

Warfarin Information for Patients With a Ventricular Assist Device

*If you have
any questions,
ask your
physician, nurse
or pharmacist.*

Warfarin (Coumadin® or Jantoven®) is a medication that prevents blood clots from forming. It is an anticoagulant, often called a “blood thinner.” However, warfarin does not actually thin the blood. Instead, it works to prevent new clots from forming and existing clots from getting bigger, which can cause more serious problems. Warfarin does not dissolve clots that have already formed.

Warfarin therapy after receiving a ventricular assist device

A ventricular assist device (VAD) changes the way blood flows through the body. This can cause blood clots to form in the pump. If a blood clot forms in the pump, there is a risk that the clot will travel to the brain and cause a stroke. Taking warfarin lowers the risk of blood clots and strokes in patients with VADs.

Blood tests while taking warfarin

The international normalized ratio (INR) is a calculation based on a simple blood test to check the activity of warfarin in your blood. The INR in a person not taking warfarin is generally 1.0. An INR less than 2.0 means your blood clots more quickly, and you may be at risk for blood clots. An INR more than 3.0 means your blood clots more slowly, and you may be at risk for bleeding. The desired range for people taking warfarin is usually 2.0 to 3.0, **but your VAD team will decide the range that is right for you.**

| Low INR | INR in Desired Range | High INR |
|----------------------------------|----------------------|----------------------------------|
| Less than 2.0 (risk of clotting) | 2.0 to 3.0 | More than 3.0 (risk of bleeding) |

Your VAD team will select the correct dose of warfarin for you based on your INR result. When you first start taking warfarin, the VAD team will check your INR often. This is to find a safe dose that works for you.

Once your dosage is stable, you may not need your INR checked as often. However, you should still have it checked on a regular basis. This helps make sure your dose is working properly.

Your VAD team may change your warfarin dosage from time to time based on your INR results.

If insurance coverage allows, many patients can use a home INR monitor after the first few months of treatment to limit laboratory visits. Your VAD team will let you know if this option is right for you.

How to take warfarin

Follow your VAD team's directions for taking warfarin. Here are some guidelines:









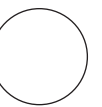
- **Take it in the evening.** This is important because your VAD team may want to change your dose after checking your INR.
- Take it with or without food but try to be consistent.
- If you forget to take a dose at the scheduled time in the evening, but remember before you go to sleep, take the missed dose. If you do not remember until the next morning, skip the missed dose and take your next scheduled dose at the right time that evening.
- Do not take 2 doses of warfarin on the same day unless your VAD team tells you to do so.

Keep a record of each dose as you take it to avoid mistakes. Be sure to make a note of any missed doses.

Tablet strengths

Warfarin comes in different milligram (mg) strengths. Each strength is a different color tablet. Remember:

- If your dosage is unchanged, your pills should always be the same color.
- If your VAD team changes your dosage, you will notice a different pill color.

| 1 mg | 2 mg | 2.5 mg | 3 mg | 4 mg | 5 mg | 6 mg | 7.5 mg | 10 mg |
|---|---|---|---|---|--|---|---|---|
|  |  |  |  |  |  |  |  |  |
| Pink | Lavender | Light Green | Tan | Blue | Peach | Teal | Yellow | White |

Taking warfarin before a medical procedure

Your warfarin dosage may change if you are going to have certain procedures that may cause bleeding. Your INR goal may change or your care team may ask you to hold (skip) a dose before a scheduled medical visit or procedure such as a right-sided heart catheterization.

Let your VAD team know ahead of time about any scheduled medical procedures, including dental appointments.

Diet guidelines and vitamin K interactions

Foods with vitamin K can affect the way warfarin works. It is important to eat a healthy, consistent and balanced diet. Sudden changes in your diet, especially crash diets, fad diets and taking diet supplements, may change how much vitamin K is in your body. This may affect the way your body bleeds or clots.

Plan to eat the same types and amounts of foods that contain vitamin K on a regular basis. For example, if you usually eat 3 salads each week, then it is best to continue eating 3 salads each week. A consistent diet is best.

Try not to eat large amounts of foods that are high in vitamin K (see Food sources of vitamin K below). However, you do not need to remove all of these foods from your diet. Remember, consistency is key.

The table below lists some common food sources of vitamin K when you plan your meals. If you have any questions or change how often you eat these foods, contact your physician, nurse or pharmacist.

