Patient information guide to

HEART MEDICATIONS

Saolta
Grúpa Ollscoile Cúram Sláinte
University Health Care Group

CROÍ
Fighting Heart Disease & Stroke

CROÍ

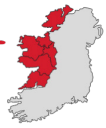
Fighting Heart Disease & Stroke

Croí works to improve quality of life for all, through the prevention and control of heart disease, stroke, diabetes and obesity. Croí is a not-for-profit foundation, dedicated to fighting heart disease and stroke in the region. We are an independent organisation, totally funded through our own fundraising activities, voluntary contributions and philanthropic support.

We are at the heart of the community, working with people to make sustainable and life-changing improvements to their cardiovascular health and well-being; supporting patients and their families; teaching the lifesaving skills of CPR and providing healthcare professionals with the knowledge and skills to translate best practice evidence into daily preventive care.

HEARTLINK WEST

091 544 310



Call Monday to Friday from 9am - 5:30pm if you have any questions about your heart health.

Contents

Introduction

You have been diagnosed with a heart condition that requires you to take medication. You have been prescribed this medicine as part of your long term treatment and it will play an important role in keeping you healthy and helping your heart to work effectively.

There are many types and combinations of medication and your health care provider will decide the best treatment combination for your condition.

This booklet describes some of the different medicines prescribed for people with heart conditions .

It is important for you to have an understanding of the medicines you are taking and know:

- ✓ **The reason why you have been prescribed them**
- ✓ **What the medicine does**
- ✓ **Possible side effects**

For further information visit

www.croi.ie

About this guide

- Some of the main types of commonly prescribed cardiovascular medications are summarised in this booklet.
- If the medicine you have been prescribed is not listed here, remember that your healthcare provider and pharmacist are your best sources of information.
- It is important to discuss all of the drugs you take with your healthcare provider and understand their desired effects and possible side effects.

You should never stop taking a medicine and never change your dose or frequency without first consulting your health care provider.

The information contained in this booklet is meant as a guide. It does not replace the information provided with each medicine or the advice from your health care provider or Pharmacist.

Why are there so many medicines?

Scientific research has led to the development of lots of different medicines that can be used to treat diseases of the heart and circulation.

They all belong to a few main groups but have different actions on the body to improve the health of your heart.

NOTE:

For your information and reference, we have included generic names as well as major trade names to help you identify what you may be taking; however, we are not recommending or endorsing any specific product.

Why do I need heart medication?

Medicines are commonly used to treat the following heart conditions:

- **Angina** – pain or discomfort in the chest, or shortness of breath which is relieved by rest. Angina is caused by narrowing of the coronary arteries (the arteries that supply blood to the heart).
- **Heart attack** – occurs when there is a blockage in the coronary artery. This is usually caused by a blood clot that forms when fatty material breaks away or ruptures.
- **High blood pressure** - also called hypertension - is when the force of the blood flowing through your blood vessels is consistently too high.
- **Heart failure** – when the heart's pumping or filling function is not working as well as it should be, resulting in less blood output to the body and fluid retention. This can cause various symptoms such as muscle tiredness, shortness of breath and swelling of the ankles and abdomen.
- **Arrhythmia** – a heart rate / rhythm that may be too slow, too fast or irregular.
- **Heart valve disease** – when one or more of the four valves in the heart is stiffened or damaged.
- **High blood cholesterol level** – also called hypercholesterolemia. If left untreated, this causes fatty deposits to form on the blood vessel walls, increasing the risk of having a heart attack.

How and when are medications taken?

Medicines can be given in a number of different ways:

- **Orally** – Most medicines for the heart are taken by the mouth, usually as tablets, capsules or liquids which you either swallow or take dissolved in water.
- **Sub-lingually** – When a tablet is placed under the tongue and allowed to dissolve, or when you spray the medicines directly under your tongue.
- **Self-adhesive patch** – When a patch containing the medicine is placed on the skin and the medicine is absorbed over a period of time.

Your health care provider will decide how often you will need to take your medicine as it depends on what it is and what condition it is being used to treat.

Most medicines need to be taken regularly, as prescribed by your health care provider.

Some medicines need to be taken only when you get a particular symptom, such as angina.

