Food and Warfarin

What you eat can affect your INR level
Introduction

Warfarin (brand names include Coumadin and Marevan) is an anticoagulant medication. It reduces the risk of blood clots forming, or prevents existing clots from getting bigger. This reduces your risk of having a heart attack or stroke.

The International Normalized Ratio (INR) measures the rate at which your blood forms clots. If you use warfarin, your doctor monitors your INR by regular blood tests. The usual range for INR is between 2 and 3. People with a prosthetic heart valve may have a target up to 3.5.

A number of factors can affect your INR, including the amount of vitamin K in your diet.

**The aim is to try to consume a similar amount of vitamin K each day.**

If you eat much more vitamin K than usual, it decreases the effect of warfarin. Your INR will go down and your risk of clotting will increase. If you eat less vitamin K than usual, this will increase the effect of warfarin. Your INR will go up, and your risk of bleeding will increase.

The main food sources of vitamin K are green leafy vegetables. As a general rule, **the more dark green the vegetable is, the higher its vitamin K content.** Cereals, meats, dairy foods, fruit and root vegetables are low in vitamin K.

Don’t avoid green leafy vegetables completely, but just be careful not to vary your intake too drastically. In fact, vitamin K is an essential nutrient for bone health, and it is important to keep eating small to moderate amounts. A well balanced and varied diet is essential for all people to maintain health and vitality, including those on warfarin.

Let your doctor know if you plan to make any significant changes to your diet. Your INR may be monitored more often for a few weeks, and your warfarin dose adjusted if necessary.

1. **Foods to avoid (excessively high in vitamin K)**
   - Natto (a fermented Japanese soybean food)
   - Large serves of foods that are very high in vitamin K
2. Eat a CONSISTENT amount of vegetables high or moderate in vitamin K content
(quantities refer to cooked vegetables unless specified)

Either 1 to 2 Tablespoons per day from this group
(very high vitamin K content: 400 - 800 mcg per 100g)

> beet greens, mustard greens (saag), turnip greens
> collards
> kale
> parsley (raw e.g. tabouli salad)
> pesto (based on basil or other herbs)
> spinach, Swiss chard and silver beet

Or 1/4 to 1/2 cup per day from this group
(high vitamin K content: 100 - 200 mcg per 100g)

> Asian greens
> broccoli
> Brussels sprouts
> spring onions (raw)

Or 1/2 to 1 cup per day from this group
(moderate vitamin K content: 30 - 100 mcg per 100g)

> asparagus
> cabbage and sauerkraut, coleslaw (raw)
> endive (raw)
> dark leaf lettuces, salad mixes such as mesclun (raw)
> okra

3. Also eat at least 3 to 4 serves per day of other vegetables, including (but not restricted to) the following.

1 serve is equal to ½ cupped cooked vegetables, 1 cup of salad vegetables or 1 small potato.

> capsicum (of any colour)
> carrot
> cauliflower
> celery
> cucumber
> green beans
> green peas
> iceberg lettuce
> mushroom
> parsnip
> potato
> pumpkin
> sweet corn
> sweet potato
> tomato
> zucchini
4. **Other interactions**

**Specific food interactions**
There have been occasional reports of changes in INR when people have consumed very large amounts of **avocados, mangos, soy drink, powdered green tea (matcha)** and **cranberry or grapefruit juice**. However, drinking up to 1 cup (250ml) of cranberry juice or soy drink is unlikely to affect your INR. Other food interactions may be possible, so it is best to avoid excessive amounts of any one food.

**Weight loss diets**
Inform your doctor when starting any new diet, as your INR may need more careful monitoring. There have been several reports of reduced INR when people started high protein, low carbohydrate diets (eg for diabetes or weight loss). Avoid fasting, crash diets or binge eating, as your warfarin dose has been adjusted to match your current eating pattern and lifestyle. Talk to a dietitian if you plan to start a special diet.

**Alcohol**
**Alcohol** in large amounts can have variable interactions with warfarin. Drink only in moderation and never binge. For general health, the recommended maximum daily amount is two standard drinks. One standard drink is 100 ml of wine or 60 ml of port or 285 ml of full-strength beer or 30 ml of spirits.

**Vitamin and other supplements**
Many supplements and herbs interact with warfarin and can change your INR. If you take a multivitamin that contains vitamin K, make sure you take it consistently each day. Avoid large doses of **vitamins A, C and E**. Keep daily intake below 10,000 IU of vitamin A, 1,000 mg of vitamin C and 400 IU of vitamin E.

Although high dose **fish oil** may prolong bleeding time, it seems safe for most people taking warfarin. Herbal medicines that interact with warfarin include **Co-Q 10, gingko biloba, ginseng, garlic**, Chinese herbs such as **Dong Quai and Danshen**, and many others.

Before starting any supplement, please consult your doctor or pharmacist, and have your INR checked more frequently to start with.

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