



# PREVENT HEART ATTACK AND STROKE WHEN YOU HAVE KIDNEY DISEASE

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## What is Chronic Kidney Disease (CKD)?

Chronic kidney disease (CKD) includes several conditions that damage your kidneys and decrease their ability to keep you healthy. Healthy kidneys filter waste products from your body. If you have CKD, wastes can build up in your blood and can make you sick. You may develop problems like high blood pressure or heart and blood vessel disease. CKD may happen slowly over a long period. Detecting and treating CKD early can often keep it from getting worse. It can also decrease your risk of heart attack, stroke, kidney failure, and other complications. High blood pressure and uncontrolled diabetes are common causes of CKD as well as risk factors for heart attack and stroke, so it is very important to treat and control all of these conditions.

## Medicines that can help you

Your doctor may recommend that you take some or all of these medicines to help prevent heart attack and stroke:

- **ACE (Angiotensin Converting Enzyme) inhibitors:** ACE inhibitors lower blood pressure. They do this by causing your blood vessels to relax and widen. This lets more blood and oxygen reach your heart. It also helps your heart to beat more easily. It can help to slow down the progress of kidney disease too. ACE inhibitors include lisinopril (*Prinivil, Zestril*), captopril, enalapril, and ramipril.
- **Aspirin:** Aspirin makes blood cells (called platelets) less sticky. This lowers the chances of blood cells clumping together to form a blood clot. Clots can block your arteries and lead to a heart attack or stroke. To protect your heart and brain, taking low-dose (81mg) aspirin can help.
- **Statins:** Statins work to lower your bad (or LDL) cholesterol. This type of cholesterol can build up in your artery walls and make them narrow. This drug also increases your good (HDL) cholesterol and lowers your triglycerides (fat particles in your blood). Statins may help to stop blood clots from forming and lessen swelling inside your arteries. Statins include lovastatin (*Mevacor*), simvastatin (*Zocor*), atorvastatin (*Lipitor*), and pravastatin (*Pravachol*).
- **Beta blockers:** Beta blockers help the heart not to work too hard. They do this by relaxing the heart muscle and by slowing down the heart rate. This lets your heart pump blood more easily. Beta blockers treat high blood pressure, heart failure, irregular heartbeats, chest pain from blocked arteries in your heart, and help prevent sudden death from heart disease. Beta blockers include atenolol (*Tenormin*), metoprolol (*Lopressor*), and propranolol (*Inderal*).
- **Diuretics:** Diuretics help your body get rid of extra fluid and help to control your blood pressure. Diuretics include furosemide (*Lasix*), hydrochlorothiazide (HCTZ), and (HCTZ)/triamterene (*Maxzide*).

Talk with your doctor, pharmacist or nurse practitioner to find out which of these medicines might be right for you. Some of these drugs may affect the kidneys, but they do such a good job of stopping heart attacks and strokes that this makes them worth the risk. Your doctor may suggest some lab tests to be sure that these medicines work well for you.

## Make healthy choices

Your doctor or other health care professional can recommend a lot of ways for you to feel better and live healthier:

- Eat more fresh foods and fewer



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processed foods like potato chips, crackers, or fast food.

- Choose foods low in fat, especially saturated fat and trans fat. These fats are harmful to your heart.
- Lower the amount of salt and sodium you eat to less than 2000mg per day.
- Making other changes in your diet might help you. You can reduce foods high in potassium (such as bananas and potatoes), reduce your phosphorus intake (less cheese, milk, and cola drinks), and limit your protein (3–4 oz. of meat each day).

There are other things you can do to feel better and healthier:

- Get up and move or walk for 30 minutes or more on most days of the week.
- Keep your weight at a healthy level.
- Quit smoking, if you smoke. This is the single most important change you can make to be healthier. We can help you quit. Visit your Health Education Center for tips on how to quit and stay smoke free.
- Know your blood sugar, blood pressure and cholesterol levels and what the best levels are for you.

Consider completing an Advance Health Care Directive to make your wishes known if, in the future, you cannot speak for yourself.

## Lab tests you may take

- **Glomerular filtration rate (GFR):** Shows how well your kidneys work.
- **Creatinine:** Creatinine is a waste product found in blood. When kidneys are not working well, creatinine levels will be higher. This test is another way to show how well your kidneys are working.
- **Hemoglobin A1c:** Shows your average blood sugar for approximately three months (important if you have diabetes).
- **Lipid Panel:** Your total cholesterol, LDL (bad) cholesterol, HDL (good) cholesterol and triglycerides (fat particles in the blood).

Talk to your doctor about these and other lab tests to show how well your kidneys work. They can also help show how the medicines you take are affecting you. Also, ask your doctor about combining blood tests to help keep your veins healthy.

## Taking other medications or nutritional products

- Read the labels carefully on over-the-counter medicines and herbal or weight loss products. Some over-the-counter medicines have warnings that say that people at risk for a heart attack, stroke, or anyone with kidney disease should not use them. Let your doctor or pharmacist know if

you are taking any over-the-counter product.

- Don't take medicines or products that make your kidneys work harder or can harm your kidneys. These include non-prescription, nonsteroidal anti-inflammatory drugs (NSAIDs), such as:
  - Advil
  - Aleve
  - Motrin
  - Alka-Seltzer
  - Ibuprofen
  - Full-strength aspirin (325mg or higher)
- If you need to take pain medicine, acetaminophen (*Tylenol*) is generally safe and effective.
- Be careful of salt substitutes or potassium supplements. Most salt substitutes have potassium instead of sodium. Potassium in high levels can harm you if you have chronic kidney disease.

Talk with your doctor about how much medicine you take (your dose). Doses of some medicines may need to be lowered if your kidneys become weaker.

### Additional resources

- National Kidney Foundation  
1-800-622-9010  
[kidney.org](http://kidney.org)
- National Kidney Disease Education Program  
[nkdep.nih.gov/](http://nkdep.nih.gov/)
- Connect to our Web site at [members.kp.org](http://members.kp.org) to access health and drug encyclopedias, interactive programs, message boards, health classes, and much more.

This information is not intended to diagnose or to take the place of medical advice or care you receive from your physician or other health care professional. If you have persistent health problems, or if you have additional questions, please consult with your doctor. If you have questions or need more information about your medication, please speak to your pharmacist. Kaiser Permanente does not endorse any brand name: any similar products may be used.