

PHARMACY

Drug Information

Medications to Treat Coronary Heart Disease



What is Coronary Heart Disease?

- Coronary heart disease (CHD) occurs when there is narrowing of blood vessels which supply blood and oxygen to the heart muscle. It is usually caused by build-up of fatty substances (called cholesterol plaques) on the vessel walls, resulting in decreased supply of blood flow to the heart.
- Partial blockage of these blood vessels can lead to chest pain (angina), especially during exertion. The pain may spread to the left arm or neck.
- Other symptoms include breathlessness, dizziness, nausea and numbness or tingling in the shoulder or arms.
- A heart attack occurs when a cholesterol plaque breaks. A blood clot forms at the break hence completely blocking the blood vessel. It may cause severe chest pain or discomfort. Other symptoms may be similar to patients with partial blockages, but they usually occur abruptly.

What are the Medications for Coronary Heart Disease and the Side Effects?

Medications and How Do They Work	Common Side Effects	Management and Advice
<p>Anti-Platelets ("Blood Thinner")</p> <ul style="list-style-type: none"> • <i>Aspirin</i> • <i>Clopidogrel</i> • <i>Ticagrelor</i> • <i>Prasugrel</i> <p><u>How do they work</u> Prevent the formation or growth of blood clots and reduce the chance of heart attack or stroke.</p> <p>Patients treated with stents may need to take two antiplatelet medications for a period ranging from one month to a year, or longer.</p>	<ul style="list-style-type: none"> • Gastric irritation • Easy bruising or bleeding 	<ul style="list-style-type: none"> • Take after meals to reduce gastric irritation • Be careful to avoid injury • Avoid rubbing bruises and apply pressure to small cuts to stop bleeding • See a doctor immediately if unusual bleeding/bruising, or black and tarry stools occurs • Inform your doctor or dentist that you are on a blood thinner before any surgical or dental procedures

Medications and How Do They Work	Common Side Effects	Management and Advice
<p>Cholesterol-Lowering Agents ("Statins")</p> <ul style="list-style-type: none"> • <i>Simvastatin</i> • <i>Atorvastatin</i> • <i>Rosuvastatin</i> • <i>Lovastatin</i> • <i>Pravastatin</i> <p><u>How do they work</u> Decrease bad cholesterol (LDL) and the fatty acids in the blood (triglyceride), hence reducing risks of heart attack.</p>	<ul style="list-style-type: none"> • Muscle ache • Rare side effects: <ul style="list-style-type: none"> ○ Unexplainable severe or generalized muscle pain/weakness ○ Tea-coloured (dark brown) urine ○ Yellowing of skin or whites of eyes ○ Severe abdominal pain 	<ul style="list-style-type: none"> • Take Lovastatin after food for better absorption • Take Simvastatin or Lovastatin at night • Seek medical attention immediately if you experience any of the rare side effects • Do not take grapefruit juice if you are taking Simvastatin, Atorvastatin or Lovastatin
<p>Beta Blockers</p> <ul style="list-style-type: none"> • <i>Atenolol</i> • <i>Bisoprolol</i> • <i>Carvedilol</i> • <i>Metoprolol</i> • <i>Nebivolol</i> • <i>Propranolol</i> <p><u>How do they work</u> Lower blood pressure and heart rate, reducing the heart's need for oxygen. They may also help to prevent a future heart attack.</p>	<ul style="list-style-type: none"> • Dizziness • Tiredness • Cold hands and feet • Breathlessness • Sexual dysfunction 	<ul style="list-style-type: none"> • Get up slowly from a sitting or lying position to minimize dizziness • Symptoms such as tiredness, cold hands and feet may resolve with time • Inform your doctor if breathlessness or persistent giddiness occur • Do not stop taking this medicine without discussing with your doctor as it may worsen your condition

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<p>Angiotensin-Converting Enzyme Inhibitors (ACE-I)</p> <ul style="list-style-type: none"> • <i>Captopril</i> • <i>Enalapril</i> • <i>Lisinopril</i> • <i>Perindopril</i> • <i>Ramipril</i> <p>Angiotensin II Receptor Blockers (ARBs)</p> <ul style="list-style-type: none"> • <i>Candesartan</i> • <i>Irbesartan</i> • <i>Losartan</i> • <i>Telmisartan</i> • <i>Valsartan</i> <p><u>How do they work</u> Relax blood vessels, preserve heart function and may prevent a future heart attack.</p>	<ul style="list-style-type: none"> • Dizziness • Dry cough (usually ACE-I) • May cause high Potassium level: dizziness, muscle weakness or fast heart beat • Rare side effects: <ul style="list-style-type: none"> ○ Swelling of the hands, face, lips, eyes, tongue, or throat ○ Breathing difficulty ○ Swallowing difficulty 	<ul style="list-style-type: none"> • Get up slowly from sitting or lying position to minimize dizziness • Inform your doctor if persistent dry cough, severe dizziness or signs of high Potassium level occur • Inform your doctor if you intend to get pregnant or are currently pregnant • Seek medical attention immediately if any rare side effect occurs
<p>Anti-Anginal Agents - <i>Trimetazidine</i> (Modified-Release and immediate release formulation available)</p> <p><u>How does it work</u> Reduces oxygen demand of the heart and prevents chest pain.</p>	<ul style="list-style-type: none"> • Dizziness, headache • Diarrhoea • Rare side effects: <ul style="list-style-type: none"> ○ Fast heartbeat ○ Parkinsonism symptoms: involuntary trembling of hands, walking difficulty, slow movement, unstable posture 	<ul style="list-style-type: none"> • Take the medication after meals • Trimetazidine modified-release tablets should be swallowed whole, do not crush or chew the tablets • Rise slowly from sitting or lying position to minimize dizziness • Inform your doctor if experiencing persistent dizziness or fast heartbeat

