Coumadin, Questions and Answers About Warfarin (Coumadin®)

Warfarin (Coumadin®) is a prescription medication that delays normal blood clotting. This is called an "anticoagulant" or "blood thinner." These medications do not actually cause the blood to become less thick, only less likely to clot.

Normally, when body tissues are cut or damaged, the blood clots in order to prevent blood loss. Some clots form when they are not supposed to and may travel through the bloodstream and become lodged in smaller blood vessels. Blockage of blood flow can cause serious problems including a stroke (when a blood vessel leading to a portion of the brain is blocked) or a heart attack (when a blood vessel leading to the heart is blocked).

WHO SHOULD USE WARFARIN?

- Warfarin is prescribed for patients who have a risk for developing harmful blood clots. People at risk include individuals with a mechanical heart valve, individuals with the irregular heart rhythm called atrial fibrillation and individuals with certain clotting disorders.
- Warfarin is also used in patients who have a history of developing harmful clots, including patients who have had a stroke, heart attack, a clot which has traveled to the lung (*pulmonary embolism*) or a blood clot in the leg (*deep venous thrombosis or DVT*).
- Warfarin may be used to prevent the growth of an already existing clot, such as a DVT.

HOW IS THE EFFECT OF WARFARIN MONITORED?

The goal of warfarin therapy is to lessen the clotting tendency of blood, but not to prevent clotting completely. Therefore, the effect of warfarin on the blood's ability to clot must be carefully watched using laboratory blood tests.

- The test most commonly used to measure the effects of warfarin is the prothrombin time ("protime", or PT).
- The PT is also used to compute a value known as the International Normalized Ratio (INR).
- The longer it takes the blood to clot, the higher the PT and INR. Your doctor will tell you what your "target" INR range is. In most cases, the target range will be 2 to 3, although other ranges may be chosen. If, at any time, your INR is below the target range, there is a risk of clotting. If, on the other hand, your INR is above the target range, there is an increased risk of bleeding.

When warfarin is first prescribed, a higher "loading" dose may be given so that an effective blood level of the drug is reached quickly. The loading dose is then adjusted downward until a maintenance dose (a dose which is enough to keep the INR where it should be) is reached. Once you are on a stable maintenance dose, the PT and INR are watched less often, usually once every 2 to 4 weeks. The warfarin dose may be changed at times in response to a changing INR or to medical changes that call for an increase or decrease in warfarin therapy. It is important to keep all laboratory and caregiver follow-up appointments!

WHAT ARE THE SIDE EFFECTS OF WARFARIN?

- Excessive blood thinning can cause bleeding (*hemorrhage*) from any part of the body. Patients on warfarin should report any falls or accidents, as well as signs or symptoms of bleeding or unusual bruising. Signs of unusual bleeding may include bleeding from the gums, blood in the urine, bloody or dark stool, a nosebleed or vomiting of blood. Because the risk of bleeding increases as the INR rises above the desired limit, the INR is closely watched during warfarin therapy. Adjustments are made as needed to keep the INR at an acceptable level (within the target range).
- Other body systems can be affected by warfarin. In addition to any signs of bleeding, patients should report skin rash or irritation, unusual fever, continual nausea or stomach upset, pain in the joints or back or

swelling or pain at an injection site.

IS WARFARIN SAFE TO USE DURING PREGNANCY?

- Warfarin is generally not advised during pregnancy, at least during the first trimester, due to an increased risk of birth defects. A woman who becomes pregnant or plans to become pregnant while on warfarin therapy should notify the caregiver immediately.
- Although warfarin does not pass into breast milk, a woman who wishes to breastfeed while taking warfarin should also consult with her caregiver.

ARE THERE SPECIAL PRECAUTIONS TO FOLLOW WHILE TAKING WARFARIN?

Follow the dosage schedule carefully–Warfarin should be taken exactly as directed. A missed dose requires a call to the prescribing caregiver for advice. **Do not change the dose of warfarin on your own to make up for missed doses.**

Warfarin tablets come in different strengths–Each tablet strength is usually a different color, with the amount of warfarin (in milligrams) clearly printed on the tablet. You should immediately report to the pharmacist or caregiver any prescription which is different than the previous one, to make sure that you are taking the correct dose.

Avoid situations that cause bleeding–Patients may have a tendency to bleed more easily than usual while taking warfarin. Some simple changes which can limit bleeding are:

- Use a softer toothbrush.
- Floss with waxed floss rather than unwaxed floss.
- Shave with an electric razor rather than a blade.
- Avoid use of scissors or sharp knives.
- Avoid potentially harmful activities (such as contact sports).

Medical conditions–Medical conditions which increase your clotting time include:

- Diarrhea.
- Worsening of heart failure.
- Fever.
- Worsening of liver function.

Alcohol use–Chronic use of alcohol affects the body's ability to handle warfarin. Patients on warfarin therapy should avoid alcohol or consume it only in very limited quantities. Check with your doctor as to avoiding alcoholic beverages. General alcohol intake guidelines are 1 drink for women and 2 drinks for men per day. (1 drink = 5 ounces of wine, 12 ounces of beer or 1½ ounces of liquor).

Other medications–A number of drugs can interact with warfarin. Some of the most common over-the-counter pain relievers (acetaminophen, aspirin and the nonsteroidal anti-inflammatory medications) make the anticoagulant effects of warfarin stronger. If these medicines are taken, your caregiver may need to adjust the dose of warfarin. Talk to your caregiver if you have problems or questions.

Dietary considerations–Some foods and supplements may interfere with warfarin's effectiveness. Examples appear below. Once someone is stabilized on a warfarin regimen, no major dietary changes should be made without consulting your caregiver.

Vitamin K–Foods high in vitamin K can cause warfarin to be less effective. Patients should avoid very large amounts of foods known to be high in vitamin K. The serving size for foods high in vitamin K are ½ cup cooked and 1 cup raw, unless otherwise noted, including:

- Beef liver (3.5 ounces).
- Garbanzo beans.
- Kale.
- Spinach.
- Nettle greens.
- Swiss chard.
- Pork liver (3.5 ounces).
- Broccoli.
- Cabbage.
- Watercress.
- Soybeans.
- Endive.
- Green tea (made with ½ ounce dried tea).
- Brussels sprouts.
- Cauliflower.
- Parsley (1 Tablespoon).
- Collard greens.
- Seaweed (limit 2 sheets).
- Turnip greens.
- Kale.
- Soybean oil.
- Green peas.

Eating large amounts of these foods may seriously reduce how well a dose of warfarin works. It is not necessary to avoid these foods, but do not change the amount of vitamin K-containing foods you currently eat. Changing to a diet low in foods containing vitamin K may lead to an excessive warfarin effect. Do not drink herbal teas containing coumarin while taking this medication.

IS IT SAFE TO USE SUPPLEMENTS WHILE TAKING WARFARIN?

- Vitamin E–Vitamin E may increase the anticoagulant effects of warfarin. A patient on warfarin therapy should consult the doctor before adding or changing a dose of vitamin E or any other vitamin.
- Check other supplements such as multivitamins and calcium supplements. These may contain vitamin K.

FOR MORE INFORMATION:

Your caregiver is the best resource for important information related to your particular case. Because every patient is different, it is important that your situation is looked at by someone who knows you as a whole person and also knows the specifics of your condition.

Most of this information is courtesy of the NIH (National Institute of Health) and the ADA Nutrition Care Manual

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