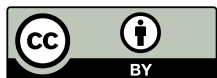


# Medications to manage heart failure



**Queensland**  
Government



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This document can be downloaded from the  
Queensland Heart Failure Services website  
<https://www.health.qld.gov.au/clinical-practice/referrals/statewide-specialist-services/heart-failure-services>

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# Introduction

When you are diagnosed with heart failure, several new medicines may be prescribed for you. Adjusting to taking these new medicines may be a daunting task. You may have many questions or concerns. This booklet is for those interested in knowing more about their heart failure medications and how to use them safely.

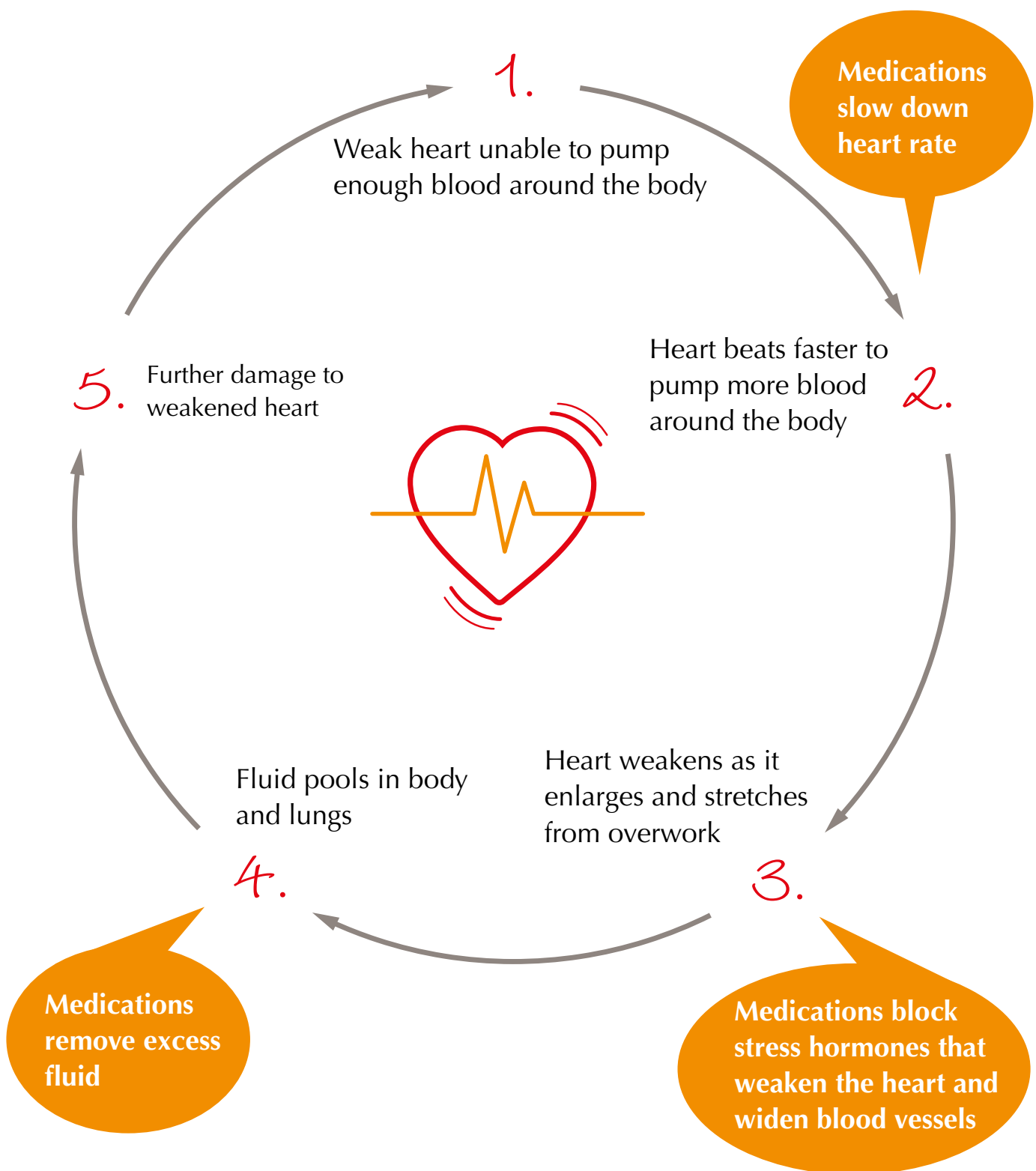
## How do medications help heart failure?

