



Treatment with Warfarin (Coumadin)

Warfarin (Coumadin) is a medicine that is used to treat and prevent blood clots in the legs, lungs, heart, brain, and other parts of the body.

What is warfarin?

Warfarin sodium (Coumadin) is a medicine that works as an *anti-coagulant*. “Anti” means “against” and “coagulant” refers to blood clotting. An anticoagulant helps prevent clots from forming in the blood. Although warfarin is sometimes called a “blood-thinner,” it works in the liver to decrease the production of natural blood components called *clotting factors*.

Why am I taking warfarin?

Your doctor has prescribed warfarin to prevent the formation of harmful clots or to treat an existing blood clot. Blood clots may form in veins, arteries, or even within the chambers of the heart or on heart valves. Blood clots can create blocks in blood vessels and cut off the blood supply to a portion of the body. Rarely, they can break into fragments called *emboli*, and be swept along by the blood. Emboli from the veins can travel through the heart and lodge in the lung, causing a *pulmonary embolus* (PE). Emboli from the heart or arteries can cause a stroke if they lodge in the brain. Warfarin may be prescribed for the treatment or prevention of:

- *Atrial fibrillation* (heart-rhythm disturbance).
- Stroke.
- Heart attack.
- *Deep vein thrombosis* (a blood clot in a vein that leads to the heart, also called DVT) or pulmonary embolism.
- Heart-valve disease or heart-valve replacement.

Warfarin therapy requires routine blood testing of the Prothrombin Time (PT) or International Normalized Ratio (INR) to determine your dose. Doses can change often during treatment with warfarin.

How does warfarin work?

Warfarin blocks some of the ability of your liver to use vitamin K. Vitamin K is needed to make *clotting factors* that help the blood clot and prevent too much bleeding. Vitamin K is found naturally in certain foods, such as green vegetables and some oils.

Warfarin reduces the body's ability to make blood clots. It can help stop harmful clots from forming and keeps clots from getting larger, but it does not break up existing clots.

How long does it take for warfarin to work?

Warfarin begins to reduce blood clotting within 24 hours after taking the first dose. However, the full effect may take 3 to 5 days to occur. During this time, you may need to be treated with injectable heparin or a low molecular weight heparin until the full effect of warfarin has occurred.

How much warfarin should I take?

The amount of warfarin needed is different for each person. Your body's response to warfarin is monitored by a blood test called the Prothrombin Time (PT) or International Normalized Ratio (INR). Your warfarin dose is adjusted to get to your goal range for the INR based on the results of this blood test.

What are the PT and INR?

Your PT is measured in seconds. PT is the time it takes for your blood to form a clot. The INR is a way to report the PT. It is more widely used to check how your body reacts to your dose of warfarin.

Your INR is based on how much warfarin you need for your health condition. Most people have an INR of about 1.0 before they take warfarin. After they start warfarin, their goal INR range is between 2.0 and 3.0. It may be higher if you are at greater risk of forming clots.

In general, if your INR is below your target range (less than 2.0), you are at greater risk of forming clots. If your INR is above your target range (greater than 3.0), you are at greater risk of having problems from too much bleeding.

When will my blood be tested?

When you first start taking warfarin, you may need to have your blood tested twice a week. As your results become more consistent and your warfarin dose becomes stable, blood testing is usually done once a month.

How often your INR is tested will be decided by your doctor. Or, if you go to an anticoagulation clinic, the clinic pharmacist or nurse will decide how often to test your INR. **It is very important that you get your blood tested on the date and time that you are told.** If you cannot make a scheduled appointment, you must call and reschedule. Your INR must be checked often to prevent blood clots and bleeding.

Have your blood tested when you are instructed to by your doctor or by the Anticoagulation Clinic.

What are the side effects of warfarin?

Side effects from warfarin therapy do not occur very often, but bleeding is the most common. Very minor bleeding may occur even when your INR is in your goal range. This may include an increase in small bruises, or slight gum bleeding when you brush your teeth. Rarely, some people experience skin rash or loss of hair when taking warfarin. If you are experiencing something that is not normal, that you feel may be caused by your warfarin, please contact the Anticoagulation Clinic.

What are the symptoms of too much warfarin or a high INR?

The main symptom of too much warfarin or a high INR is bleeding. If you are unsure whether you are bleeding too much, call your doctor or the Anticoagulation Clinic. Your INR may need to be checked.

