

Outpatient Bridging for Patients on Warfarin

What to expect

This handout for patients taking warfarin explains "bridging." This term refers to giving you a different blood-thinning medicine when your warfarin therapy must be stopped.

What is warfarin?

Warfarin (Coumadin) is a blood-thinning medicine. It is used to treat and prevent blood clots and strokes.

What is outpatient bridging?

There may be times when your warfarin therapy needs to be stopped. This is often done before a procedure or surgery. In *bridging*, you will receive a different blood-thinning medicine.

In *outpatient bridging*, you will give yourself a *subcutaneous* (under-the-skin) injection of blood-thinning medicine at home. Most times, enoxaparin (Lovenox) or dalteparin (Fragmin) are used for this.



Your care provider will teach you how to give yourself an injection of medicine.

Why do I have to stop warfarin?

People who take warfarin tend to bleed more easily. If you are having a procedure or surgery, warfarin must be stopped to lessen bleeding during and after your procedure or surgery.

When do I start the injections?

You will give yourself injections starting a few days before your procedure or surgery. This begins after warfarin has been stopped and when your *international normalized ratio* (INR) is less than the lowest number in your goal range. This is usually less than 2.0, but may be less than 2.5. You will give yourself injections again for several days after your procedure or surgery, until your INR is above the lowest number in your goal range. This is usually above 2.0, and may be above 2.5.

Why can't I just stop taking warfarin?

Your doctor prescribed warfarin because you are at risk for a blood clot or stroke. Although it is not safe to take warfarin before a procedure or surgery, it is important for you to keep taking a blood-thinning medicine.

When warfarin is stopped, the injectable blood thinner is used to "bridge" the gap while your blood levels of warfarin are dropping. It is also used to bridge the gap between the time warfarin is restarted and begins working again.

Why can the injectable blood thinner be used right before and after surgery, but not warfarin?

The effects of the injectable blood thinner end about 1 day after the medicine is stopped. The effects begin again a few hours after it is restarted. It takes longer for the effects of warfarin to end and begin.

How long does bridging take?

Bridging will begin 1 to 2 days after you stop warfarin. Warfarin is stopped about 4 to 5 days before your procedure or surgery. During this time, your blood levels of warfarin slowly drop.

Bridging will be started again after your procedure or surgery, when it is safe. It will be continued for 5 to 7 days while you also take warfarin. During this time, your blood levels of warfarin slowly build and your blood gets "thin" again.

What should I expect?

- The Anticoagulation Clinic will call you and tell you when to:
 - Stop taking your warfarin
 - Inject the blood-thinning medicine
 - Restart taking your warfarin
- Expect to use the injectable blood thinner for up to 10 days. This includes the bridging time 2 to 3 days before and 5 to 7 days after your surgery or procedure.
- You will have blood tests on the day of your procedure and for several days afterward until your INR is within goal range. These tests include an INR test, a complete blood count, and a kidney function test.

Questions?

Your questions are important. Call your doctor or Anticoagulation Clinic if you have any questions or concerns about inpatient bridging.

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