

CREDIT-VALLEY
THE CREDIT VALLEY HOSPITAL

MEDICATIONS & YOUR HEART - Information Session

Department of Pharmacy
Credit Valley Hospital
2010

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Treatment and prevention of HEART DISEASE =

Healthy Lifestyle Choices

+

Medications

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OBJECTIVES

- 1. **TAKING PRESCRIPTION MEDICATIONS**
- 2. **NON-PRESCRIPTION MEDICATIONS AND SUPPLEMENTS**
- 3. **PRESCRIPTION HEART MEDICATIONS – Medication Schedule** (ASA/Plavix®, ACE inhibitors, ARBs, cholesterol meds, beta-blockers, calcium channel blockers and nitroglycerin)

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More questions?

- You can make appointment for individual consultation with pharmacist, as part of the CVRM Program, at no cost to you – check with your Case Manager about how to set up an appointment . . .

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1. TAKING MEDICATIONS – *Case 1a: FRANK*

Frank is 36 years old, has diabetes, and high blood pressure. He was started on LISINOPRIL-HCT for his blood pressure 1 month ago. Since there were no refills on his prescription, he was happy to stop the medication after 1 month, as it was expensive and he has no drug plan coverage.

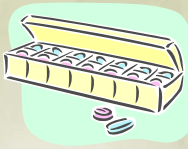
WHAT SHOULD WE TELL FRANK?

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1. TAKING Your Prescription MEDICATIONS

- It may take some time to figure out the right doses and mix medications for you – see your doctor regularly
- Many heart medications need to be taken long-term
- Do not stop taking your medications without talking to your doctor

1. **TAKING MEDICATIONS** – More Tips

- Take your medications as directed and never double doses
- Keep away from kids
- Use pill organizer
- Go to same Pharmacy

1. **TAKING MEDICATIONS** – More Tips




- Ask questions
- Keep medication diary or get ANNUAL MEDICATION REVIEW at your Pharmacy
- When travelling, always keep medication with you
- Bring old medications to your Pharmacy or local Waste Disposal / Recycling Centre

www.peelregion.ca/pw/waste/crc/locations.htm



When disposing used syringes and needles, DO...





- pick up your FREE biohazard container at Peel Community Recycling Centre
- dispose of all sharps in your biohazard container
- bring full container back to Recycling Centre


2. **NON-PRESCRIPTION MEDICATIONS & SUPPLEMENTS** ; Case 1: FRANK

Frank's nose gets stuffy and he is not sure if he has a cold or allergies, so he goes to a pharmacy and buys REACTINE-PLUS (an anti-allergy medication with a nasal decongestant).

WHAT DO WE TELL FRANK this time?



2. **NON-PRESCRIPTION MEDICATIONS & SUPPLEMENTS**



- **Some medications may increase your blood pressure or your heart rate!** (EXAMPLES: decongestants, weight loss supplements, wake up pills or energy drinks)
- **Some may have blood thinning effects** (EXAMPLES: ginko biloba, vitamin E, fish oils in high doses)
- **Herbals = Drugs**, "natural" does NOT mean safe
- **Ask your doctor or pharmacist for advice** BEFORE using any non-prescription medication or natural supplements

3. **PRESCRIPTION HEART MEDICATIONS** –

Case 2: MARY

Mary is 48 years old and was discharged from hospital yesterday, after having her first heart attack. Before going to the hospital, Mary was taking only Lipitor for her cholesterol. She now has a prescription for 5 new medications and is not sure how and when to take them.

WHAT DO WE TELL MARY?