Minor Bleeding

You might see any of these symptoms from time to time:

- Gum bleeding while brushing teeth.
- Nosebleed.
- Easy bruising.
- More bleeding after minor cuts.
- Longer menstrual bleeding.

If your INR is too high, bleeding may occur.

Call your doctor or the Anticoagulation Clinic, or come to the hospital emergency department *right away* if you:

- Have a serious fall or hit your head.
- Have any of these symptoms of **major bleeding**:
 - Red or dark brown urine.
 - Red or black, tarry stool.
 - Vomiting or coughing up blood.
 - Severe headache or stomachache.
 - Unexplained bruising.
 - Frequent nosebleeds, bleeding gums, or unusual bleeding.
 - Any bleeding that doesn't stop or is very heavy.

What are the symptoms of too little warfarin or a low INR?

Blood clotting is a serious result of too little warfarin or a low INR. **Call your doctor or the Anticoagulation Clinic, or go to the emergency room *right away* if you have *any* of these symptoms:**

- Sudden weakness in any limb.
- Numbness or tingling anywhere.
- Visual changes or loss of sight in either eye.
- Sudden onset of slurred speech or inability to speak.
- Dizziness or faintness.
- New pain, swelling, redness, or heat in your arm, leg, or foot.
- New shortness of breath or chest pain.

When should I take warfarin?

Take your warfarin once a day, at about the same time, usually in the evening. If you have trouble remembering to take your warfarin, talk to your doctor or the Anticoagulation Clinic pharmacist or nurse.

You may take warfarin with *or* without food. It should not upset your stomach. You may also take warfarin when you take most other medicines. A daily pill box, mediset (a box that holds all your pills for 1 week) or dosing calendar can help you keep track of doses.

What should I do if I miss a dose?

Try not to miss any doses of warfarin. If you do miss a dose:

- If you remember the same day, take your warfarin later than the regular time.
- If you miss a day, call your doctor or the Anticoagulation Clinic. If you can't reach them, skip the missed dose and continue your usual dose the next day at the normal time.
- Do NOT double your dose to "catch up."
- Mark the missed dose on your calendar. Tell your doctor or nurse at your next clinic visit.

Does warfarin interact with any other medicines?

Warfarin interacts with *many* other medicines. This includes some prescription drugs, over-the-counter medicines, herbs, and vitamins. It is very important that you tell your doctor or anticoagulation clinic whenever you start or stop any medicine, herb, or vitamin. Please check even if the medicine was prescribed by another doctor! You may need more frequent INR checks to prevent interaction with warfarin.

There are some medicines that you should *never* take with warfarin. They may decrease the blood's ability to form clots and increase your risk of bleeding:

- Never take aspirin without first talking to your doctor or anticoagulation clinic. If your doctor has recommended that you take 1 aspirin a day, your daily dose should not be more than 81 mg.
- Do not take products containing aspirin such as Excedrin, Alka-Seltzer, Ascription, Bayer, Bufferin, Ecotrin, Empirin, Nyquil, and Pepto Bismol.
- Do not take ibuprofen such as Advil, Motrin, Nuprin, Medipren, Excedrin IB, Haltran, Midol 200, Pamprin-IB, naproxen (Aleve, Naprosyn, Anaprox), ketoprofen (Orudis), cimetidine (Tagamet HB), or famotidine (Pepcid AC).

If you need a medicine for mild pain relief, you can use acetaminophen (Tylenol). Limit your use of acetaminophen to no more than 2 grams a day (6 of the 325 mg tablets, or 4 of the 500 mg tablets).

If your INR is too low, clotting may occur.

Call your doctor or the Anticoagulation Clinic whenever you start or stop any prescription medicine, herbal product, or vitamin supplement.

Drug interactions with warfarin can cause changes in the INR. This can increase your risk of bleeding or clotting.

Notify your doctor or the Anticoagulation Clinic if you change the amount of alcohol that you usually drink, if there are any changes in your health, or if there are any changes in your lifestyle or activity level.

Is it safe to drink alcohol while taking warfarin?

Alcoholic beverages, in moderation, are safe while taking warfarin. This means no more than 1 drink per day and no more than 2 drinks every now and then (1 drink = 1 beer **or** 1 glass of wine **or** 1 cocktail **or** 1 shot). Drinking more than this can make your INR too high and increase your risk of bleeding.

