

## Comparison of Oral Blood Thinners

	<b>Warfarin (Coumadin<sup>®</sup>, Jantoven<sup>®</sup>)</b>	<b>Apixaban (Eliquis<sup>®</sup>) Dabigatran (Pradaxa<sup>®</sup>) Rivaroxaban (Xarelto<sup>®</sup>)</b>
<b>Monitoring</b>	Frequent testing (INR) required to determine blood thinning effect	No monitoring to determine blood thinning effect
<b>Dosage</b>	Variable dosing for each patient, with frequent dosing changes sometimes required. Dosing dependent upon coagulation test to keep blood thinning affect within desired therapeutic range	Same dose for each patient.
<b>Food interactions</b>	Vitamin K containing foods (such as salads and green vegetables) influence warfarin's blood thinning effect. Patients on warfarin must carefully monitor what they eat to maintain a consistent vitamin K intake.	No food interactions.
<b>Drug interactions</b>	Many common drugs influence the blood thinning effect of warfarin, such as antibiotics, thus requiring more frequent blood monitoring tests.	Fewer drug interactions.
<b>Time to fully active</b>	Warfarin takes at least 5 days after starting to reach its full blood thinning effect. Therefore, patients who start warfarin need to be treated with an additional blood thinner (typically injections underneath the skin) during those first 5 or more days.	Full blood thinning effect is achieved within 2-3 hours. Therefore, there is no need for the initial injections with an additional blood thinner.
<b>Time to being out of system</b>	After being stopped, warfarin takes 5-7 days to clear the body.	Takes 24 to 48 hours to clear after being stopped.
<b>Reversal in cases of excessive bleeding</b>	There are proven reversal methods in case of excessive bleeding on warfarin.	There is no antidote or reversal strategy that is guaranteed to work if major bleeding occurs.
<b>Cost</b>	Depends on insurance, but generally lower-cost.	Depends on insurance, but generally more expensive.
<b>Effectiveness in preventing recurrent clots</b>	Same	Same
<b>Safety</b>	Same risk of major bleeding, but higher risk of bleeds into the head.	Same risk of major bleeding, but lower risk of bleeds into the head

Abbreviations: INR = International Normalized Ratio



For more information on blood clots and blood thinners, visit:

[www.ClotConnect.org](http://www.ClotConnect.org)

# Comparison of the New Oral Blood Thinners for DVT and PE

**Advantages**

**Disadvantages**

**No advantage one over the other**

	<b>Apixaban (Eliquis®)</b>	<b>Dabigatran (Pradaxa®)</b>	<b>Rivaroxaban (Xarelto®)</b>
Started immediately upon diagnosis of DVT or PE	yes	no	yes
Dosing	twice daily	twice daily	once daily
Excreted through the kidney	25%	80%	33%
Efficacy compared to warfarin (recurrent DVT or PE)	same	same	same
Safety compared to warfarin in respect to relevant bleeding	better <sup>2</sup>	same	same/better <sup>1</sup>
Reversal agent/antidote available for major bleeding <sup>3</sup>	none	none	none
FDA approved for DVT/PE treatment	yes	yes	yes

<sup>1</sup> "Major bleeding" same as with warfarin in DVT trial, but less in PE trial

<sup>2</sup> Less "major bleeding" with apixaban compared to warfarin

<sup>3</sup> Reversal agents are in the early clinical development for all three new blood thinners

## REFERENCES

The 'advantages-disadvantages-same' determination above is based upon the following published clinical trial data:

1. Agnelli G et al. Oral Apixaban for the Treatment of Acute Venous Thromboembolism. N Engl J Med 2013, 369:799-808.
2. The Einstein Investigators: Oral Rivaroxaban for symptomatic venous thromboembolism. New Engl J Med 2010;363:2499-510.
3. The Einstein Investigators: Oral Rivaroxaban for the treatment of symptomatic pulmonary embolism. New Engl J Med 2012;366:1287-97.
4. Schulman S et al. Dabigatran versus warfarin in the treatment of acute venous thromboembolism. N Engl J Med. 2009 Dec 10;361(24).



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