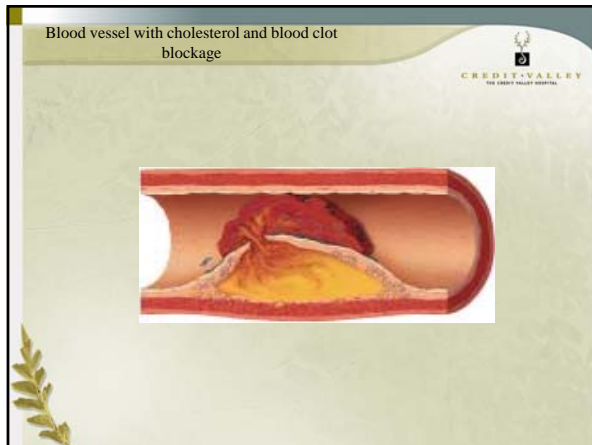
Home Hospital Medication Schedule

Patient name: _____ Date: _____ Prepared by: _____

Medications	Directions	Breakfast	Lunch	Supper	Bedtime	Special instructions
Aspirin [®] (ASA) Aspirin [®] (____ mg)	Take 1 tablet once a day					
Clopidogrel [®] (Plavix [®]) (75 mg)	Take 1 tablet once a day					
Angiotensin converting enzyme (ACE) inhibitor (____ mg)	Take ____ tablet(s) / capsule(s) ____ time(s) a day					
Cholesterol lowering agent (____ mg)	Take ____ tablet(s) / capsule(s) ____ time(s) a day					
Beta blocker (____ mg)	Take ____ tablet(s) ____ time(s) a day					
Calcium channel blocker (____ mg)	Take ____ tablet(s) / capsule(s) ____ time(s) a day					
Nitroglycerin patch (____ mg/h)	Apply 1 patch per day					Put on in morning take off at bedtime
Nitroglycerin spray (____ mg)	Spray 1-2 drops under tongue; can repeat twice every 5-10 min [†]					take as needed [†] If no relief after 3 sprays within 15 minutes, seek medical help. Can be taken 5-10 minutes before activity that may bring on chest pain. Do not inhale the spray and keep away from eyes.

3. HEART MEDICATIONS - Antiplatelet Drugs


- Acetylsalicylic Acid =ASA (Aspirin[®], Entrophen[®], Novasen[®])
- CLOPIDOGREL (Plavix[®])

3. HEART MEDICATIONS - Antiplatelet Drugs: ASA + Plavix[®]

ACTION

- Prevent blood clots to lower risk of heart disease and stroke
- Lower risk of another heart attack
- ASA + Plavix[®] = combined effect




USES

- Heart attack (treatment & prevention), angioplasty, stroke prevention, peripheral vascular disease

3. HEART MEDICATIONS - Antiplatelet Drugs: ASA

SIDE EFFECTS

- Nausea
- Stomach upset/pain
- Stomach ulcers
- Itching and/or skin rash (allergy)




Home Hospital Medication Schedule

Patient name: _____ Date: _____ Prepared by: _____

Medications	Directions	Breakfast	Lunch	Supper	Bedtime	Special instructions
Aspirin [®] (ASA) Aspirin [®] (____ mg)	Take 1 tablet once a day					
Clopidogrel [®] (Plavix [®]) (75 mg)	Take 1 tablet once a day					
Angiotensin converting enzyme (ACE) inhibitor (____ mg)	Take ____ tablet(s) / capsule(s) ____ time(s) a day					
Cholesterol lowering agent (____ mg)	Take ____ tablet(s) / capsule(s) ____ time(s) a day					
Beta blocker (____ mg)	Take ____ tablet(s) ____ time(s) a day					
Calcium channel blocker (____ mg)	Take ____ tablet(s) / capsule(s) ____ time(s) a day					
Nitroglycerin patch (____ mg/h)	Apply 1 patch per day					Put on in morning take off at bedtime
Nitroglycerin spray (____ mg)	Spray 1-2 drops under tongue; can repeat twice every 5-10 min [†]					take as needed [†] If no relief after 3 sprays within 15 minutes, seek medical help. Can be taken 5-10 minutes before activity that may bring on chest pain. Do not inhale the spray and keep away from eyes.