Heart failure is a condition where the heart is not pumping as well as it should to keep up with the body's needs. The natural response of the body is to send hormonal signals which tell the heart to work harder and the kidneys to hold onto fluid in an attempt to boost the blood supply to your body. Over time, this constant hormonal stress further weakens the heart and can cause you to experience problems with fluid build-up.

Medications help your heart by:

- Widening blood vessels and lowering pressure
- Blocking stress hormones that can further weaken the heart
- Slowing heart rate
- Removing excess fluid

Taking medications every day is an important part of managing heart failure (along with changes to lifestyle such as diet and exercise). Each medication works in a different way and is personalised for the needs of each patient. While medicines do not cure heart failure, they are proven to help you live longer, stay out of hospital and feel better.



How medications stop the vicious cycle of heart failure

# Common side effects

You may experience some side effects from your heart failure medications after starting a new medication or when the dose is increased. Reassuringly, most side effects are predictable, mild, and usually go away once your body gets used to the medications.

If side effects continue or are severe:

- Seek advice from your doctor, pharmacist, or nurse as there are often changes that can be made to address your concerns.
- Avoid stopping your medications abruptly as this may make your symptoms and heart failure worse.





### **Allergic reaction**

Contact your doctor

immediately if you develop a swollen face, lips, or mouth ('angioedema'), have difficulty breathing, or develop a rash.



### **Dry persistent cough**

If you develop a constant cough:

- Ensure the cough is not from another cause
- Your doctor may need to swap a medication
- A sugar-free lozenge can help until side effect is managed



### **Feeling dizzy**

Medications that lower your blood pressure can make you feel dizzy. Moving slowly in stages when changing position such as getting out of bed or standing up can help.



### **Impotence in men**

Difficulty in having an erection has many causes. Note that:

- Medications are not always the cause
- If erectile dysfunction (ED) is of concern, mention this to your doctor or nurse as drugs or other aids may help



### **Low blood pressure or heart rate**

Many heart failure medications lower blood pressure and heart rate. If your readings are low but you feel fine there is usually no need to change your medications



### **Reduced kidney function**

Kidney function may be affected by medication. Note that:

- The effects are usually short-term as your body adjusts
- Sometimes a change in medication or dose is needed
- Regular blood tests are advised to ensure issues are picked up early



### **Tiredness**

As your body adjusts to a new medication you may feel more tired than usual for a few weeks.

- Rest before becoming too tired and break tasks into manageable pieces
- Seek help if your energy levels are very low as there could be other reasons such as anaemia or an iron deficiency



# Tips on managing your medications



## Getting the most benefit

- Often medications are started at a low dose and then gradually increased to have the full benefit
- Most medications for heart failure are taken long-term and should not be stopped even if you start to feel better
- Several medicines are usually needed for the best results



## Know your medications

- Always carry an up-to-date medication list (in your wallet, purse or on your phone)
- Check the generic name on the pack to avoid confusion when changing brands (e.g. perindopril, an ACE inhibitor, is the generic name for brands such as Coversyl®)
- Check that you are taking the correct strength of your medication when using older prescriptions as the strength may be different
- To avoid confusion, use only one community pharmacy that holds all your prescriptions



## Taking your medications

- Take medications regularly at the same time every day
- If you forget to take a dose, take the next one as usual, never take a double dose
- Use memory aids such as setting an alarm or a pill organiser (e.g. dosette box or Webster-pak®)
- Don't use someone else's medications as they may be out of date or a different strength



## Controlling cost of medicines

- Safety Nets are available for many medicines in Australia through the Pharmaceutical Benefits Scheme (PBS). It is important to register at your chemist for a PBS Safety Net card to access benefits. When a patient reaches the Safety Net threshold within a calendar year, they qualify to receive some medications at a cheaper price for the rest of that year.



# Main heart failure medications

The main groups of medications for heart failure are listed in the table below and described in detail further on. Not all the medications discussed will be suitable for you. The type and severity of your heart failure, your symptoms, and other medical conditions will determine which types of medications are prescribed. Medications used to treat other heart conditions (such as high cholesterol or an irregular heartbeat) are not covered in this booklet.

