

Doctor, I take Xarelto or Eliquis or Pradaxa for atrial fibrillation. What is the risk of stopping it before my procedure?

For most people, temporarily stopping Xarelto or Eliquis or Pradaxa 3 to 5 days before a procedure increases the risk of stroke by a small amount. Restarting these drugs 1 to 2 days after surgery increases the risk of major bleeding by a small amount.

Study highlights

The risk of [stroke](#), [TIA](#) or [systemic embolization](#) within 30 days of temporarily stopping Xarelto or Eliquis or Pradaxa for a procedure was less than 1%. The risk of [major bleeding](#) within 30 days after temporarily stopping Xarelto or Eliquis or Pradaxa was between 1-3% depending on the type of procedure and the [anticoagulant](#) taken.



What's the issue?

Understanding the problem

People with atrial fibrillation who are taking Xarelto or Eliquis or Pradaxa may need an invasive procedure or surgery. [Atrial fibrillation](#) increases the risk of blood clots forming within the heart which can then break loose and travel to the blood vessels in the brain to cause a stroke or TIA. These clots can also travel to other arteries in the body ([systemic embolization](#)), e.g. within the leg. [Anticoagulants](#) reduce this risk by preventing the formation of blood clots therefore ideally, people should stop their anticoagulants for as little time as possible.

Surgeries and invasive procedures increase the risk for bleeding. Doctors will therefore ask patients to stop anticoagulants before these procedures to reduce the risk of bleeding during and after the procedure. Restarting an [anticoagulant](#) too soon after a procedure also increases the risk of bleeding.

Researchers wanted to know if people with atrial fibrillation who stopped and restarted Xarelto or Eliquis or Pradaxa according to a schedule based on the type of procedure reduced the risk of bleeding due to the procedure without increasing the risk of [stroke](#).



The study

Who? The study included 3007 people who were taking Xarelto, Eliquis or Pradaxa for atrial fibrillation and were required to stop it for a procedure.

What? For people taking Xarelto or Eliquis, the last dose of drug was taken 2 days prior to procedures with a low-risk of bleeding and 3 days prior to procedures with a high-risk of bleeding. The same schedule was given to patients taking Pradaxa who had normal kidney function.

For people taking Pradaxa who have kidneys that don't work normally, the last dose was taken 3 days prior to procedure with a low-risk of bleeding or 5 days prior to procedures with a high-risk of bleeding.

The number of [strokes](#), TIAs, systemic embolizations and major bleeds were recorded for 30 days after the procedure.

Examples of Procedures and Bleeding Risk

Low-Bleeding Risk Procedure*	High-Bleeding Risk Procedure*
<ul style="list-style-type: none"> • Camera tests that involve the stomach or bowel (endoscopy/colonoscopy) • Minor? heart procedures such as a "dye test" (angiogram), changing a pacemaker battery, or having a new pacemaker put in. • Dental operations such as? having a tooth pulled or root canal • Skin biopsy • Cataract surgery 	<ul style="list-style-type: none"> • Major surgery of any part or the body including the neck, chest, abdomen or the pelvis (typically requiring more than one night stay in hospital) • Surgery where the doctors use an epidural to control pain • Open heart surgery • Surgery involving large blood vessels in the body • Brain surgery • Orthopedic surgeries including hip or knee replacements

*These are only examples. Your doctor will determine the bleeding risk of your specific procedure.



Summary of findings

Rates of thrombosis and bleeding in patients who had to stop their [anticoagulant](#) prior to a surgical procedure

Anticoagulant?	Procedure Type?	Stroke, TIA or blood clot	Major Bleeding
Xarelto	Low-Bleeding Risk	1 out of 100 people	1 out of 100 people
	High-Bleeding Risk	1 out of 100 people	3 out of 100 people

Anticoagulant?	Procedure Type?	Stroke, TIA or blood clot	Major Bleeding
Eliquis	Low-Bleeding Risk	1 out of 100 people	1 out of 100 people
	High-Bleeding Risk	1 out of 100 people	3 out of 100 people
Pradaxa	Low-Bleeding Risk	1 out of 100 people	1 out of 100 people
	High-Bleeding Risk	1 out of 100 people	1 out of 100 people

This Evidence Summary is based on the following article:

Douketis JD, Spyropoulos AC, Duncan J, et al. **Perioperative Management of Patients With Atrial Fibrillation Receiving a Direct Oral Anticoagulant.** *JAMA Intern Med.* 2019 Aug 5. pii: 2740207. doi: 10.1001/jamainternmed.2019.2431. PubMed (<https://pubmed.ncbi.nlm.nih.gov/31380891>)

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