Food sources of vitamin K

| Food | Amount | Micrograms (mcg) of vitamin K* | Level of vitamin K |
|----------------------------------|---------------|---------------------------------------|---------------------------|
| Brussels sprouts, cooked | 1/2 cup | 150 | High |
| Collard greens, cooked | 1/2 cup | 365 | High |
| Kale, cooked | 1/2 cup | 530 | High |
| Mustard greens, cooked | 1/2 cup | 415 | High |
| Parsley, raw | 1/2 cup | 492 | High |
| Spinach, cooked | 1/2 cup | 444 | High |
| Spinach, raw | 1 cup | 188 | High |
| Turnip greens, cooked | 1/2 cup | 265 | High |
| Asparagus, cooked | 1/2 cup | 45 | Medium |
| Blackberries or blueberries, raw | 1 cup | 28 | Medium |
| Broccoli, cooked | 1/2 cup | 110 | Medium |
| Broccoli, raw | 1/2 cup | 45 | Medium |
| Cabbage, cooked | 1/2 cup | 80 | Medium |
| Grapes, red or green | 1 cup | 22 | Medium |
| Kiwifruit | 1/2 cup | 36 | Medium |
| Lettuce, romaine, iceberg, raw | 1 cup | 48 | Medium |
| Peas, cooked | 1/2 cup | 20 | Medium |
| Pickles or cucumber | 1 cup | 75 | Medium |

*Values listed are for fresh produce; frozen or canned produce may slightly differ.

Beverages

Drinking too much alcohol may change the way warfarin works in your body. It is best not to drink alcohol. Talk with your physician if you have questions about drinking alcohol.

Avoid drinking green tea, grapefruit juice and cranberry juice. These drinks can also work against warfarin.

Medications

Your VAD team may also prescribe you aspirin in addition to warfarin. Aspirin will help your blood flow smoothly through the VAD. Remember:

- Aspirin also thins the blood.
- Only take aspirin as directed by your VAD team.

Some medications can interact with warfarin and thin your blood.

| Medications to avoid | |
|---|--|
| Nonsteroidal anti-inflammatory medications (NSAIDs) | Ibuprofen (Motrin®, Advil®) Naproxen (Aleve®, Naprosyn®) Aspirin-containing migraine products (Excedrin®, BC® Powder, Goody's® Powder) |
| Medications to use with caution (Call your VAD team before using them.) | |
| Antibiotics | Some antibiotics can increase or decrease the effect of warfarin. Before taking any new antibiotics, please check with your VAD team about interactions with warfarin. |
| Over-the-counter (OTC) medications | Avoid taking cold or sinus medication, laxatives or antacids without talking to someone on your healthcare team first. Aspirin or NSAIDs may be a hidden ingredient in these products. |
| New prescription medications | Make sure your VAD team knows about any new prescriptions that another healthcare provider prescribes you. |

When to call your VAD team

| Signs of bleeding | |
|---|---|
| Normal and expected symptoms Let your VAD team know if these symptoms become more noticeable or bothersome. | <ul style="list-style-type: none">■ Prolonged bleeding from cuts or wounds■ Frequent nosebleeds■ Unusually heavy menstrual bleeding■ Bleeding gums, especially while brushing your teeth■ Unusual bruising or changes in skin color |
| Unexpected and emergency symptoms Call your VAD team right away. | <ul style="list-style-type: none">■ Coughing up blood or something that looks like coffee grounds■ Blood in your urine or stool■ Black-colored stool (if you are not taking iron supplements)■ Dizziness or faintness |

| Signs of Clotting | |
|--|--|
| Unexpected and emergency symptoms Call your VAD team right away. | <ul style="list-style-type: none"> ▪ Cola- or tea-colored urine ▪ Sudden swelling in 1 leg or arm ▪ Warmth or redness of your skin ▪ Bluish or dark discoloration of your skin ▪ Weakness in your arms or legs |

F.A.S.T. is an acronym to help you detect the signs of stroke quickly. It stands for:

| | |
|-----------------------------|---|
| F: Face drooping | Smile. Is 1 side of your face drooping? |
| A: Arm weakness | Lift both arms to an even height. Does 1 arm fall down? Is 1 arm numb? |
| S: Speech difficulty | Try to repeat a simple sentence. Is your speech slurred? |
| T: Time to call 911 | Call 911 right away if you have any of these symptoms. |

Contact information

Call the VAD clinic with any questions or concerns about your warfarin or other medications. We are here to help keep you healthy and safe.

VAD clinic: 312.926.1711 (TTY: 711) Calls are received on weekdays from 8 am to 5 pm and are returned within 24 hours. Calls received after 3 pm or on the weekend will be returned the next business day.

VAD emergency pager: 312.695.9611 (TTY: 711)