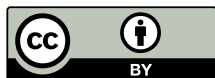


Medications to manage heart failure



Queensland
Government



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For more information contact
Statewide Heart Failure Services:
qldheartfailure@health.qld.gov.au

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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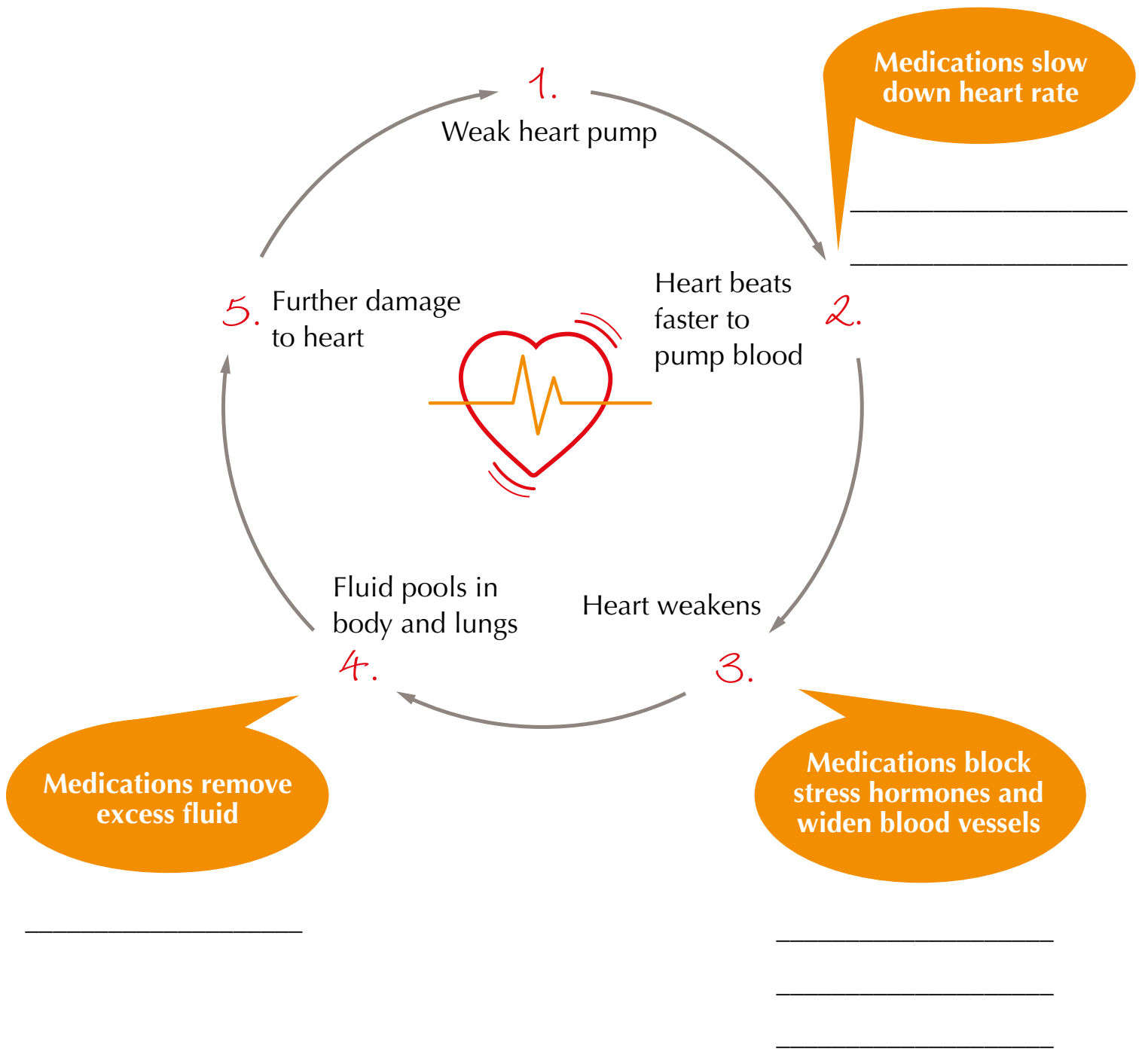
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How medications help?

When the heart pump is weak, it starts to work harder. Over time the heart enlarges, stretches and weakens. Medicines work by stopping the cycle of overwork.



Possible side effects

Most side effects usually go away once your body gets used to a new medication or change in dose.

If side effects continue or are severe seek advice from your doctor, pharmacist, or nurse.



Allergic reaction

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



Low blood pressure or heart rate and feeling dizzy

Medications that lower blood pressure can make you feel dizzy. Moving slowly when changing position (such as getting out of bed) can help.

If your readings are low, but you feel fine, there is usually no need to change your medications.