Side effects

Your health care provider will prescribe medicines to help you to improve your condition or your symptoms. It is important to realise that your medicines are prescribed for your benefit and like most people, you will probably not experience any side effects at all. If you do, they can sometimes disappear after a period of time.

For more information about possible side effects of the medicines that you are taking, read the information leaflet that comes with the medicine. If you are worried about the side effects, speak to your health care provider or pharmacist.

What to do if you have side effects

If you develop any new, persistent or troublesome symptoms, or problems after starting a medicine, it is important to tell your health care provider about this immediately.

Your health care provider may decide to change your dosage or prescribe a different medicine instead.

It is important not to stop taking your prescribed medicines without medical advice as this could make your condition worse.

Types of Medicine

Ace Inhibitors (Angiotensin-converting enzyme inhibitor)

Commonly prescribed versions include:

- Captopril (Capoten)
- Enalapril (Innovace)
- Lisinopril (Zestril)
- Perindopril (Coversyl)
- Ramipril (Tritace/Ramilo/Ramic)

What the medication does:

- Lowers blood pressure by relaxing the arteries, easing the workload of the heart.
- Improves heart function.

Reasons for medication:

- To treat or improve symptoms of cardiovascular conditions including high blood pressure and heart failure.

Possible side effects:

- Dizziness when standing up
- Persistent dry cough
- Change in taste
- Changes in kidney function reflected in blood tests
- Increased potassium levels
- Throat/tongue swelling - This is very rare but requires immediate medical assistance

IMPORTANT

Avoid non-steroidal, anti-inflammatory painkillers such as Ibuprofen, e.g. Nurofen, Brufen and Diclofenac (Difene).

Angiotensin II Antagonists
(Angiotensin-2 Receptor Blockers or ARBs)

Commonly prescribed versions include:

- Candesartan (Atacand)
- Irbesartan (Approvel)
- Losartan (Cozaar)
- Valsartan (Diovan)

What the medication does:

- Lowers blood pressure by relaxing the arteries.
- Eases the workload of the heart.
- Improves heart function.

Reasons for medication:

- To treat or improve symptoms of cardiovascular conditions including high blood pressure and heart failure.

Possible side effects:

- Light-headedness
- Increased potassium levels
- Decreased Kidney function

IMPORTANT

- Do not take ACE/ARB together.
- Avoid non-steroidal, anti-inflammatory painkillers such as Ibuprofen, e.g. Nurofen, Brufen and Diclofenac (Difene).

ARNI (Angiotensin Receptor Neprilysin Inhibitor)

Commonly prescribed as:

- Sacubitril/Valsartan (Entresto)

What the medication does:

- Relaxes blood vessels.
- Increases elimination of salt and water from the body.
- Reduces heart strain and improves efficiency of the heart.

Reasons for medication:

- Replaces ACE inhibitor/ARB to treat heart failure due to weak pumping action of the heart.

Possible side effects:

- Dizziness associated with low blood pressure (BP should be >100 systolic before commencing)
- Worsening kidney function
- High blood potassium

IMPORTANT

If you are prescribed Sacubitril/Valsartan and are already taking ACE Inhibitors, you will need to stop the ACE inhibitor 36 hours prior to starting this new drug.

Beta Blockers

Commonly prescribed versions include:

- Atenolol (Tenormin/Atecor)
- Bisoprolol (Emcor, Bisop, Cardicor)
- Carvedilol (Eucardic)
- Metoprolol (Betaloc)
- Nebivolol (Nebilet)

What the medication does:

- Slows down the heart rate.
- Lowers blood pressure.
- Lessens the workload of the heart.

Reasons for medication:

- To improve heart function.
- To reduce the symptoms of angina.
- To slow down a fast heart beat.

Possible side effects:

- Tiredness
- Cold hands and feet
- Erectile dysfunction (impotence)
- Wheeziness
- Dizziness
- Disturbed sleep/nightmares

Calcium Channel Blocker (Calcium Antagonists)

Commonly prescribed versions include:

- Amlodipine (Istin)
- Diltiazem (Tildem, Dilzem, Adizem)
- Verapamil (Isoptin, Verap)
- Lercanidipine. (Lercalpin, Zanidip)

What the medication does:

- Relaxes blood vessels, reducing blood pressure.
- Controls fast, irregular heart beats - (Verapamil, Diltiazem).