Angiotensin Converting Enzyme =
ACE Inhibitors


- **BENAZEPRIL** (Lotensin®)
- **CAPTOPRIL** (Capoten®)
- **CILAZAPRIL** (Inhibace®)
- **ENALAPRIL** (Vasotec®)
- **FOSINOPRIL** (Monopril®)
- **LISINAPRIL** (Prinivil®, Zestril®)
- **PERINDOPRIL** (Coverisyl®)
- **QUINAPRIL** (Accupril®)
- **RAMIPRIL** (Altace®)
- **TRANDOLAPRIL** (Mavik®)



3. **HEART MEDICATIONS**
- ACE Inhibitors...

ACTIONS

- Lower blood pressure
- Lessen workload for the heart
- Strengthen heart muscle
- Lower risk of another heart attack and stroke




USES

- Hypertension, diabetic nephropathy, after heart attack, congestive heart failure

3. **HEART MEDICATIONS**
- ACE Inhibitors...

SIDE EFFECTS

- Dizziness, weakness
- Dry cough
- Itching and/or skin rash (allergy)



Angiotensin Receptor Blockers
-ARBs

- **CANDESARTAN** (Atacand®)
- **EPROSARTAN** (Teveten®)
- **IRBESARTAN** (Avapro®)
- **LOSARTAN** (Cozaar®)
- **OLMESARTAN** (Olmotec®)
- **TELMISARTAN** (Micardis®)
- **VALSARTAN** (Diovan®)

3. **HEART MEDICATIONS** - ARBs

ACTION/USE/SIDE EFFECTS:
similar to ACE inhibitors, but less likely to cause dry cough

Home Hospital Medication Schedule

Patient name: _____ Date: _____ Prepared by: _____

Medications	Directions	Frequency	Time	Special instructions
Aspirin (ASA) Aspirin® (____ mg)	Take 1 tablet once a day			
Cholesterol Plavix® (75 mg)	Take 1 tablet once a day			
Angiotensin converting enzyme (ACE) inhibitor (____ mg)	Take ____ tablet(s) / capsule(s) ____ time(s) a day			
Cholesterol lowering agent (____ mg)	Take ____ tablet(s) / capsule(s) ____ time(s) a day			
Beta blocker (____ mg)	Take ____ tablet(s) ____ time(s) a day			
Calcium channel blocker (____ mg)	Take ____ tablet(s) / capsule(s) ____ time(s) a day			
Nitroglycerin patch (____ mg/h)	Apply 1 patch per day			Put on as morning take off at bedtime
Nitroglycerin spray (____ mg)	Spray 1-2 drops under tongue; can repeat twice every 5-10 min*			* If no relief after 3 sprays within 15 minutes, seek medical help. Can be taken 5-10 minutes before activity that may bring on chest pain. Do not inhale the spray and keep away from eyes.

3. **HEART MEDICATIONS** –
Cholesterol-Lowering Drugs

FIBRATES: FENOFIBRATE (Lipidil®), GEMFIBROZIL (Lopid®), BEZAFIBRATE (Bezalip®)

STATINS: ATORVASTATIN (Lipitor®), FLUVASTATIN (Lescol®), LOVASTATIN (Mevacor®), PRAVASTATIN (Pravachol®), ROSUVASTATIN (Crestor®), SIMVASTATIN (Zocor®)

CHOLESTEROL ABSORPTION INHIBITOR:
EZETIMIBE (Ezetrol®)

3. **HEART MEDICATIONS**
- Cholesterol-Lowering Drugs...