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<p>Calcium Channel Blockers</p> <p><i>Dihydropyridine Derivatives:</i></p> <ul style="list-style-type: none"> • Amlodipine • Nifedipine LA (Long Acting) <p><i>Non-Dihydropyridine Derivatives:</i></p> <ul style="list-style-type: none"> • Diltiazem • Verapamil (Modified-Release and immediate release formulation available for both medications) <p><u>How do they work</u> Reduce oxygen demand and workload of the heart by relaxing blood vessels; also lower blood pressure.</p>	<ul style="list-style-type: none"> • Dizziness • Headache • Flushing of face • Lower leg swelling • Constipation (Especially verapamil and diltiazem) 	<ul style="list-style-type: none"> • Nifedipine LA, Diltiazem SR (Sustained Release) and Verapamil SR (Sustained Release) should be swallowed whole, do not crush or chew the tablets • Get up slowly from sitting or lying position to minimize dizziness • Inform your doctor if dizziness is persistent • Elevating your legs may help to reduce leg swelling • Include more fibre-rich food (e.g. fruits, vegetables, whole grains) into your diet to reduce constipation
<p>I_f Channel Inhibitor</p> <ul style="list-style-type: none"> • Ivabradine <p><u>How does it work</u> Lowers the heart rate thereby reduces the oxygen demand and workload of the heart.</p>	<ul style="list-style-type: none"> • Dizziness • Sensation of enhanced brightness • Blurred vision 	<ul style="list-style-type: none"> • Inform your doctor if persistent dizziness or changes in vision occur

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<p>Venous Vasodilators (Nitrates)</p> <ul style="list-style-type: none"> • Isosorbide Dinitrate • Isosorbide 5-Mononitrate CR (Controlled Release) • Glyceryl Trinitrate (GTN)* <p><u>How do they work</u> Relax blood vessels and increase blood and oxygen supply to the heart.</p> <p><i>*Note: Please see section below for specific instructions on administration and storage of GTN.</i></p>	<ul style="list-style-type: none"> • Dizziness • Headache • Flushing 	<ul style="list-style-type: none"> • Isosorbide 5-Mononitrate CR should be swallowed whole, do not crush or chew the tablets • Headache and flushing of face usually improve with time • Inform your doctor if severe headache or persistent dizziness occurs • Do not take with Phosphodiesterase-5 Enzyme Inhibitors [e.g. Sildenafil (Viagra®), Tadalafil (Cialis®), Vardenafil (Levitra®)]

If you develop rashes, facial swelling or shortness of breath after taking the medication, you could be allergic to the medication. Please seek medical attention immediately.

What Is Glyceryl Trinitrate (GTN) and How Are the Tablets Taken?

GTN is used to relieve chest pain or to prevent an expected chest pain.

1. Sit down when you experience a chest pain.
2. Place a tablet under your tongue. Do not swallow the tablet.
3. Rest for 5 minutes.
4. If the pain is not relieved after 5 minutes, repeat steps 2 and 3.
5. If you still have chest pain after 2 to 3 tablets, call an ambulance (995).
6. While waiting for the ambulance to arrive, continue placing a tablet under your tongue every 5 minutes if pain persists.

How Is Glyceryl Trinitrate (GTN) Spray Used?

Before you use a new bottle of GTN spray, prime the spray by ejecting a few puffs into the air until a fine liquid mist appears. Re-prime the spray before use if you have not used it for a while.

1. When you experience chest pain, sit down and remove the plastic cover. Do not shake the container.
2. Hold the bottle upright and place your index finger on the white button.
3. Open your mouth and place the container close to your tongue. Point the nozzle at the area under your tongue.
4. Press the button firmly to release 1 spray under your tongue and close your mouth. Do not inhale the spray and avoid swallowing immediately after using the spray.
5. If the pain is not relieved after 5 minutes, repeat steps 2-4.
6. If you still have chest pain after 2 to 3 sprays, call an ambulance (995).
7. While waiting for the ambulance to arrive, continue administering a spray under your tongue every 5 minutes.
8. Replace the plastic cover after use.

If you are using GTN to prevent an anticipated angina attack, dissolve the tablet or spray under your tongue 5 to 10 minutes before engaging in activities that may cause an attack (e.g. exercise).

How are the Medications Taken?

- If you miss a dose, take the missed dose as soon as you remember. If it is almost time for your next dose, take only the usual dose. Do not double the dosage.

Can the Medications be Taken with Other Medications?

- Please inform your doctor or pharmacist if you are taking other medications, including supplements, traditional or herbal remedies.

Do I Need Regular Monitoring When Taking These Medicines?

- Regular monitoring of blood tests may be required.

Are There any Special Precautions That I Need to Take?

- It is important to inform your doctor if you intend to conceive or breastfeed while taking this medication.

What Else Can I do to Help My Condition?

- Eat more fruits, vegetables, whole grains and fish
- Limit your intake of food that is rich in salt and fat
- Maintain an active lifestyle by exercising regularly
- Quit smoking
- Limit your daily alcohol intake to no more than 2 drinks for men and 1 drink for women (1 drink = 1 can of beer or 1 glass of wine).

How Do I Store These Medications?

- Store your medication in a cool, dry place away from heat, moisture and direct sunlight.
- Store GTN tablets in their original bottle, do not transfer them to other containers. Carry them with you wherever you go but do not place them too close to your body. Once opened, discard the bottle after 8 weeks.

If you have any problem with your treatment, please contact your doctor, pharmacist or nurse clinician.

Please keep all medications out of reach of children.



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