Tiredness

Rest before becoming too tired and seek help if your energy levels remain very low as there could be other reasons such as anaemia or an iron deficiency.



Dry persistent cough

If you develop a constant cough, tell your doctor as it may be due to your medication or from another cause.



Reduced kidney function

Blood tests detect changes in your kidney function. The effects are usually short-term but sometimes a change in medication or dose is needed.



Impotence in men

Difficulty having an erection has many causes. If this is of concern, mention this to your doctor or nurse as they may be able help. You may also choose to discuss this with your partner.

Stopping your medications abruptly may make your symptoms and heart failure worse.

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, try and 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 aids such as setting an alarm or a pill organiser (e.g., dosette box or Webster-pak® or sachet roll).
- Don't use someone else's medications as they may be out of date or a different strength.
- If you stop your medicines for a few days, please discuss with your health care provider, as you may need to restart at a lower dose.




Controlling the cost of medicines

- Register at your chemist for a Prescribing Benefits Scheme (PBS) Safety Net. When the safety net threshold is reached within a calendar year, some medications will be cheaper or free for the rest of that year.
- Your main pharmacist will need the receipts for PBS medications bought elsewhere for them to count towards reaching your safety net. Your hospital pharmacist can give you a *safety net report* for medications purchased from the hospital to give to your local community pharmacist.
- Before ordering your medication, it is important to tell your pharmacist if you are a concession or DVA card holder, identify as a First Nations person, or if have reached your safety net threshold.
- Check with Centrelink to see if you qualify for any concession cards that will make your medication cheaper or free once you reach the safety net threshold in a calendar year.
- You may be eligible to buy a 60 day supply of PBS heart failure medication from a single prescription, saving you money and trips to the pharmacy/doctor. Talk to your pharmacist or doctor to find out if this is suitable for you.



Main heart failure medications

The main medications for heart failure are listed in the table below and described in detail further on. 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.

Group	Key medication	Benefits
Diuretics	Furosemide (frusemide) or Bumetanide	Feel better
4 Pillars* 	ACEI or ARB or ARNI	Live longer Stay out of hospital Feel better
	Beta blockers	
	MRA	
	SGLT2 inhibitor	
Other medications	Ivabradine	In select patients: Live longer Stay out of hospital Feel better
	Digoxin	
	Vericiguat	

* **Note:** Most people will be prescribed one from each of the 4 pillar medications (if tolerated and medications may be added later)

Diuretics

- Furosemide (frusemide)
- Bumetanide
- Other _____

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

How do diuretics work?

Diuretics 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.

They act in 30 minutes to ease fluid build-up and congestion by passing urine frequently for up to 6 hours.

Timing

You can take a fluid tablet 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).

Dose of diuretic

- Keep a daily record of your symptoms and weight so your doctor or nurse can tailor the dose as needed.
- As your symptoms improve, you may be able to reduce your dose or stop it altogether.
- If your fluid build-up worsens, act early as you may be able to manage it at home and avoid 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 or if you have diarrhoea or vomiting, a fever or drink too little fluid.



Fluid in the lungs







Swollen ankles and legs

The 4 pillars of heart failure medications

Most people with heart failure are prescribed medications from one or more of the four pillars (groups). These four pillars of medications help patients live longer, spend less time in hospital, and feel better.

Medicines in each group may have many brand names. Different brand names may have the same active ingredient which is shown on the box. The ending on the active ingredient name will help you identify your type of medication.

How to identify your pillar medication type

Pillar	Key medication	Names
 Pillar 1	ACEI (Angiotensin-converting enzyme inhibitor)	names end in 'pril'
	ARB (Angiotensin receptor blocker)	names ending in 'sartan'
	ARNI (Angiotensin receptor neprilysin inhibitor)	known by brand name Entresto®
 Pillar 2	Beta blockers	names ending in 'lol'
 Pillar 3	MRA (Mineralocorticoid receptor antagonist)	names ending in 'one' (spironolactone and eplerenone)
 Pillar 4	SGLT2 inhibitor (Sodium glucose co-transporter-2)	names ending in 'gliflozin'

ACEI or ARB or ARNI?

ACEI (Angiotensin-converting enzyme inhibitors)

- Perindopril
- Ramipril
- Lisinopril
- Enalapril
- Other _____

ARB (Angiotensin receptor blocker)

- Valsartan
- Candesartan
- Irbesartan

ARNI (Angiotensin receptor neprilysin inhibitor)

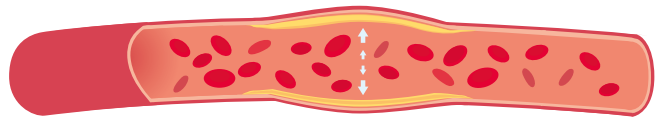
- Sacubitril-valsartan (Entresto®)

Your doctor may prescribe an ACEI, ARB, or ARNI. While not used together, your doctor may switch you from one medication to the other, depending on how you respond.

