Doctor, I have finished 6 months of treatment for my blood clot. Can I start taking a reduced-dose of anticoagulant now?

After 6 months, some people can safely switch to a reduced dose of a direct oral anticoagulant (DOAC). In these cases, reduced-dose DOACs are just as good at preventing new clots as full-dose DOACs and appear to cause less bleeding. The bleeding risk of reduced-dose DOACs is similar to that of taking a daily aspirin. We should talk about whether that is a good plan for you.

What's the evidence?

Understanding the problem

Anticoagulants protect people who have deep vein thrombosis (DVT) or pulmonary embolism (PE) from forming new blood clots while their body works on breaking down the old blood clots. How long people with DVT or PE should take an anticoagulant is not based on when the clot is gone. Instead, it is based on when the risk factor that caused the blood clot is gone.

For example, Alice develops a DVT one week after hip replacement surgery. She is treated with anticoagulants for 3 months, and then her doctor tells her she can stop taking them. Alice's risk factor for DVT was surgery. Her DVT is called "provoked".

For many people, the risk factor that caused the DVT or PE is either weak (e.g., travel) or unknown. This type of DVT or PE is called "unprovoked". These people remain at risk for forming new blood clots for the rest of their lives. To protect themselves from another clot, they may decide to take anticoagulants indefinitely.

Anticoagulants also have safety concerns because they increase the risk of bleeding.

For example, Sam has an ulcer in his stomach that is bleeding but so slowly, he hasn't noticed it. When Sam is diagnosed with a PE and starts taking anticoagulants, the bleeding from his ulcer increases and he vomits up blood.

Researchers are always looking for ways to protect people from blood clots while lowering the risk of bleeding. One possible way to do this is to reduce the dose of the anticoagulant. Previous studies showed that reduced-dose DOACs appear to be just as good at preventing new blood clots as full-dose DOACs but with a lower risk of bleeding.

A meta-analysis is a statistical method used to get more accurate information about a treatment by combining the results of studies together. This is similar to judging a sports team based on how they perform over an entire season rather than just one game.

The meta-analysis described below was designed to find out more about how reduced-dose DOACs compare to 1) full-dose DOACs, and 2) stopping DOACs or substituting a DOAC with aspirin.

The research

A summary of 2 studies published up to March 2017.

Who? The studies included 5847 people who completed 6 to 12 months of full-dose anticoagulation for venous thromboembolism (VTE; collective term for blood clots within the venous system). Patients were excluded if their doctor thought it was unsafe for them to stop anticoagulation or if they had had severe medical illnesses that would prevent them from safely remaining on a full-dose DOAC. Very few patients with cancer were included in the studies.

What? The studies compared reduced-dose DOACs with full-dose DOACs and with placebo or aspirin.

<table>
<thead>
<tr>
<th>Reduced-dose DOAC</th>
<th>vs</th>
<th>Full-dose DOAC</th>
<th>vs</th>
<th>Placebo or aspirin</th>
</tr>
</thead>
</table>

https://plus.mcmaster.ca/ClotPlus/Articles/EvidenceSummary/51
Doctor, I have finished 6 months of treatment for my blood clot. Can I start taking a reduced-dose of anticoagulant now? &nbsp;

Reduced-dose DOAC vs Full-dose DOAC vs Placebo or aspirin

<table>
<thead>
<tr>
<th>Reduced-dose DOAC</th>
<th>Full-dose DOAC</th>
<th>Placebo or aspirin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rivaroxaban (Xarelto®), 10 mg once a day or Apixaban (Eliquis®), 2.5 mg twice a day</td>
<td>Rivaroxaban (Xarelto®), 20 mg once a day or Apixaban (Eliquis®), 5 mg twice a day</td>
<td>Placebo: A pill containing an inactive substance that has no effect on the outcome. Sometimes, it is referred to as a “sugar pill.” or Aspirin, 81 mg once a day</td>
</tr>
</tbody>
</table>

What the researchers found

The quality of the studies was moderate to high with low risk of bias.

People who took reduced-dose DOACs did not have more new blood clots than people who continued to take full-dose DOACs. As well, people who took reduced-dose DOACs had fewer new blood clots than did people who switched to placebo or aspirin.

People who took reduced-dose DOACs did not bleed more than people on placebo or aspirin.

Summary of findings

Reduced-dose DOAC vs full-dose DOAC vs placebo or aspirin in people who have been treated for VTE for 6 months

<table>
<thead>
<tr>
<th>Outcomes at 1 year</th>
<th>Rate of events with:</th>
<th>Result of reduced-dose DOAC compared with:</th>
<th>Number of studies and quality of the evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reduced-dose DOAC</td>
<td>Full-dose DOAC</td>
<td>Placebo or aspirin</td>
</tr>
<tr>
<td>Recurrent VTE</td>
<td>2 out of 100 people</td>
<td>1 out of 100 people</td>
<td>6 out of 100 people</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major Bleeding or</td>
<td>3 out of 100 people</td>
<td>4 out of 100 people</td>
<td>2 out of 100 people</td>
</tr>
<tr>
<td>Clinically relevant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nonmajor bleeding</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Although the rates for the 2 groups look different, the differences were not statistically significant—this means that the difference could simply be due to chance rather than due to the different treatments.

This Evidence Summary is based on the following article:


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Glossary
anticoagulant medications that prevent blood clots from forming or travelling (aka blood thinner)

anticoagulants medications that prevent blood clots from forming or travelling (aka blood thinner)

anticoagulation medications that prevent blood clots from forming or travelling (aka blood thinner)

apixaban Eliquis® (aka DOAC)

Clinically relevant nonmajor bleeding bleeding that is not as serious as major bleeding but still required assessment by a doctor OR a medical intervention (e.g. scope) OR interruption of the medication OR caused discomfort or impairment of activities of daily living

deep vein thrombosis (DVT) formation of a blood clot within a vein deep within the leg

DOAC anticoagulant pill that does not require blood tests to monitor the effect (aka novel oral anticoagulant, NOAC); examples include apixaban, dabigatran, edoxaban, rivaroxaban

DVT formation of a blood clot within a vein deep within the leg

High-quality Additional studies are very likely to have the same result

major bleeding serious bleeding (e.g. requiring a visit to the doctor or hospital, an invasive test to find the source of bleeding or a blood transfusion)

meta-analysis advanced statistical method that combines the results of different studies together

Moderate-quality Additional studies are likely to have the same result

PE blood clot(s) that cause obstruction of blood vessels within the lungs (pulmonary artery), after travelling from veins, most commonly within the leg or arm or pelvis

placebo a harmless, inactive, and simulated treatment

provoked DVT or PE that is associated with (or thought to be caused by) a strong risk factor such as cancer or recent surgery

pulmonary embolism (PE) blood clot(s) that cause obstruction of blood vessels within the lungs (pulmonary artery), after travelling from veins, most commonly within the leg or arm or pelvis

risk factor characteristics that increase the chance that a person will develop a disease or condition or experience a bad outcome

risk of bias possibility that study has an error(s) that deviates the results away from the truth

rivaroxaban Xarelto® (aka DOAC)

ulcer open sore

unprovoked a DVT or PE that is unexplained or not associated with a strong risk factor (aka idiopathic VTE)

venous thromboembolism the collective term referring to blood clots within the veins, most commonly deep vein thrombosis and pulmonary embolism

VTE venous thromboembolims; collective term referring to blood clots within the veins