Reasons for medication:

- To treat high blood pressure
- To treat chest pain (angina)
- To control abnormal heart rhythms

Possible side effects:

- Headaches
- Flushing
- Dizziness
- Ankle swelling
- Constipation
- Nausea

Alpha Blockers

In the treatment of hypertension, the most common drug is doxazocin (Cardura, Raporsin).

Because alpha blockers also relax other muscles throughout the body, these medicines can be used to help with 'urine flow' in men with prostate problems.

What the medication does:

- Lowers blood pressure by blocking hormones to relax the blood vessel walls.

Reasons for medication:

- To treat high blood pressure.

Possible side effects:

- Dizziness
- Headache
- Pounding heartbeat
- Weakness

Anti Arrhythmics

Commonly prescribed versions include:

- Amiodarone (Cordarone X)
- Mexilitine
- Sotalol
- Flecanide (Tambocor)
- Digoxin (Lanoxin)

What the medication does:

- Blocks certain electrical signals which cause irregular heart rhythm.

Reasons for medication:

- To restore/maintain normal rhythm or regulate and control the heart rate in atrial fibrillation.
- To treat dangerous, abnormal heart rate rhythms (Ventricular fibrillation/Tachycardia).

Possible side effects:

Amiodarone: Light-headedness, excessive slowing of the heart. Blurred vision, dark urine, sunlight sensitivity, liver and thyroid problems. (Bloods need to be monitored at intervals).

Mexileitine: Headache, nausea, chest discomfort, drowsiness, abdominal pain. (It is important to try to stop smoking as it reduces the effects of this medicine. Reduce caffeine intake as mexileitine increases caffeine levels).

Flecanide: Fatigue, laboured breathing, dizziness.

Sotalol: Cold hands/feet, Nausea, Headache, Diarrhoea, laboured breathing.

Digoxin: Over-slowing of heart beat. (Check pulse before taking - ensure over 50bpm). Observe for symptoms of toxicity: nausea, vomiting, low appetite, new confusion.

If you experience any of these symptoms on this medication, seek urgent medical advice.

SGLT2 Inhibitors

Commonly prescribed versions include:

- Empagliflozin
- Dapagliflozin

What the medication does:

- Helps the body to get rid of excess fluid and sugar in the urine.
- Helps improve heart function for patients with heart failure.

Reasons for medication:

- SGLT2 inhibitors were initially developed for diabetes but have been shown to improve heart function in patients with heart failure (even in patients who do not have diabetes).

Possible side effects:

- Increased risk of genital/urinary infections including thrush (take care with hygiene).
- Dehydration – discuss with your GP if vomiting/diarrhoea - may advise holding the dose until you are well.
- Rarely – (In people with diabetes) risk of acid in your blood (Ketones) even when blood sugar level is normal. Symptoms include nausea, vomiting, abdominal pain, rapid breathing, dizziness and thirst - seek emergency care.

Anticoagulant

Commonly prescribed anticoagulants include: **Warfarin** - refer to separate Warfarin information booklet.

New Oral Anticoagulants:

- Rivaroxaban (Xarelto)
- Dabigatran (Pradaxa)
- Apixaban (Eliquis)
- Edoxaban (Lixiana)

What the medication does:

- Anticoagulants are used to prevent and treat blood clots, which are linked to serious complications, such as stroke.

Reasons for medication:

- **Clot Treatment:** They can be used to treat clots such as Deep Venous Thrombosis (DVT), Pulmonary Embolism (PE) or a clot in the heart (cardiac thrombus), by stopping the growth of the clot.
- **Clot Prevention:**
  - Prevent stroke in patients who are at risk due to irregular heartbeat (Atrial Fibrillation - Afib).
  - Prevent clot formation and stroke following mechanical valve replacement (Warfarin).
  - Prevent stroke happening again.
  - Prevent clots in the veins forming after certain surgery. E.g. hip or knee surgery.

