high blood cholesterol**
- recreational drug use
- excessive use of alcohol
- exposure to chemotherapy or radiation therapy
- smoking
- unhealthy diet
- not enough exercise
- unhealthy weight
- sex and age – men are more likely than women to have heart failure, but the difference grows less with age
- African heritage – Black people have a higher risk of heart failure than other ethnic groups

Symptoms

When your heart doesn't pump well and congestion occurs, you may experience some of these symptoms. Contact your doctor or healthcare provider if any of the following occurs:

- increased shortness of breath, especially when lying flat
- sudden gain of more than 1.5 kg (3 pounds) over 1 to 2 days, or 2.5 kg (5 pounds) in a single week
- bloating or feeling full all the time
- cough or cold symptoms that last for longer than a week
- tiredness, loss of energy or extreme tiredness
- loss of or change in appetite
- increased swelling of the ankles, feet, legs, sacrum (base of the spine) or abdomen (stomach area)
- increased urination at night
- cool extremities
- new experience of **cognitive impairment** (confusion and trouble thinking clearly)

By using your **Heart failure zones** chart, you can make it easier to monitor your condition.

Diagnosis

Your doctor will take your medical history, examine you and have you take some tests to determine if you have heart failure and how it should be treated and managed. Doctors may use several tests and procedures such as:

- **blood test** including BNP test (brain natriuretic peptide)
- NT-proBNP
- **electrocardiogram (ECG)**
- **chest X-ray**
- **echocardiogram**
- **stress test**
- **coronary angiogram**

- **magnetic resonance imaging** (heart MRI)

Make sure you ask what each test involves, what it is for and when you will get the results.

Treatment

Your doctor and healthcare team may recommend medication or surgery and may suggest **lifestyle changes** such as healthy eating and physical activity. This may include a recommendation to consume at least 1g of Omega 3 daily.

Medications

You may need to take a combination of medications including one or more of these:

- angiotensin receptor – neprilysin inhibitor (ARNI)
- **ACE inhibitors**
- **angiotensin II receptor blockers** (ARBs)
- **Beta Blockers**
- mineralocorticoid receptor antagonist (MRA)
- SGLT2 inhibitor (sodium-glucose cotransporter-2 inhibitors)
- **ivabradine** (Lancora)
- **diuretics**
- vasodilator (the combination of **hydralazine and a nitrate**)
- **warfarin**(Coumadin)
- **digoxin** (Lanoxin or Toloxin)
- **angiotensin receptor-neprilysin inhibitor** (ARNI)
- **mineralocorticoid receptor antagonist** (MRA)

Learn more about these medications in our **Living with Heart Failure guide**.

Here are some tips for taking your medications properly:

- Take your medications regularly.
- If you experience side effects, do not stop or change your dosages without speaking to your specialists or family doctor first.
- Do not take any over-the-counter anti-inflammatory medications (such as ibuprofen or naproxen); speak with your pharmacists and doctor before taking any other over-the-counter medications such as vitamins, natural health products or herbal remedies.
- Learn more about **managing your medications**.

Surgery and device therapy

Depending on the severity and nature of your heart failure, your doctor may also recommend surgery or device therapy to treat your condition. People with heart failure may be considered for:

- **Cardiac resynchronization therapy (CRT)**
- Bi-ventricular pacing (special pacemaker that paces both the left and right-sided chambers of the heart)
- **Implantable cardioverter defibrillator (ICD)**
- Left ventricular assist device
- **Heart transplantation**

If you also have blocked coronary arteries, you might also be a candidate for:

- **Percutaneous coronary intervention**
- **Bypass surgery**

Read more about **surgery and other procedures**.

Living with heart failure

Currently there is no cure for heart failure but early diagnosis, lifestyle changes and appropriate drug treatments can help you lead a normal and active life, stay out of hospital and live longer.

