



Important Drug and Food Information

From the National Institutes of Health Clinical Center
Drug-Nutrient Interaction Task Force

Important information to know when you are taking: Warfarin (Coumadin) and Vitamin K

The food you eat can affect how your medicine works. It is important to learn about possible drug-nutrient interactions for any medicines you take. This handout provides you with information about the interaction between warfarin (Coumadin) and vitamin K.

Why was warfarin (Coumadin) prescribed for you?

Warfarin (Coumadin) is a medicine prescribed for people at increased risk of forming blood clots. Sometimes medical conditions can make blood clot too easily and quickly. This could cause serious health problems because clots can block the flow of blood to the heart or brain. Warfarin (Coumadin) can prevent harmful blood clots from forming.

How does warfarin work?

Blood clots are formed through a series of chemical reactions in your body. Vitamin K is essential for those reactions. Warfarin (Coumadin) works by decreasing the activity of vitamin K; lengthening the time it takes for a clot to form.

International Normalized Ratio (INR) and Prothrombin Time (PT) are laboratory test values obtained from measurements of the time it takes blood to clot. Individuals at risk for developing blood clots take warfarin (Coumadin) to lengthen the usual time it takes for a clot to form, resulting in a prolonged INR/PT. Doctors usually measure the INR/PT every month in patients taking warfarin (Coumadin) to make sure it stays in the desired range.

What can help keep INR/PT in the desired range?

To help warfarin (Coumadin) work effectively, it is important to keep your vitamin K intake as consistent as possible. Sudden increases in vitamin K intake may decrease the effect of warfarin (Coumadin). On the other hand, greatly lowering your vitamin K intake could increase the effect of warfarin (Coumadin).

To keep INR/PT stable and within the recommended range, it is important to:

- Take your medicine exactly as your doctor directed.
- Have your INR/PT checked regularly.
- Keep your vitamin K intake consistent from day to day.

How do I keep my vitamin K intake consistent?

- *Keep your intake of foods rich in vitamin K about the same each day. For example, you may plan to eat only ½ cup of these foods per day. If you like these foods and eat them often, you can eat more, but be consistent.*

- Do not a make any major changes in your intake of foods rich in vitamin K. For example, if you typically have a spinach salad daily, do not stop eating it entirely.
- Carefully consider dietary supplements (see page 3).

What foods are rich in vitamin K*?

<i>Food</i>	<i>Serving Size</i>	<i>Vitamin K (mcg)</i>
Kale, cooked	1/2 cup	531
Spinach, cooked	1/2 cup	444
Collards, cooked	1/2 cup	418
Swiss chard, raw	1 cup	299
Swiss chard, cooked	1/2 cup	287
Mustard greens, raw	1 cup	279
Turnip greens, cooked	1/2 cup	265
Parsley, raw	1/4 cup	246
Broccoli, cooked	1 cup	220
Brussels sprouts, cooked	1 cup	219
Mustard greens, cooked	1/2 cup	210
Collards, raw	1 cup	184
Spinach, raw	1 cup	145
Turnip greens, raw	1 cup	138
Endive, raw	1 cup	116
Broccoli, raw	1 cup	89
Cabbage, cooked	1/2 cup	82
Green leaf lettuce	1 cup	71
Prunes, stewed	1 cup	65
Romaine lettuce, raw	1 cup	57
Asparagus	4 spears	48
Avocado	1 cup (cube, slice, puree)	30-48
Tuna, canned in oil	3 ounces	37
Blue/black-berries, raw	1 cup	29
Peas, cooked	1/2 cup	21

Other foods and beverages not listed in the table may be consumed in moderation. If your INR/PT levels are difficult to manage, consider meeting with a Registered Dietitian (RD) to review the vitamin K content of your diet. Refer to the USDA National Nutrient Database for vitamin K content of common foods (link below).

* Food Values are from the U.S. Department of Agriculture, Agricultural Research Service. 2010. USDA National Nutrient Database for Standard Reference, Release 23. Nutrient Data Laboratory home page: <http://www.ars.usda.gov/nutrientdata>

What else should you know about warfarin (Coumadin)?

Alcoholic Beverages

Alcohol can affect your warfarin (Coumadin) dose and should be avoided. Check with your doctor or pharmacist about this issue and any questions you may have.

Dietary supplements and herbal medications

Many dietary supplements can alter the INR/PT such as: arnica, bilberry, butchers broom, cat's claw, dong quai, feverfew, forskolin, garlic, ginger, ginkgo, horse chestnut, inositol hexaphosphate, licorice, melilot (sweet clover), pau d'arco, red clover, St. John's wort, sweet woodruff, turmeric, willow bark, and wheat grass. Much is unknown about dietary supplements. The safest policy is for individuals on warfarin (Coumadin) to avoid all dietary supplements unless your physician approves. This includes any vitamin/mineral supplements that list vitamin K on the label. If they are taken regularly on a daily basis, they pose less of a problem than if taken off and on.

Vitamin E supplements

Evidence suggests that vitamin E has blood-thinning effects. Vitamin E intakes above 1,000 International Units (IU) per day may increase the risk of excess bleeding. Research suggests that doses up to 800 IU may be safe for individuals on warfarin (Coumadin), but the evidence is not conclusive. It is best to ask your physician about taking Vitamin E supplements while taking warfarin (Coumadin).

Antibiotics

Some antibiotics can either lower vitamin K levels in the body or interfere with the activity of warfarin (Coumadin). Check with your physician or pharmacist about whether you will need to adjust your vitamin K intake or warfarin (Coumadin) dose when you take antibiotics.

What should I remember about warfarin (Coumadin) and vitamin K?

1. **Follow your prescription exactly, and keep your follow-up appointments for blood tests such as the INR/PT.** Warfarin (Coumadin) is a very important drug for you.
2. **Keep vitamin K intake constant from day to day** because warfarin (Coumadin) interacts with vitamin K in your body.
3. **Avoid herbal products and dietary supplements that may affect vitamin K and warfarin (Coumadin)** unless approved by a qualified health care provider.

This information is prepared specifically for persons taking part in clinical research at the National Institutes of Health Clinical Center and may not apply to patients elsewhere. If you have questions about the information presented here, talk to a member of your health care team.

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