



PATIENT EDUCATION

**Direct Oral Anticoagulants:**

*Oral Anticoagulant Therapy*

learning **EDUCATION** EXCELLENCE  
HEALTHY **CARING** INTERACTION  
LIVING

BARBARA WOODWARD LIPS  
PATIENT EDUCATION CENTER



# A Different Type of Anticoagulant

Direct oral anticoagulants (DOACs) are a new type of anticoagulant medication.

Anticoagulants change how you stop bleeding. You may also hear that anticoagulants change how your blood “clots” or “coagulates.” Each of these phrases refers to the same idea.

Anticoagulants are sometimes called “blood thinners.” They actually don’t thin your blood. Instead, they change, or interfere with, one or more of the steps involved in blood-clotting. When taken as directed, this medication stops blood from clotting or makes it take longer for blood to clot.

Your health care provider may suggest a direct oral anticoagulant for you. This medication is given in pill form.

**DOACs are different than other anticoagulants. Read this to learn more about this type of medication and how it may help you.**

Note: You may get medical care for issues that are not related to your need for an anticoagulant medication. Here, the terms “health care provider” and “health care team” refer to the providers who manage your anticoagulant medication.

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# How Does Blood Clot?

Before direct oral anticoagulants are explained, it may help to review the basics about how blood clots.

Blood clotting is your body's way to stop you from losing blood. Typically, it's good for blood to clot.

**To make a clot, special proteins in your blood go through a series of steps.** These proteins are called "blood clotting factors."

## Two kinds of clotting problems

When the proteins don't follow the clotting steps properly, one of two very different things could happen.

- **Your blood may not clot well. It may not clot fast enough.** If this happens, you could lose a lot of blood from a simple cut or injury. If you bleed too much, it's called a hemorrhage.

**OR**

- **Your blood may clot too well. It may form a clot within a blood vessel.** A clot inside a blood vessel or the heart is called a **thrombus**. This could be a life-threatening condition.

DOAC medications directly target the proteins that cause your blood to clot too well. A DOAC makes your blood take longer to clot. The goal is to avoid having clots form in your blood vessels.

## Which DOAC might be right for you?

The kind and dose of anticoagulant prescribed for you depends on your treatment goal. Anticoagulants are used:

- **To treat a current condition.** One example of this is a deep vein thrombosis (DVT).

**OR**

- **To prevent a blood clot in people who are at high risk.** Examples include people who have atrial fibrillation and people who just had surgery.

## Do you need to stay in the hospital?

Every person is different, and each medical condition is different.

- Some people may need to stay in the hospital for a few days. This is done to help get their condition under control. This is referred to as "inpatient care."
- Most people who have blood clots are able to treat the condition at home by taking medication daily. They do not have to stay in the hospital for a few days. Treating a condition at home is called "outpatient care."

Talk to your health care provider about how he or she thinks you will manage your condition.

# Advantages and Disadvantages of DOACs

Direct oral anticoagulants target the specific protein that affects how your blood clots. This type of medication has advantages and disadvantages.

The advantages of a direct oral anticoagulant:

- It works quickly after you take it. And it passes quickly out of your system if you don't take another dose.
- There aren't many known issues regarding what you can eat/drink while taking this medication. And there aren't many known issues regarding interactions with other medications.
- It may offer less risk for major bleeding in some people, as compared to other anticoagulants.
- It's convenient. It does not require routine lab tests. There are fewer follow-up appointments. And most people do not need to change their dosages during treatment.

The disadvantages of a DOAC include but may not be limited to the following:

- DOACs are time-sensitive. Depending on the medication, it passes out of the system about 12 hours after you take a dose. For this reason, it is very important that you take your medication as prescribed, at the same time every day.
- The medication is only approved for certain conditions.
- A DOAC may not be taken by people who have artificial heart valves. And it may not be right for people who have severe liver or kidney disease.
- A DOAC costs more than other anticoagulants. Most DOACs are not available in generic form.

**The medication prescribed for you depends on your current diagnosis, your medical history and your overall wellbeing. Your medication plan may change as needed.**

## Common DOACs

Medication	Targeted clotting factor	Common dose	Known interactions with food?
Dabigatran (Pradaxa™)	Factor IIa	Twice daily	No.
Rivaroxaban (Xarelto™)	Factor Xa	Once or twice daily	Yes, take with food.
Apixaban (Eliquis™)	Factor Xa	Twice daily	No.
Edoxaban (Savaysa™)	Factor Xa	Once daily	No.



## Activity Limits

In general, people who take anticoagulant medication continue to have normal lives and work schedules. **However, while you are taking this medication you are at increased risk for prolonged bleeding. Think about the risk of bleeding before you do an activity. Protect yourself from falls, head injuries and cuts to your skin.** In case you are injured, always carry or wear I.D. that notes your anticoagulant.

If or when your health care provider tells you to stop taking the DOAC, your clotting should return to its usual state within a few days. During that time, use the same precautions that you used while you were taking the medication.

