



The Beat

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Falls and Anticoagulation: What You Should Know

Anticoagulants, also known as blood thinners, are effective in treating and preventing blood clots, but they increase the risk of bleeding. The fear of falling—and subsequently bleeding from a fall—is a major reason why some patients hesitate to take blood thinners. Healthcare providers also cite fall risk as the most common reason for not prescribing anticoagulation. “Anyone on anticoagulation is going to bleed easier, so if you’re taking anticoagulation and you fall or injure yourself, you’ll bleed more easily than someone who isn’t on anticoagulation,” explains Dr. Judith Beizer, a clinical professor at St. John’s University College of Pharmacy and Health Sciences in New York. “Bleeding isn’t always visible. You could bleed internally and not know it, and that’s a significant concern. For example, we worry about brain bleeds when people fall and hit their heads – but if patients don’t see blood, they might not realize that they’re bleeding,” she says.

The risk of falling increases as patients age and become less mobile, but there are other common risk factors that patients and caregivers may overlook.

- **Environmental factors:** Electrical cords, slippery floors, loose carpets/rugs, poor lighting, and stairs all pose a risk for falling at home.
- **Vision issues:** Vision declines with age and poor vision can lead to falls – but vision correction is also a culprit for falling. Bifocal glasses, for example, can make things blurry if they’re worn while walking down a flight of stairs.
- **Shoes:** Ill-fitting shoes can raise the risk of a fall.
- **Medications:** Medicines that cause dizziness, drowsiness, blurred vision, or problems with coordination increase fall risk. People on diabetes medications can also be at risk for falls if their blood sugar is either too tightly controlled or too low.

Does the type of anticoagulant matter when it comes to fall risk? According to Dr. Beizer, “the anticoagulant itself doesn’t affect your risk of falling. Based on what we know, your risk is your risk whether you’re on warfarin or a direct oral anticoagulant (DOAC). We’re more

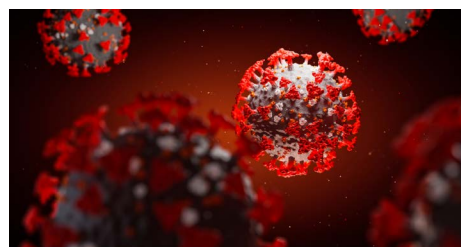
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Asked and Answered: COVID-19 FAQs



Since the start of the pandemic, NATF has received several questions on COVID-19 and blood clots. We’re pleased to welcome Dr. Alex Spyropoulos to answer some of these FAQs! Dr. Spyropoulos is a Professor of Medicine at the Zucker School of Medicine in New York

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Upcoming Support Groups and Events

In-Person Blood Clot Support Groups

Temporarily moving online due to COVID-19

September 22, 2020

October 13, 2020

November 19, 2020

December 17, 2020

Please visit natfonline.org for more information.
All support groups start at 7:00 PM EST.

Atrial Fibrillation Awareness Month

September 1-30, 2020

Falls Prevention Awareness Week

September 21-25, 2020

Save the Date!

NATF Virtual Summit on Women's Cardiovascular Health

October 7, 2020

For more information or to register for these events,
please visit www.natfonline.org/events or email events@natfonline.org.



ASKED AND ANSWERED: COVID-19 FAQs

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and the Systems Director of the Hofstra-Norwell Anticoagulation and Thrombosis Services. He has been involved in thrombosis-related research for 25 years.

Q: Why do blood clots occur in patients with COVID-19?

A: COVID-19 represents “the perfect storm” for thrombosis. The virus causes a local inflammatory response, usually starting in the lungs, which progresses to what we call a cytokine storm, an immune-mediated storm. In other words, the body’s “over-response” to the virus causes all of these complications. The cytokines and inflammation in the body activate multiple steps of the blood clotting system. It’s almost like a cascade, like a domino effect, resulting in high rates of things like pulmonary embolism (PE), heart attack, and stroke.

We really worry about these complications in the COVID-19 patients who are sick enough to be hospitalized, especially those who are in the intensive care unit. And we’re still concerned about clots when these patients leave the hospital.

For outpatients with COVID-19—the patients who have mild illness and can manage the virus at home—we think the risk of blood clots is low, but we don’t know for sure.

Q: Are patients in a high-risk category for a COVID-related blood clot if they’ve had a prior blood clot unrelated to COVID-19?

A: Yes. In my view, these patients represent a high-risk group. Patients with blood clots—especially “unprovoked” clots—have a chronic cardiovascular disease (CVD) process. With acute COVID-19 infection, that underlying risk “activates” so to speak, putting these patients at higher risk than patients without underlying heart disease.

Any patient with underlying cardiopulmonary disease is also in a higher risk category. For example, chronic PE, meaning [chronic thromboembolic pulmonary hypertension \(CTEPH\)](#), is a cardiopulmonary disease, and that would raise a patient’s risk.

Q: Are there other diseases or conditions that raise the risk for blood clots in the setting of COVID-19?

A: Yes. We now have data that several conditions are risk factors for COVID-related thrombotic complications, including diabetes, obesity, and current tobacco abuse. We think autoimmune diseases may also be a risk factor, although there’s not a lot of data yet.