Key medication group*	Benefits
<b>Diuretics</b>	Feel better
<b>Angiotensin-converting enzyme (ACE) inhibitor</b>	Live longer Stay out of hospital Feel better
<b>Angiotensin receptor blocker (ARB)</b>	
<b>Angiotensin receptor neprilysin inhibitor (ARNI)</b>	
<b>Beta blockers</b>	
<b>Mineralocorticoid receptor antagonist (MRA)</b>	
<b>Sodium–glucose co-transporter-2 (SGLT2) inhibitor</b>	
<b>Sinus node inhibitors</b>	In select patients: Live longer Stay out of hospital Feel better
<b>Digitalis</b>	

\* **Note:** Most people need several medicines for the best result

# Diuretics

If you have fluid build-up because of your heart failure, you may be prescribed a diuretic or “fluid” tablet.

## Examples of diuretics

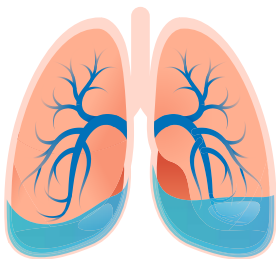
Furosemide (frusemide), bumetanide

## How do diuretics work?

- Cause you to pass more urine
- The effect starts in 30 minutes and lasts for up to 6 hours
- Relieve symptoms by removing fluid that leads to swelling in the ankles and legs as well as breathlessness and poor appetite from fluid in the lungs or abdomen

## Timing

- You will pass urine more often for about 6 hours after a dose
- You can take your fluid pill at a time that suits you (e.g. taking a pill earlier in the day so as not to disturb your sleep, or taking a pill in the afternoon if you are out in the morning)



**Fluid in the lungs**



**Swollen ankles and legs**

## Dose of diuretic

- Keep a daily record of your symptoms and weight so your doctor or nurse can tailor the dose to your body's needs
- As your symptoms improve, you may be able to reduce your dose or stop it altogether
- If your fluid build-up worsens, early action can mean avoiding a lengthy hospital stay

## Possible side effects of diuretics

- Dizziness or light-headedness
- Changes to kidney function and low potassium levels (monitored by blood tests)
- Gout (pain and swelling in joints such as toes and fingers)
- Dehydration (dry mouth, tiredness, cramps)\*

\* You are more at risk of becoming dehydrated in hot weather, if you have diarrhoea or vomiting, have a fever or drink too little fluid.

## Angiotensin-converting enzyme (ACE) inhibitors or angiotensin II receptor blockers (ARB)

Angiotensin-converting enzyme (ACE) inhibitors are usually the first choice. If these cannot be tolerated, then an angiotensin II receptor blockers (ARB) is the common alternative.

### Examples of ACE inhibitors or ARB

ACE inhibitors have names ending in 'pril' such as: captopril, enalapril, lisinopril, perindopril, and ramipril.

ARBs have names ending in 'sartan' (candesartan, losartan, and valsartan).

### How do ACE inhibitors and ARBs work?

- Widen blood vessels
- Reduce pressure making it easier for the heart to pump blood to all parts of the body
- Reduce the effect of certain stress hormones that cause the heart to change shape and weaken

### Possible side effects of ACE inhibitor or ARB

- Dizziness or light-headedness
- Persistent dry cough
- Changes in kidney function and potassium levels (monitored by blood tests)
- Allergic reaction such as a swollen face, lips, or mouth ('angioedema'), difficulty breathing, or a rash

**Note:** if you have experienced angioedema from an ACE inhibitor, you should not take an Angiotensin II receptor blocker without advice from your doctor.



## Angiotensin receptor neprilysin inhibitor (ARNI)

Angiotensin receptor neprilysin inhibitor (ARNIs) are used instead of an ACE inhibitor or ARB. Some people swap to an ARNI from an ACE inhibitor or ARB to help further improve heart function. ACE inhibitors must be stopped for at least 36 hours before starting an ARNI.

### Examples of ARNI

There is only one ARNI available known by the brand name Entresto®. The generic name is sacubitril-valsartan.

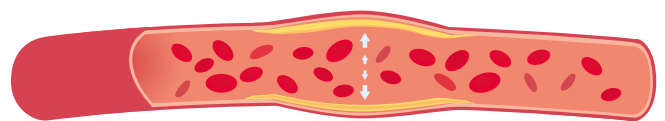
### How does an ARNI work?