Should I limit activities while taking warfarin?

Since warfarin increases your risk of bleeding, you should avoid activities that place you at risk of injury. Talk with your doctor or to your anticoagulation clinic pharmacist or nurse about your current activities and whether or not you should continue these while taking warfarin. Physical activities that are usually safe are walking, jogging, swimming, and gardening. It is important to let your doctor or anticoagulation clinic staff know about any *changes* in your activity level, as this may also affect your INR.

What if I get sick?

Illness changes your body's response to warfarin. Congestive heart failure, fever, flu, viral or bacterial infection, nausea, vomiting, or diarrhea can cause your INR to go up and increase your risk of bleeding. If you have any of these conditions, contact your doctor or the Anticoagulation Clinic. Please remember to call before starting an antibiotic.

Vitamin K and Warfarin

Foods that are high in vitamin K may reduce the effect of warfarin and decrease your INR. The list on the next page shows foods with a high vitamin K content. Your intake of these foods should be consistent while you are taking warfarin.

If you usually eat several servings of 1 or more of these foods each day, it is all right to keep doing that. If you usually do not eat these foods, keep doing that. **The key is to be consistent.** Your anticoagulation manager will ask you about your diet at each visit to check your intake of foods high in vitamin K.

Foods and beverages that are low in vitamin K do not influence warfarin. These include breads and grains, meat and dairy products, fruits and fruit juices, herbal and black tea (green tea is an exception), coffee, and cola.

If you are planning on changing your diet, call your anticoagulation clinic so that your INR can be monitored more closely.

Foods with High Levels of Vitamin K

The most important thing to remember about your diet is to be **as consistent as possible** and **not** to significantly change the amount of foods high in vitamin K that you eat. Ask to talk with a dietitian if you have questions about what to eat.

Here is a list of foods high in vitamin K:

- Asparagus
- Beet greens
- Broccoli
- Brussels sprouts
- Cabbage
- Celery
- Coleslaw
- Collard greens
- Cucumber with peel
- Dandelion greens
- Endive
- Kale
- Lettuce, butter or iceberg
- Margarine
- Mayonnaise
- Mustard greens
- Oils: canola, olive, soy
- Okra
- Scallions
- Parsley
- Peas
- Plums
- Pumpkin
- Rhubarb
- Sauerkraut
- Spinach, cooked or raw
- Tea, green
- Turnip greens
- Vegetables, mixed

Try to keep your diet consistent. Tell your doctor or the Anticoagulation Clinic if you change your diet. Changes in the amount of vitamin K foods you eat can change how much warfarin you need to take.

The most important thing is to keep your diet consistent. This will keep the amount of vitamin K in your diet steady.

Who should know that I'm taking warfarin?

It is very important to tell all health care providers you see that you are taking warfarin. Tell your doctors, your dentist, and all pharmacists where you have prescriptions filled. Being on warfarin may affect how they care for you in certain medical situations. Consider wearing a medical alert bracelet or necklace that will tell emergency health care providers that you are on warfarin.

Questions?

Your questions are important. Call your doctor or health care provider if you have questions or concerns.

Anticoagulation Clinics:

- University of Washington Medical Center:
206-598-4874
- Seattle Cancer Care Alliance:
206-288-6756
- Harborview Medical Center:
206-744-2976

What about pregnancy?

You should not take warfarin if you are pregnant or are trying to get pregnant. There are other, safer choices for anticoagulation in women who are pregnant. Talk with your doctor, anticoagulation pharmacist, or nurse so that you can switch to another medicine to prevent harm to the unborn baby.

Remember:

- Take your warfarin exactly as directed, at the same time each day.
- Look for signs of bleeding or clotting and report them right away.
- Notify your doctor or the Anticoagulation Clinic of changes in your dietary vitamin K intake, activity level, or medicines (including herbal products, vitamins, and over-the-counter medicines).
- Call your doctor or the Anticoagulation Clinic if you have a fever, diarrhea, vomiting, or loss of appetite lasting longer than 1 day.
- Limit alcohol to 1 to 2 drinks per day.
- Tell all of your health care providers that you are taking warfarin, carry a wallet card, and consider getting a medical alert bracelet or necklace.
- Keep all appointments or call promptly to reschedule.
- Call the Anticoagulation Clinic with any questions!

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