Anticoagulant - Possible side effects:

- Bleeding that does not stop by itself (If this happens to you, seek emergency care)
- Severe bruising
- Red or dark brown urine
- Red or black bowel movements
- For women, heavier bleeding during periods, or other vaginal bleeding that is not caused by periods

Important anticoagulant information:

- It is important to take new oral anticoagulants at the same time every day to ensure protection. If your anticoagulant is to be taken twice a day, ensure you take the doses 12 hours apart e.g. 8 a.m. and 8 p.m.
- If you miss a dose, continue dosing as follows:

Once daily anticoagulant	Twice daily anticoagulant
Take within 12 hours of missed dose	Take within 6 hours of missed dose
If missed dose is more than 12 hours overdue, omit dose and take your next dose at usual time.	If more than 6 hours overdue, omit the dose and take your next dose at the usual time.
Do not double up on the total daily dose.	

- If you sustain an injury while taking an anticoagulant, **seek medical advice.**
- Tell your health care provider or dentist well before any planned procedure that you are taking an anticoagulant.
- Avoid activities and sports that may cause serious injuries.
- If seeking medical attention for an emergency bleed, tell your health care provider that you are taking an anticoagulant.
- Anticoagulant doses may need adjustment according to kidney function results. Your GP should check your blood tests for kidney function at least every 6 months, or annually if you have no pre-existing kidney problems.

Antiplatelet

Commonly prescribed versions include:

- Aspirin
- Clopidogrel (Plavix)
- Prasugrel (Effient)
- Ticagrelor (Brilique)

What the medication does:

- Reduces clot formation by stopping certain blood cells (platelets) from sticking together.

Reasons for medication:

- To help prevent clotting in patients who have had a heart attack; an ischemic stroke; a TIA (transient ischemic attack, or 'mini stroke'); have unstable angina or other forms of cardiovascular disease. Also, prevents clot formation within a stent.
- Certain patients will be prescribed aspirin combined with another antiplatelet drug – also known as dual antiplatelet therapy (DAPT).

Possible side effects:

- Irritation of the stomach (to prevent this, take medicine after a meal and never on an empty stomach)
- Wheeziness (patients with asthma should take caution)
- Increased risk of bleeding (very rare)

Cholesterol Lowering Medications

Cholesterol is produced in the liver but is also ingested in food.

The most common medications for cholesterol are statins:

- Atorvastatin (Lipitor)
- Pravastatin (Lipostat)
- Rosuvastatin (Crestor)
- Simvastatin (Zocor)

What statins do:

- Reduce "bad" fats in the blood (LDL cholesterol and triglycerides)
- Improve the function of the lining of blood vessels.
- Reduce inflammation and damage.
- Stabilize fatty "plaques" in the arteries.

Reasons for medication:

- Cholesterol lowering drugs are important to prevent and treat cardiovascular disease.
- Cholesterol lowering agents are prescribed for all patients with known cardiovascular disease e.g. heart attack, stents, stroke.
- Cholesterol medication may be necessary to prevent cardiovascular disease if lifestyle changes alone are not effective.

Possible side effects:

- Tiredness
- Nausea
- Vomiting
- Diarrhoea
- Headache
- Disturbed sleep
- Muscle weakness/aches

Monitoring of blood results:

- Cholesterol blood tests should be repeated 4 - 12 weeks after starting statin therapy or making a dose adjustment. Following that every 3 - 12 months blood test as directed by your healthcare provider.
- Note:
  - Avoid grapefruit juice.
  - Inform GP if you are taking antibiotics.

Other medications which work in various ways may be needed for additional cholesterol control, including: (See product leaflets)

- Cholesterol Absorption Inhibitors: Ezetimibe
- Fibrates: Gemfibrizil (Lopid)
- Nicotinic Acids:
  - Niacin
  - Omega-3 Fatty acids
- PCSK9 inhibitor (injections), Alirocumab (Pralulent), Evolocumab (Repatha)

Diuretics (Water Pills)

Commonly prescribed versions include:

- Furosemide (Lasix), Bumetanide (Burinex), Co-amilofruse (Frumil), Torasemide
- Bendroflumethiazide - Metalazone
- Spironolactone (Aldactone), Eplerenone
- Amiloride

What the medication does:

- "Water tablet" relieves fluid retention by making you pass more urine thereby easing symptoms of breathlessness and swelling.

Reasons for medication:

- To relieve the symptoms of fluid build-up due to reduced heart function (heart failure).
- To help lower blood pressure.