ACTION & USE 😊

- Lower amount of cholesterol in the body
- **Statins** lower risk of heart attack and stroke ('*plaque stabilizing effect*')

SIDE EFFECTS of statins

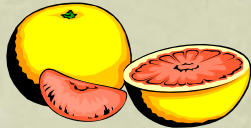
- Report to your doctor: unexplained muscle pains/cramps 😞

3. **HEART MEDICATIONS** –
Cholesterol-Lowering, Drugs: statins

INTERACTIONS

Avoid grapefruit or grapefruit juice if taking:

- ATORVASTATIN (Lipitor®)
- LOVASTATIN (Mevacor®)
- SIMVASTATIN (Zocor®)




Home Hospital Medication Schedule

Prepared by: _____

Medications	Directions	Frequency	Route	Special instructions
Acetylsalicylic acid (ASA) "Aspirin" (____ mg)	Take 1 tablet once a day			
Chiropraxal "Flax" (75 mg)	Take 1 tablet once a day			
Angiotensin converting enzyme (ACE) inhibitor ____ (____ mg)	Take ____ tablet(s) / capsule(s) ____ time(s) a day			
Cholesterol lowering agent ____ (____ mg)	Take ____ tablet(s) / capsule(s) ____ time(s) a day			
Diuretic ____ (____ mg)	Take ____ tablet(s) ____ time(s) a day			
Calcium channel blocker ____ (____ mg)	Take ____ tablet(s) / capsule(s) ____ time(s) a day			
Nitroglycerin patch ____ (____ mg/24h)	Apply 1 patch per day			Put on in morning, take off at bedtime
Nitroglycerin spray ____ (____ mg)	Spray 1-2 doses under tongue, can repeat twice every 5-10 min*			Take as needed * If no relief after 3 sprays within 15 minutes, seek medical help. Can be taken 5-10 minutes before activity that may bring on chest pain. Do not rub the spray and keep away from eyes.

3. **HEART MEDICATIONS** –
Beta-Blockers

- ACEBUTOLOL (Monitan®, Sectral®)
- ATENOLOL (Tenormin®)
- BISOPROLOL (Monacor®)
- CARVEDILOL (Coreg®)
- METOPROLOL (Betaloc®, Lopressor®)
- PROPRANOLOL (Inderal®)
- SOTALOL (Sotacor®)



3. **HEART MEDICATIONS** –
Beta-Blockers...


ACTIONS 😊

- Lower blood pressure and heart rate
- Lessen workload for the heart
- Lower risk of another heart attack

USES

- Angina, heart attack, irregular/fast heart beats, high blood pressure

3. HEART MEDICATIONS
- Beta-Blockers

SIDE EFFECTS 

- Shortness of breath/wheezing (asthma)
- Dizziness, lightheadedness
- Slow heart rate
- Fatigue, decreased exercise tolerance
- Drowsiness


Home Hospital Medication Schedule

Patient name: _____ Date: _____ Prepared by: _____


Medication	Dose/Route	Frequency	Start	Stop	Duration	Special instructions
Aspirin/low-dose (ASA) Aspirin® (____ mg)	Take 1 tablet once a day					
Chondroitin Flare® (75 mg)	Take 1 tablet once a day					
Angiotensin converting enzyme (ACE) inhibitor (____ mg)	Take ____ tablet(s) / capsule(s) ____ times(s) a day					
Cholesterol lowering agent (____ mg)	Take ____ tablet(s) / capsule(s) ____ times(s) a day					
Beta-blocker (____ mg)	Take ____ tablet(s) ____ times(s) a day					
Calcium channel blocker (____ mg)	Take ____ tablet(s) / capsule(s) ____ times(s) a day					
Nitroglycerin patch (____ mg/h)	Apply 1 patch per day					Put on in morning take off at bedtime
Nitroglycerin spray (____ mg)	Spray 1-2 doses under tongue; can repeat every 5-10 min*					Take as needed * If no relief after 3 sprays within 15 minutes, seek medical help. Can be taken 5-10 minutes before activity that may bring on chest pain. Do not inhale the spray and keep away from eyes.