### Risky activities

- Use caution handling scissors, knives and other sharp objects.
- Wear a helmet when you ride a bicycle and do activities that risk hurting your head.
- Avoid contact sports or other activities with a high risk of injury. Activities with low risk of injury, such as walking or bicycling, are good forms of exercise.

### Pregnancy

If you are pregnant or want to get pregnant, talk to the health care provider who manages your DOAC. He or she may prescribe a different anticoagulant. Anticoagulants taken in pill form (“oral anticoagulants”) can cause birth defects.

### Upcoming surgery or dental procedure?

If you plan to have a dental procedure (like a tooth extraction) or a surgical procedure, tell your dentist/health care provider that you take an anticoagulant. **Do this at least 5 days before the procedure.** Also tell a member of the team that manages your anticoagulant.

NOTE: If your dentist tells you to not take your medication before a dental procedure, call to tell the health care provider who prescribes your DOAC. Most people do not have to stop medications for routine dental procedures.

### Other restrictions?

Unless your health care provider tells you otherwise, typically there are no restrictions when you are on anticoagulant therapy. Many people continue their normal work schedules, depending on the types of activities they do at work. **Ask your health care provider if you have any other specific restrictions.**

### Traveling

If you plan to travel for more than two or three days, follow these guidelines:

- Carry enough of your oral anticoagulant with you to last the entire trip.
- Put your medication in your carry-on baggage.
- Take your medication as close to the same time as possible each day. Ask your health care provider when to take your anticoagulant if you will be traveling through different time zones.

# When to Contact Your Health Care Provider

Note: If you need medical care and you can't reach your provider, go to a local emergency care center.

## Medications and supplements

- **Tell a member of your care team if you miss a dose of your DOAC.**
- **Tell a member of your care team and your pharmacist about all medications you take now and those you want to start taking.** This includes prescription and non-prescription (over-the-counter) medications, nutritional supplements, herbal supplements, and vitamins. Some of these products can affect how your anticoagulant medication works..

**Note: Pain-relief products, such as aspirin and non-steroidal anti-inflammatory medications (NSAIDs), can cause internal bleeding if you are also taking an anticoagulant.** Examples of NSAIDs include ibuprofen, naproxen and diclofenac sodium.

- **Be sure to talk to your care team about** your use of alcohol and your use of other self-care treatments, such as antacids, laxatives and cold/cough products.

**Also, get your prescriptions filled at the same pharmacy.** This may allow your pharmacist to identify if any other medications you take might interact with your DOAC.

## Bleeding

Contact a member of your care team **right away** if you have any of the following:

- You have a lot of bleeding or bleeding over a long time. For example, bleeding that doesn't stop even after you hold constant pressure (or ice) on the area for 10 minutes. (Do not release the pressure before 10 minutes, not even to see if bleeding has stopped.)
- You notice dark or bright-red stools, dark/black tar-like stools or blood in your urine.
- Bleeding from the rectum (such as blood on the toilet paper).
- You have intense nosebleeds or nosebleeds that happen more often than usual.
- You have a lot of bleeding from your gums.
- You have very heavy menstrual flow or bleeding that is off-schedule for your cycle.

Less-obvious symptoms of bleeding:

- Dizziness or weakness.
- Red or dark brown urine.
- Unusually long headaches, severe stomach pain or back pain.
- Unexplained bruising or purple areas in your skin.

## Other reasons to contact your provider right away

- You have a painful or swollen leg or arm.
- You are pregnant or plan to become pregnant.
- You fall, are hit on the head or get any other injury that could cause internal bleeding.
- You have questions after reading this information.

# When to Get Urgent Medical Care

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**Call 9-1-1 or have someone take you to an emergency care center if you:**

- Have chest pain.
- Are short of breath.
- Vomit, cough-up blood or both.
- Pass a lot of blood in your stool, from your rectum or in your urine.
- Have any of these symptoms of bleeding or clotting:
  - Pain and/or swelling in an arm or leg.
  - Shortness of breath.
  - Chest pain.
- Have any of these symptoms of stroke:
  - Sudden numbness, weakness or paralysis – the inability to move a body part — the face, arm or leg, usually on one side of the body.
  - Difficulty speaking or trouble understanding others.
  - Sudden blurred or decreased vision, or sudden double vision.
  - Dizziness, loss of balance or loss of coordination.
  - Sudden, severe headache.

# Notes

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## BARBARA WOODWARD LIPS PATIENT EDUCATION CENTER

Mrs. Lips, a resident of San Antonio, Texas, was a loyal Mayo Clinic patient of more than 40 years and a self-made business leader who significantly expanded her family's activities in oil, gas and ranching. Upon her death in 1995, Mrs. Lips paid the ultimate compliment by leaving her entire estate to Mayo Clinic. By naming the Barbara Woodward Lips Patient Education Center, Mayo honors her generosity, her love of learning, her belief in patient empowerment and her dedication to high-quality care.

*This material is for your education and information only. This content does not replace medical advice, diagnosis or treatment. New medical research may change this information. If you have questions about a medical condition, always talk with your health care provider.*

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