- Increases salt and fluid loss to reduce workload on the heart
- Widens blood vessels
- Reduces pressure making it easier for the heart to pump blood to all parts of the body
- Reduces the effect of certain stress hormones that cause the heart to change shape and weaken

### Possible side effects of an ARNI inhibitors

- Dizziness or light-headedness
- Persistent dry cough
- Changes in kidney function and potassium levels (monitored by blood tests)
- Allergic reaction such as a swollen face, lips, or mouth ('angioedema'), difficulty breathing, or a rash

**Note:** if you have experienced angioedema from an ACE inhibitor, you should not take an ARNI without advice from your specialist.



**Widened blood vessels reduce pressure**

## Beta blockers

There are many beta blockers available, however some are more effective than others for managing heart failure.

### Examples of beta blockers

The beta blockers proven to be most effective for heart failure are: bisoprolol, carvedilol, metoprolol extended release, and nebivolol.

### How do beta blockers work?

- Slow your heart rate to reduce heart workload
- Block certain stress hormones in the body which cause the heart to change shape and weaken

### Possible side effects of beta blockers

- Dizziness or light-headedness
- Tiredness
- Chest tightness, wheeze, or shortness of breath (used with caution for people with asthma)
- Difficulty sleeping or nightmares
- Depression
- Cold hands or feet
- Impotence

## Mineralocorticoid receptor antagonists (MRAs)

Mineralocorticoid receptor antagonists (MRAs) are also called aldosterone receptor antagonists.

### Examples of MRAs

Spironolactone, eplerenone

### How do MRAs work?

- Block certain stress hormones in the body which cause the heart to change shape and weaken
- Relieve some heart failure symptoms related to fluid retention

### Possible side effects from MRAs

- Dizziness or light-headedness
- Nausea
- Changes in kidney function and potassium levels (monitored by blood tests)
- Impotence
- Breast enlargement or tenderness, especially in men (from spironolactone)

## Sodium–glucose co-transporter- 2 (SGLT2) inhibitors

SGLT2 inhibitors can help to keep you out of hospital and to live longer.

### Examples of SGLT2-I

Dapagliflozin (Forxiga®)

Empagliflozin (Jardiance®)

### How do SGLT2 inhibitors work?

- Relieve symptoms caused by fluid build-up
- Prevent further damage to the heart
- Help heart cells to work more efficiently

### Possible side effects of SGLT2 inhibitors

- Dehydration: more than usual thirst, dry mouth, tiredness, and dizziness
- Thrush infection causing itchiness in genital area

Note that you may need to temporarily stop your SGLT2 inhibitor if you are unwell with diarrhoea, cannot eat or keep food down; or are fasting (such as prior to a procedure).

Ask your doctor, pharmacist, or nurse for more information.

## Sinus node inhibitors (ivabradine)

The sinus node inhibitor, ivabradine, is well tolerated and effective in select patients.

### How does ivabradine work?

- Slows your heart rate

### Possible side effects of ivabradine

- Temporary visual symptoms such as bright spots of light

## Digitalis (digoxin)

Digoxin reduces symptoms from a racing heart (pounding heart or breathlessness)

### How does digoxin work?

- Digoxin helps the heart to beat more strongly and slowly

### Possible side effects of digoxin

- Tiredness
- Loss of appetite, nausea or vomiting
- Irregular pulse, slow or fast
- Seeing yellow / green circle around objects

If you notice side effects your doctor may order a blood test and change the dose if appropriate.

# Vaccines and iron supplements



## Vaccines

People with heart failure are at an increased risk from complications from respiratory infections such as influenza (flu), pneumonia, and COVID-19.

It is strongly recommended that you have vaccines for flu, pneumonia, and COVID-19. Please discuss with your GP about the timing of or your vaccinations.

### Flu

It is usually recommended to have an influenza vaccine every year.

### Pneumonia

There are a range of pneumonia vaccines. How often you need them will depend on the vaccine used.

### COVID-19

Vaccines for COVID-19 are very new and over time we will learn how long your immunity lasts. Discuss with your doctor or nurse.



## Iron supplements

Quite often patients with heart failure do not have enough iron in their blood. A lack of iron causes shortness of breath and extreme tiredness. If the amount of iron in your body is low, your doctor may suggest an iron injection or an iron infusion (which delivers the iron intravenously via a drip). Both these methods put the iron directly into the blood. Iron tablets, that you can buy at the chemist, are often not very effective for people with heart failure due to problems of absorbing iron into the blood.





## Medications to avoid or to use with caution

Some medications can make your heart failure worse or stop your medications from working properly. Below are some medicines that can be a problem, but this is not a complete list. Always check with your doctor or pharmacist about whether a medication or product is safe for you to use.