3. HEART MEDICATIONS
- Calcium Channel Blockers

- AMLODIPINE (Norvasc®)
- DILTIAZEM (Cardizem®, Tiazac®)
- FELODIPINE (Plendil®, Renedil®)
- NIFEDIPINE (Adalat®)
- VERAPAMIL (Isoptin®)



3. HEART MEDICATIONS – Calcium Channel Blockers...

ACTIONS 

- Lower blood pressure
- Some slow heart rate (diltiazem, verapamil)

USES


- Angina, high blood pressure

3. HEART MEDICATIONS
- Calcium Channel Blockers


INTERACTIONS

Avoid grapefruit or grapefruit juice if taking :

- FELODIPINE (Plendil®/Renedil®)
- NIFEDIPINE (Adalat®)



3. HEART MEDICATIONS – Calcium-Channel Blockers

SIDE EFFECTS 

- Dizziness, lightheadedness
- Headache
- Flushing of the face (amlodipine / felodipine/ nifedipine)
- Swelling of feet/ankles (amlodipine / felodipine/ nifedipine)
- Faster growth of gums
- Slow heart beat (diltiazem / verapamil)
- Constipation

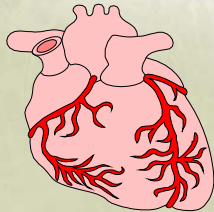
Home Hospital Medication Schedule

Patient name: _____ Date: _____ Prescribed by: _____

Medication	Directions	Frequency	Start	Stop	Refills	Special Instructions
Acetylsalicylic acid (ASA) Aspirin [®] _____ mg	Take 1 tablet once a day					
Clonidine Feloxy [®] (7.5 mg)	Take 1 tablet once a day					
Angiotensin converting enzyme (ACE) inhibitor _____ mg	Take _____ tablet(s) / capsule(s) _____ times a day					
Calcium channel blocker _____ mg	Take _____ tablet(s) / capsule(s) _____ times a day					
Diuretic _____ mg	Take _____ tablet(s) / capsule(s) _____ times a day					
Statins _____ mg	Take _____ tablet(s) / capsule(s) _____ times a day					
Nitroglycerin patch _____ mg/24h	Apply 1 patch per day					Put on in morning, take off at bedtime
Nitroglycerin spray _____ mg	Spray 1-2 drops under tongue, can repeat every 5-10 min*					* If needed after 3 sprays within 15 minutes, seek medical help. Can be taken 1-10 minutes before activity that may bring on chest pain. Do not inhale the spray and keep away from eyes.

3. HEART MEDICATIONS - Nitrates


- ISOSORBIDE DINITRATE (Isordil®, Cedogard®, Coradur®)
- NITROGLYCERIN (Nitrolingual®, Nitrostat®, Minitran®, Nitro-Dur®, Transderm-Nitro®, Trinipatch®, Nitrol®)



3. HEART MEDICATIONS - Nitrates...

ACTIONS

- Improve blood flow to the heart by relaxing blood vessels → relieve angina symptoms




3. HEART MEDICATIONS - Nitrates...

USES

- Angina, heart attack, heart failure

SIDE EFFECTS

- Flushing of face, headache, dizziness or lightheadedness, fast heart beat



WEB Information



- emedicinehealth.com
- hc-sc.gc.ca
- healthyontario.com
- heartandstroke.com
- hypertension.ca
- mayoclinic.com
- webmd.com

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Patient Information Sheet

After a Heart Attack or Unstable Angina

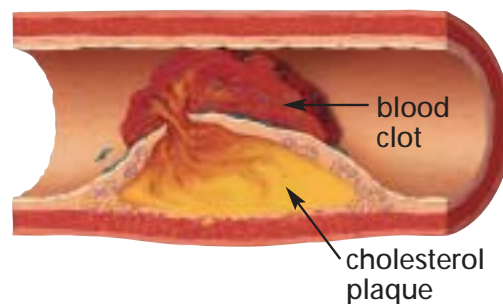
You have just left the hospital after having had a heart attack or an episode of unstable angina. You probably have undergone a number of tests, been started on new medications to take every day and been given some recommendations about your diet and regular exercise. This sheet will hopefully answer some of the questions that you may have.