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concerned with weighing the risk of bleeding and the risk of falling against the risk of not being anticoagulated.”

In patients with atrial fibrillation, for example, anticoagulation can significantly lower the risk of having a stroke. “In my experience, patients fear a stroke more than a fall or a bleed. So, in most cases, I think it’s important for those patients to be on a blood thinner. But with decisions like this, you need to understand your level of risk and the doctor needs to document that risk. The decision to start a blood thinner should only be made after you have a conversation with your doctor. For patients who start anticoagulation but worry about falling, it’s again important to address those risk factors that are within their control, like making sure that the home is well-lit, that they get their eyesight checked, etc.”

Exercise is also important for staving off falls. “It’s a common misconception that a person should avoid exercising to avoid a fall. Exercising can actually help strengthen the bones and muscles needed to prevent a fall,” Dr. Beizer explains. “I like to say that if you don’t use it, you lose it, and those weakened muscles can lead to falls.”

In addition, Dr. Beizer encourages a formal medication audit at least once a year. She recommends bringing all medications to your primary care doctor or to a pharmacist and reviewing the dosage and instructions for each prescription. “This review is especially key for patients who are on many medications. These patients often have different providers prescribing meds for different issues and it’s important to keep the medication list up-to-date. Patients who take certain anticoagulants also need to take them at the exact same time every day, so it’s helpful to go over the protocols more than once with a doctor or pharmacist.”

Patients who work with an anticoagulation management service (or a “coumadin clinic”) can consult the pharmacists there about their medications. Patients who don’t visit a clinic can consult a pharmacist at their local pharmacy. “Many patients don’t realize that they can ask their local pharmacist. The pharmacists there are an easily available resource for you,” says Dr. Beizer. [The American Society of Clinical Pharmacists \(ASCP\)](#) or [Board of Pharmacy Specialties \(BPS\)](#) can also help connect you to a local pharmacist.



PREVENTING FALLS

SEPTEMBER 21-25, 2020 IS FALLS PREVENTION AWARENESS WEEK! HERE ARE SOME COMMONSENSE THINGS YOU CAN DO TO PROTECT YOURSELF FROM A FALL.



ASSESS YOUR RISK FOR FALLS

There are several tools you can review with your doctor, including the [CDC’s STEADI](#) tool.



SAFEGUARD YOUR HOME

Make sure it’s well-lit, tuck away electrical cords, tighten railings, put up bars in the bathroom or hallways if needed, and be mindful of area rugs.



STAY ACTIVE

Weakened or underused muscles and walking after long periods of being sedentary can increase the risk for falls.



MIND YOUR BONE HEALTH



Ask your doctor about whether you should have a bone density scan (a DEXA scan) and make sure you get enough calcium and vitamin D to keep your bones strong. Osteoporosis itself doesn’t increase a person’s risk of falling, but it can raise the risk of breaking a bone if you fall.



AVOID DRINKING TOO MUCH ALCOHOL

Alcohol can affect balance and coordination.

PAY ATTENTION TO YOUR CLOTHING AND FOOTWEAR



Wear pants, skirts, etc. that are properly hemmed. People shrink with age and clothes can sometimes drag on the floor and become a tripping hazard. Always wear well-fitting shoes that you can walk in.

AVOID DRINKING TOO MUCH CAFFEINE LATER IN THE DAY AND DON’T DRINK TOO MUCH OF ANYTHING BEFORE BED



Falls often happen in the middle of the night on the way to—or in—the bathroom. If you do get up at night to use the bathroom, have a nightlight near your bed and in the bathroom.



FALLS AND ANTICOAGULATION: WHAT YOU SHOULD KNOW

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So, what should you do if you have a fall while on a blood thinner? Dr. Beizer recommends calling your healthcare provider as soon as possible. “You should be assessed for bruising, and most importantly, for potential head trauma. Your doctor will want to know how you fell, what parts of your body were affected, and if you lost consciousness. Even if you think the fall was minor, you should still call your doctor.”

There are several things patients can do to prevent future falls as well. [See page 3]. “Most importantly, try to make your home as “fall-proof” as possible, wear shoes that fit well, stay active, keep tabs on your medications, and know that your pharmacist is your friend and can help you manage your anticoagulation and fall risk!”



Dr. Judith Beizer

Judith Beizer, PharmD is a Clinical Professor at St. John’s University College of Pharmacy and Health Sciences in New York in Queens. She is board-certified in geriatric pharmacy and has been teaching pharmacy students for 33 years. She currently sits on the Board of Directors for the American Geriatric Society and is a Past President of the American Society of Consultant Pharmacists.



ASKED AND ANSWERED: COVID-19 FAQS

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Q: Do genetic clotting disorders increase a patient’s risk of COVID-related thrombosis?