### Anti-inflammatory medications

Anti-inflammatory pain medications may cause you to retain salt and fluid, which make your heart work harder. Check with your pharmacist whether a gel or cream can be used as an alternative to tablets or syrups.

#### Examples of anti-inflammatories to avoid

- Ibuprofen (Nurofen®, Advil®, Herron Blue®, Brufen®, Tri-profen®)
- Diclofenac (Voltaren® rapid, Fenac®)
- Naproxen (Aleve®, Naprosyn®)
- Mefenamic acid (Ponstan®)
- Indomethacin (Arthrexin®, Indocid®)
- Celecoxib (Celebrex®)
- Meloxicam (Mobic®)



### Constipation treatments

Some medications need to be taken with a full glass of water. You need to include this glass of water as part of your daily fluid allowance.

#### Examples of constipation medications that require a large amount of fluid

- Metamucil®
- Fybogel®

Check with your doctor or pharmacist about alternatives such as stool softeners, like Coloxyl®, that only require enough water to swallow a tablet.



## Decongestants

Decongestants such as phenylephrine and pseudoephedrine are found in many cough and cold medications. These products can make your heart work harder and stop some of your medications from working properly. Ask your pharmacist or doctor what the best treatment for you would be.

### Examples of decongestants to avoid

- Codral® cough and cold preparations
- Sudafed® preparations
- Demazin® preparations



## Natural supplements

Natural supplements are sometimes called herbal or complementary. Sometimes these supplements can harm your heart or interfere with your heart failure medications. Always check with your doctor or pharmacist before taking a natural supplement and never substitute them for a medication prescribed by your doctor.



## Medications containing salt

Many vitamins, minerals and other common over-the-counter medications contain a lot of salt. Salt causes your body to retain fluid, which makes your heart work harder and may cause foot or leg swelling and shortness of breath. Always read the label to check the amount of salt (sodium) in a product. In general, you should limit the amount of salt in your diet from all sources to 2000mg per day.

### Examples of medicines high in salt

- Effervescent tablets and powders (Panadol soluble®, Aspro Clear®, Ural®, Citravescent®, Alka-Seltzer®, Eno®)
- Vitamin and mineral products (Berocca®, Supradyn®, Redoxon®, Phosphate Sandoz®, Vitamin C products with sodium ascorbate)
- Antacids (Heartburn relief tablets or liquid such as Gaviscon®, Mylanta® or Salvital®)

# Common feelings about heart failure medications

While medications have enormous benefits, many patients with heart failure would like to be free from their medication, especially when they are told they must take them long term. Sometimes patients want to stop taking their medicines because of the cost or side effects or when they start to feel better, and they feel 'cured'. These feelings are totally understandable but need to be balanced by the benefits of medications.

If you feel like you want to stop taking a medication, please talk to your doctor or nurse first. They can help you with various treatment options and give you enough information so you can make informed choices between the benefits of a medication versus the impact of stopping it.

It is important to not suddenly stop or change your medications as you may trigger a relapse. Discuss your feelings and concerns with your doctor, nurse or pharmacist and work together to develop a joint plan.



# My heart failure medications

## Diuretics

- ☐ Furosemide (frusemide)
- ☐ Bumetanide
- ☐ Other \_\_\_\_\_

## Angiotensin-converting enzyme (ACE)

- ☐ Perindopril
- ☐ Ramipril
- ☐ Lisinopril
- ☐ Enalapril
- ☐ Other \_\_\_\_\_

## Angiotensin receptor blocker (ARB)

- ☐ Valsartan
- ☐ Candesartan
- ☐ Other \_\_\_\_\_

## Angiotensin receptor neprilysin inhibitor (ARNI)

- ☐ Sacubitril-valsartan (Entresto®)

## Beta blockers

- ☐ Bisoprolol
- ☐ Metoprolol XL
- ☐ Carvedilol
- ☐ Nebivolol
- ☐ Other \_\_\_\_\_

## Mineralocorticoid receptor antagonist (MRA)

- ☐ Spironolactone
- ☐ Eplerenone
- ☐ Other \_\_\_\_\_

## SGLT2 inhibitor

- ☐ Dapagliflozin
- ☐ Empagliflozin

## Sinus node inhibitors

- ☐ Ivabradine
- ☐ Other \_\_\_\_\_

## Digitalis

- ☐ Digoxin
- ☐ Other \_\_\_\_\_

## Other

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Queensland Health

Medications to manage heart failure, February 2023



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