What is a heart attack or unstable angina?

Heart attacks and unstable angina are part of what is called an 'acute coronary syndrome'. A heart attack happens when one or more of your arteries (blood vessels) become blocked, either by a build-up of cholesterol plaque or by a blood clot. This blockage keeps your heart from getting enough oxygen.

In angina (another way of saying chest pain), the arteries aren't closed completely, but are still blocked enough to decrease blood flow. Unstable angina is when the pain starts to happen with less activity or even at rest.



What medications do I take?

The medications that you have been given work together to reduce your symptoms and lower your chance of having any more heart problems. The table below lists different heart medications, and shows how they work and the reason for taking them. Some medications that do the same thing (for example, ASA and clopidogrel) are sometimes given together to work better. To lower your chance of having more heart problems, you will probably be taking your prescribed medication for a very long time.

Medication	How it works	Protects the heart	Reduces symptoms
Acetylsalicylic acid (ASA; Aspirin®)	<ul style="list-style-type: none"> • thins your blood to lower the risk of heart disease 	√	
Clopidogrel (Plavix®)	<ul style="list-style-type: none"> • thins your blood to lower the risk of heart disease 	√	
ASA + clopidogrel	<ul style="list-style-type: none"> • work together to prevent further heart problems 	√	
Angiotensin-converting enzyme inhibitor	<ul style="list-style-type: none"> • lowers blood pressure • relaxes the blood vessels • strengthens the heart muscle 	√	
Cholesterol-lowering drugs	<ul style="list-style-type: none"> • reduce the amount of cholesterol in your body • prevent further heart disease / problems 	√	
Beta-blocker	<ul style="list-style-type: none"> • decreases the work of the heart • lowers blood pressure and heart rate 	√	√
Calcium channel blocker	<ul style="list-style-type: none"> • decreases the work of the heart • lowers blood pressure 		√
Nitroglycerin	<ul style="list-style-type: none"> • improves blood flow to the heart by relaxing the blood vessels; this reduces angina (chest pain) 		√



How do I take my medications?

It is extremely important that you take your medications at the right times and in the right doses. This is true even if you feel completely better. While all medications have the potential to cause side effects, most people do not have problems with their medication. Be sure that you understand the side effects that may occur with the medications you will be taking. **Speak with your doctor or your pharmacist** before you change anything about your medications.

What medications do I take if I had a stent inserted?

If you had a stent (a thin metal tube) inserted in your artery to keep it open (a procedure called a percutaneous coronary intervention or angioplasty), your doctor may have prescribed a combination of medications (for example, ASA and clopidogrel) that help to prevent a clot from forming in the stent, which could close it off. Take this combination of medications as prescribed for as long as you are told to prevent further heart problems. If your doctor prescribes this combination for you, you will be asked to watch for more bleeding than normal, such as from cuts or scratches, or for blood in your urine or stools.

What else can I do?

Medications are only one part of maintaining a healthy heart and preventing future heart attacks or other heart problems. The following table lists some lifestyle changes that you should think about.

Smoking	Stopping smoking is one of the best things you can do for your health. Speak with your doctor or pharmacist about how they can help you to stop smoking.
Diet	Making good food choices is an important change to make. <i>Canada's Guidelines for Healthy Eating</i> recommends that you: <ul style="list-style-type: none">• eat a variety of foods;• focus on eating several portions of cereals, breads, other grain products, vegetables and fruits every day;• choose low-fat dairy products, leaner meats (like chicken and fish); and• limit how much salt, alcohol and caffeine you consume.
Exercise	Regular physical activity is essential to strong heart health. Staying active is more important than ever to prevent further complications. Speak with your doctor before starting an exercise program.

What should I know about my health insurance?