A: Well, not all genetic disorders are the same. For example, there are some severe genetic disorders such as protein C and S deficiency, which are deficiencies of anticlotting proteins. In my view, those disorders represent a higher-risk genetic category than heterozygous Factor V Leiden or heterozygous prothrombin gene mutation – heterozygous meaning that you have a gene from one parent causing this disorder. If you have a homozygous clotting disorder—two bad genes from mom and dad—then yes, you’re in a higher-risk category. The vast majority of patients who have a heterozygous Factor V Leiden or prothrombin gene mutation and have had a blood clot may be in a *slightly* elevated, but not very elevated, thrombotic risk category. It’s really the patients with severe disorders or homozygosity states that I worry about.

Q: What advice would you give to patients with genetic clotting disorders?

A: The best advice is don’t get COVID! If you have a genetic clotting disorder, I’d recommend being strict about social isolation and preventative measures. Stay hydrated, exercise or do some physical activities around the house, walk, etc. Those are the commonsense things you could do. Some patients have asked me about taking antithrombotic therapy,

like a baby aspirin. That may not be a bad thing to do, although you should talk to your healthcare provider before starting any new medication.

Q: If patients already take a blood thinner and then get COVID-19, are they protected from COVID-related clots?

A: There’s good and bad news with anticoagulation. The good news is that more and more data suggest that being on an anticoagulant decreases your risk of getting hospital-associated blood clots. So, if you’re already on an anticoagulant and are hospitalized for COVID-19, you’ll have a lower risk of getting a clot in the hospital than someone not on anticoagulation. **But regardless of COVID-19, if you’re on a blood thinner, definitely stay on the blood thinner – and be rigid and disciplined about taking it.** If you’re on warfarin, you have to be very good about maintaining your INR in the appropriate target range. If you’re on a direct oral anticoagulant (DOAC), you need to make sure to take it like clockwork.

The bad news is that if you’re on an anticoagulant, you either have a previous history of clots or you have a risk factor for a clot, like atrial fibrillation. As I mentioned, a previous history of clots puts you at an elevated risk, so don’t think you’re out of the woods simply because you’re on a blood thinner. Again, this

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means that social distancing and other preventative measures are in order and patients should take these precautions seriously.

Q: What is the anticoagulation protocol for COVID-19 patients both in the hospital and after discharge?

A: In the US, the medical community quickly realized that all hospitalized COVID-19 patients should get some type of preventive anticoagulation, which we call chemical prophylaxis. The two front-line agents that we use are called low-molecular-weight heparin or unfractionated heparin. If you're a hospitalized COVID-19 patient, you should be on some type of prophylaxis unless there's a reason you can't be, like active bleeding, a history of bleeding, or a low platelet count. So, preventive anticoagulation is the first order of business and I would call it a universal protocol at this point.

I should point out that the dose of heparin used varies among institutions. Some hospitals are more aggressive with the dose and others are comfortable giving a lower dose. There's no evidence at this point that a higher dose of heparin, what we call a treatment dose, is more likely to prevent blood clots. There are ongoing clinical trials to look at this issue.

Many institutions prescribe preventive anticoagulation for COVID-19 patients who have been discharged from the hospital as well. Even though there's no COVID-specific data, we have data to draw from in other patients with infections, and we've found that the risk for a blood clot can linger for up to 30 days after leaving the hospital.

At my institution, most patients will go home on a post-discharge rivaroxaban (Xarelto®) dose of 10 mg for up to 30 days, which is FDA-approved. Other DOACs (dabigatran, and edoxaban) have not been studied in patients leaving the hospital, and apixaban hasn't been shown to be effective in this setting.

Q: If patients are taking warfarin, should they continue to come to the hospital for blood tests or would you suggest transitioning to home testing or to a DOAC?

A: I think COVID-19 has created a perfect opportunity for home testing. As a matter of fact, some colleagues and I recently published a study and found that telehealth INR management may

improve time spent in the therapeutic INR range by up to 45%, which is a huge jump. Most insurers now cover home testing.

I also think it's a great time to switch to a DOAC (from warfarin) if you can. But "if you can" is the important point here. Most patients on warfarin take it because they have situations that prevent them from taking a DOAC, like a mechanical heart valve, or warfarin is simply more affordable.

I'd recommend speaking to your doctor or pharmacist if you're interested in either home testing or switching to a DOAC.

Q: Are there any conditions that would prevent someone from wearing a mask?

A: Absolutely not. Wearing a mask is critical to preventing the spread of COVID-19 and protecting yourself from COVID-19. Don't use the excuse of having an underlying heart or lung condition to avoid wearing a mask. It's probably the single most important thing you can do.

Q: Is there any role for vitamin C, vitamin D, other supplements in preventing or treating COVID-19?

A: There's no high-quality data suggesting that vitamins or supplements can prevent or treat COVID-19. I think the most important thing that a patient can do is make their everyday health a priority. Exercise, stop bad habits like smoking, keep your blood pressure and blood sugar under control, and take your medications as prescribed. If you're on a statin, stay on it. The usual cardiovascular preventative measures, in my view, are the best thing to do, along with social distancing and wearing a mask when you leave your home!



Dr. Alex Spyropoulos

Interested in learning more about COVID-19 and blood clots? Check out our [patient resource page and video library](#).

If you have specific questions about COVID-19 and your health, please contact your healthcare provider.



*Fighting blood clots
through education*

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