Possible side effects:

- Changes to kidney function reflected in blood tests
- Lowers blood potassium levels*
- Gout flare up
- Muscle cramps
- Dizziness

IMPORTANT

- *Blood will need to be checked for kidney function and Potassium levels 1-2 weeks after starting diuretics or after any increase in the dosage.
- Urgently report worsening breathing symptoms, swelling and/or sudden increases in weight whilst taking diuretics to your healthcare provider.
- If you experience vomiting/diarrhoea/excessive thirst while taking diuretics, **seek medical advice** to avoid dehydration.

Nitrates (also known as Anti Anginals)

Commonly prescribed versions include:

- Isosorbide Mononitrate (Imdur, Isomonit, Elantan)
- Glyceryltrinitrate (GTN patch or spray)
- **Non-Nitrates** - Renexa (Ranolazine)

This medication can come in the form of:

- Pills to be swallowed
- Tablets for use under the tongue
- A patch
- A GTN Spray

What the medication does:

- Relaxes blood vessels and increases the supply of blood and oxygen to the heart while reducing its workload.

Reasons for medication:

- To ease symptoms of angina including chest pain or discomfort.

Possible side effects:

- Headache (nitrate, ranexa)
- Flushing (nitrate)
- Dizziness
- Feeling faint

CAUTION

- Do not use drugs for erectile dysfunction such as Viagra when taking nitrates - may cause a dangerous drop in blood pressure.

How to treat Angina/chest discomfort using GTN spray

- Angina symptoms include discomfort of any severity in the chest, arms, jaw and gums.
- You may not experience all of the symptoms together; learn to recognize your own symptoms.

When symptoms start, stop what you are doing and get your GTN spray. Take some rest. Always carry your GTN spray with you.

- Sit down; GTN can cause light-headedness.
- Spray 1 puff of your GTN spray under your tongue and close your mouth (1st dose).
  - Wait for 5 minutes.
- If the symptoms are still present, spray 1 more puff (2nd dose).
  - Wait for 5 minutes.
- If the symptoms are still present, spray 1 more puff (3rd dose).
  - Wait for 5 minutes.
- If the symptoms persist after the third dose, you should immediately call an ambulance: Dial 999 or 112.

Other drugs used to treat angina include:

- Nicorandil (Ikorel)
- Ranolazine (Ranexa)
- Ivabradine (Procorolan)

See product leaflets for a full list of side effects.

IMPORTANT

- Always have two sprays available, one at home and one for going out.
- Once opened, a GTN spray should be used within 2 years, even if expiry date has not passed.

Important dietary considerations when taking heart medicines

Grapefruit

Grapefruit and grapefruit juice can affect the way a number of heart medications work. They can increase the effect of the medicine which can make you feel unwell. If you are concerned about whether it is safe for you to take grapefruit or grapefruit juice, ask your health care provider or pharmacist.

Salt

Some medicines contain sodium which is found in salt. A large amount of salt in your diet increases the risk of high blood pressure and therefore cardiovascular disease. To find out if your medicines contain sodium, check the information sheet that comes with them. If you are worried, talk to your health care provider or pharmacist.

Caution when using salt substitutes:

Speak to your healthcare professional before using salt substitutes such as potassium salt or 'Lo-Salt' as these are not suitable for everybody, particularly those with kidney disorders or people taking certain medications.

Medications Checklist

Advice from our experts

- ✓ Talk to your healthcare provider about the medications you have been prescribed. Make sure you understand why you have been given your medicine or medicines, and how best to take them.
- ✓ There is a lot of information in this booklet and it might not all be relevant to you at any one time. Keep this booklet handy and have a read of it every now and then.
- ✓ Keep medicines out of the reach of children.
- ✓ Store medicines in original container.
- ✓ Make a list of your medication, including strength, dose and how often you need to take it. Update this list every time there are new changes.
- ✓ Your pharmacist can provide blister packs on request.
- ✓ Bring ALL your medication or an UPDATED list of your medication with you to all medical appointments.
- ✓ Keep at least a two week supply of medicines at all times. Set reminders to refill your prescription.
- ✓ Check if any medicine is out of date, and if so, return it immediately to the pharmacy for disposal.
- ✓ Only take the medicines that have been prescribed for you.
- ✓ Consult your health care provider before taking "over the counter medicines" (including herbal remedies).
- ✓ Always read the possible side effects in the information leaflet supplied.
- ✓ If you are having any side effects from your medicine, tell your nurse or health care provider immediately.
- ✓ Most medicines do not mix well with excessive alcohol.
- ✓ Never take an extra dose. If you have missed a dose, please consult the drug information leaflet, your health care provider or pharmacist for further advice.
- ✓ Inform your health care provider if you become pregnant.