Here are important steps you need to take to help manage your heart failure:

- Take your medications regularly as instructed by your healthcare provider. Use this **medication chart** to keep you on track.
- Weigh yourself daily in the morning (after going to the bathroom but before breakfast) and keep a written record of your weight. If you gain or lose 2 kg (4 lb) or more in 2 days or 2.5 kg (5 lbs) or more in a week, contact your heart failure clinic or family doctor.
- Use the **heart failure zones** chart to recognize and monitor your symptoms and determine the best response to stay in balance.
- Drink no more than 1.5 to 2 litres (6 to 8 regular glasses) of fluids per day. This includes all beverages such as coffee, tea, water, juice and milk as well as soups. At least half of your daily fluid intake should be water. Your healthcare provider may ask you to adjust your fluid intake depending on your body's blood sodium levels. Learn more about heart failure and fluid restriction in **our guide**.
- Eat less than 2,000 mg of **salt** (sodium) per day from all foods (read food labels, watch out for sources of sodium in prepared foods). If you have been also diagnosed with high blood pressure (hypertension), reduce your sodium intake to 1,500 mg or less a day. Speak with your healthcare provider about the right sodium level for you. Read more about sodium restriction in **our guide**.
- Become more physically active to help strengthen your heart and improve blood flow. Be sure to discuss your physical activity with your healthcare team before starting any program or new routine. Engage in activities such as walking at

your own pace. Increase your levels of activity a small amount each day. Learn more about why you should exercise and keep active in **our guide**.

- Get plenty of sleep and manage your stress levels. Identify any sources of **stress** so you can take steps to address the problem with your healthcare team.
- Watch for depression and anxiety because people with heart failure are more likely to experience them. Learning how to recognize it, and when to get help, is important. Learn more in **our guide**.
- Eat a healthy diet by choosing plenty of vegetables and fruit, eating whole grains frequently, choosing low-fat meats and alternatives prepared with little sodium or added fat, as well as low fat milk and alternatives (such as soy milk). Read more about **healthy eating**.
- Eat plenty of **fibre**. Because of the restricted fluid levels and some medications you may be prescribed (such as diuretics), you may experience constipation, which may cause strain on your heart.
- Reduce your alcohol intake to no more than one drink per day (this is equal to a 150 mL / 5 oz. glass of wine, 350 mL / 10 oz. beer or one 50 mL / 1 ½ oz. spirits or mixed drink). Alcohol may interfere with medications, increase blood pressure or affect your heart, so it is important to speak with your doctor about this issue. In some types of heart failure cases, alcohol must be totally avoided.
- Decrease or avoid caffeine consumption to prevent increased heart rates or abnormal heart rhythms.
- Become **smoke-free**.
- Get your flu shot every year and a pneumococcal vaccine once in a lifetime.

Palliative care

Some people living with heart failure can benefit from end-of-life care (also called palliative care). It can comfort you and your family.

If you want to get more information about end-of-life care, talk to your healthcare providers. You can also visit **Public Health Agency of Canada** and **Health Canada**. The **Canadian Hospice Palliative Care Association** has a directory of end-of-life care services across the country and a caregiver resource list. The Canadian Virtual Hospice has an **Ask an Expert Service** and a **discussion forum** where you can talk to end-of-life specialists and people interested in palliative care.

The **PREPARE** website helps you make medical decisions that reflect your values and effectively communicate your wishes to others. **TheConversationProject.org** has a **starter kit** to help you and your family talk about your wishes for end-of-life.

Related information

The Beat: How to heal a failing heart (podcast)

Living with heart failure (PDF)

Understanding heart failure (Traditional Chinese) (PDF)

Heart failure zones (Traditional Chinese) (PDF)

When to consider Implantable Cardioverter Defibrillator (ICD) deactivation (PDF)

To find useful services to help you on your journey with heart disease, see our **services and resources listing**.

The Heart Life Foundation has **tools and resources** to support people living with heart failure.

Beat heart disease. Beat stroke. Beat as one.