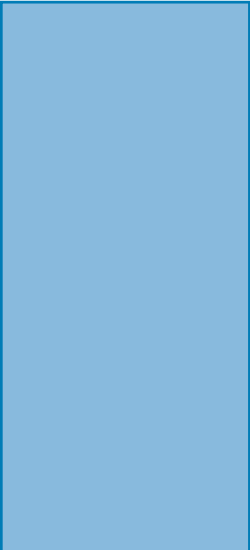
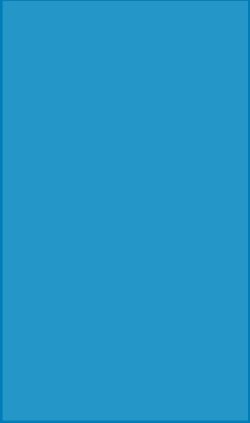
Be sure you understand what your health insurance (federal, provincial or private) covers and what has to be done for coverage of your medication expenses. For some medications, such as clopidogrel, your doctor may need to fill out some forms. **This extra paperwork should not interrupt or delay taking your medication.** Speak with your doctor or pharmacist if you have any questions about medication coverage, and the options that are available to you.

Prepared in collaboration with the Canadian Cardiovascular Pharmacists Network (CCPN) / Réseau canadien des pharmaciens impliqués en soins cardiovasculaires (RCPC)





Medication Schedule



Patient name: _____ Date: _____ Prepared by: _____

Medications	Directions	<i>Breakfast</i>	<i>Lunch</i>	<i>Supper</i>	<i>Bedtime</i>	Special instructions
Acetylsalicylic acid (ASA) Aspirin® (____ mg)	Take 1 tablet once a day					
Clopidogrel Plavix® (75 mg)	Take 1 tablet once a day					
Angiotensin-converting enzyme (ACE) inhibitor ____ (____ mg)	Take ____ tablet(s) / capsule(s) ____ time(s) a day					
Cholesterol-lowering agent ____ (____ mg)	Take ____ tablet(s) / capsule(s) ____ time(s) a day					
Beta-blocker ____ (____ mg)	Take ____ tablet(s) ____ time(s) a day					
Calcium-channel blocker ____ (____ mg)	Take ____ tablet(s) / capsule(s) ____ time(s) a day					
Nitroglycerin patch ____ (____ mg/h)	Apply 1 patch per day					Put on in morning; take off at bedtime
Nitroglycerin spray ____ (____ mg)	Spray 1-2 doses under tongue; can repeat twice every 5-10 min*					Take as needed

* If no relief after 3 sprays within 15 minutes, seek medical help
Can be taken 5-10 minutes before activity that may bring on chest pain
Do not inhale the spray and keep away from eyes



Other medications	Directions	Breakfast	Lunch	Supper	Bedtime	Special Instructions
(___ mg)						
(___ mg)						
(___ mg)						
(___ mg)						

Safety Tips for Taking Your Medications

1. Consider using a medication organizer to help keep track of the pills you need to take every day. Check with your pharmacist, as some medications need to be kept in their original packages to stay useful.
2. Keep an up-to-date “medication diary” of what to take and when to take it. Record any missed or late doses. Show this diary to any health-care professional involved in your care, such as a doctor, dentist, pharmacist and/or nurse.
3. **Always speak with your doctor or pharmacist before stopping any medication.**
4. Check with your doctor or pharmacist about taking any other medications, including those you can buy without a prescription (over-the-counter drugs, herbal preparations and vitamins); some of these products can interfere with your current prescribed medication.
5. When you travel, be sure you have enough medication for the entire trip and for any unexpected travel delays. Always keep your medications with you to avoid the risk of losing them with your luggage.

No single treatment or activity will prevent further complications with your heart or other health problems from developing. All of the medications you have been prescribed work together to strengthen your heart and lower your risk of further heart problems. Your doctor and pharmacist are excellent resources to help you to understand how this treatment plan is meant to work, as well as what signs and symptoms to expect.