- ✓ Do not stop taking your medicines unless advised to do so by your health care provider or nurse.
- ✓ An alternative can be prescribed if a medication does not agree with you.
- ✓ Most heart medicines are long-term or even life-long treatments.

Tips for taking medications:

It can be difficult to remember to take medications, especially if you are taking more than one kind.

- Your healthcare provider or pharmacist can help you to come up with a plan for taking your medications. For example, your pharmacist might help you to set up a pill box with compartments for every day of the week.
- Setting an alarm to remind you to take your medications is a great idea! Instead of an alarm, you could place a summary of your medications and when you need to take them on the door of your fridge, or another spot you pass often.
- If you like to use technology, there are many Smartphone Apps that can be downloaded for free to help you to remember to take your medications.
- Another tip to help you to remember to take your medications is by putting your medications next to something that you do every day. For example, you might put your morning medications next to your tooth brush.
- Ask your GP to review your medications every year.

DATE:

Medication Name	Reason for Medication	Dosage

When				Additional Information
AM	MM	PM	Night	

DATE:

Medication Name	Reason for Medication	Dosage

When				Additional Information
AM	MM	PM	Night	

DATE:

Medication Name	Reason for Medication	Dosage

When				Additional Information
AM	MM	PM	Night	

DATE:

Medication Name	Reason for Medication	Dosage

When				Additional Information
AM	MM	PM	Night	

DATE:

Medication Name	Reason for Medication	Dosage

When				Additional Information
AM	MM	PM	Night	

Contact

If you would like to support Croí in the important work we do, please contact us by:

- *Telephone:* ***091 544310***
- *Email:* ***healthteam@croi.ie***
- *Visit:* ***www.croi.ie***
- *Address:* ***Croí Heart & Stroke Centre, Moyola Lane, Newcastle, Galway, H91 FF68***

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Fighting Heart Disease & Stroke

The challenges facing people living with heart disease and stroke are now greater than any that have come before.

Croí, the Heart & Stroke Charity, has always worked tirelessly to respond to the needs of the community, and with your support, we continue to do that. People living with heart disease and stroke need our support now, more than ever. Your support allows us to continue providing essential services such as our Heartlink West telephone helpline and virtual health chats, and our online support groups which help people living with heart disease and stroke. Your gift will also help fund the Croí Courtyard Apartments, which allows families to stay together, free of charge, while one of them is receiving cardiac or stroke care in Galway University Hospital — a priceless gift during a stressful time.

As an independent, not-for-profit organisation, all our activities are funded from our own fundraising initiatives and revenue generating activities. We are not a state-funded organisation so each year we have to generate enough revenue to ensure we can continue to lead the fight against heart disease and stroke in the region. **Please give to Croí today.**

Your donation can be sent:

By Post: Croí Heart & Stroke Centre, Moyola Lane, Newcastle, Galway, H91 FF68

Online: www.croi.ie

By phone: 091 544 310

Registered Charity CHY 7500

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Fighting Heart Disease & Stroke

I would like to support Croí

Name:

Address:

Email:

Phone: Mobile:

I am happy to receive information from Croí by: *(please tick)* ☐ Email ☐ Phone ☐ Post

I wish to make a one-time donation: *(please tick)*

☐ €25 ☐ €50 ☐ €100 ☐ €250 ☐ Other €

I wish to make a regular monthly gift by direct debit: (Please tick)

☐ €5 ☐ €50
☐ €10
☐ €21 ☐ Other €

Preferred Start Date: Day Month Year

Bank Name & Address:

Account Name(s):

Account No: **Sort Code:**

Please debit my/our account number and pay the amount specified above to Croí, until your receive further notice from me/us in writing.

Signature: **Date:**

All donations of €250 or more in a year (€21 per month) are eligible for tax relief at 31%, increasing the value of your gift at no additional cost to you.

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