How do ACEI, ARB and ARNI work?

These medications widen blood vessels, lower blood pressure, and block stress hormones that cause the heart to change shape and weaken.

ARNIs also increase salt and fluid loss to reduce workload on the heart.



Widened blood vessels reduce pressure

Possible side effects of ACEI , ARB, or ARNI

- Dizziness or light-headedness
- Persistent dry cough (mainly with an ACEI)
- Changes in kidney function and potassium levels (monitored by blood tests)
- Allergic like reactions (swollen face, lips, or mouth, difficulty breathing, or a rash)

Starting an ARNI (Entresto®)

ACE inhibitors must be stopped for at least 36 hours before swapping to an ARNI.

Beta blockers

- Bisoprolol
- Metoprolol XL
- Carvedilol
- Nebivolol
- Other _____

How do beta blockers work?

- Slow your heart rate to reduce heart workload.
- Block certain stress hormones which cause the heart to change shape and weaken.
- The beta blockers listed above are more suitable for heart failure.

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

MRAs (Mineralocorticoid receptor antagonists)

- Spironolactone
- Eplerenone
- Other _____

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

How do MRAs work?

MRAs block stress hormones which cause the heart to change shape and weaken. They also relieve some 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)

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

- Dapagliflozin (Forxiga®)
- Empagliflozin (Jardiance®)
- Other _____

SGLT2 inhibitors (also known as gliflozins) can be used for diabetes and kidney disease as well as heart failure.

How do SGLT2 inhibitors work for heart failure?

- Relieve symptoms from fluid build-up.
- Prevent further damage to the heart.
- Help heart cells to work efficiently.

Possible side effects of SGLT2 inhibitors

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

Tips to prevent side effects

- Have enough fluid (within your daily limits).
- Help prevent thrush by washing genital area daily and by wearing clean underwear.

Sickness, surgery and SGLT2 inhibitors

There is a rare risk ketoacidosis (especially if you have diabetes). Ketoacidosis is when your blood becomes too acidic and is dangerous if untreated. To reduce the risk:



STOP your SGLT2 inhibitor when you can't eat or drinking normally because you are unwell, or you are fasting prior to a surgery.



Look out for symptoms such as nausea, vomiting, dehydration, or difficulty breathing. Please tell your doctor if you have these symptoms.



Restart the SGLT2 inhibitor when you feel better and can eat and drink normally for 24 to 48 hours.

Other heart failure medications

Other medications that can have a similar benefit to the four pillars, but they are only suitable for some people and are not usually the first choice.

Digoxin

Brand name:

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.

Ivabradine

Brand name:

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

How does ivabradine work?

- Slows your heart rate

Possible side effects of ivabradine

- Temporary visual symptoms such as bright spots of light

Vericiguat

Verquvo®

How does vericiguat work?

Vericiguat works by relaxing blood vessels so the blood can flow more easily which reduces strain on the heart.

Possible side effects of vericiguat

- Dizziness from low blood pressure
- Anaemia symptoms: pale skin, unusual tiredness

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

Ensure that you stay up to date with your COVID-19 vaccines as recommended by your general practitioner or local pharmacist.



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, may not work for some people with heart failure due to problems with 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

- 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

- 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

Sometimes a person wants to stop taking their medicines for reasons such as cost, unpleasant side effects or because they feel better or 'cured'.

These feelings are totally understandable but need to be balanced by the benefits of taking medications long term.

If you feel like you want to stop taking a medication, please talk to your doctor or nurse first so you can make informed choices between the benefits of a medication versus the impact of stopping it. Stopping your medications suddenly may make your symptoms and heart failure worse.

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 _____

4 Pillars

ACEI (Angiotensin-converting enzyme inhibitors)

- Perindopril
- Ramipril
- Lisinopril
- Enalapril
- Other _____

ARB (Angiotensin receptor blocker)

- Valsartan
- Candesartan
- Irbesartan

ARNI (Angiotensin receptor neprilysin inhibitor)

- Sacubitril-valsartan (Entresto®)

Beta blockers

- Bisoprolol
- Metoprolol XL
- Carvedilol
- Nebivolol
- Other _____

MRA (Mineralocorticoid receptor antagonist)

- Spironolactone
- Eplerenone
- Other _____

SGLT2 inhibitors

(Sodium-glucose co-transporter-2)

- Dapagliflozin (Forxiga®)
- Empagliflozin (Jardiance®)
- Other _____

Other heart failure medicines

- Digoxin
- Ivabradine
- Vericiguat

Other medications

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Medications to manage heart failure, June 2024



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