

# Thrombosis (Blood Clots) and COVID-19 Vaccines

## Frequently Asked Questions

### **What is the risk of thrombosis in the general population?**

The risk of thrombosis (blood clots) is uncommon in the general population. Each year, about 1 or 2 out of 1,000 people will develop a blood clot.

### **What is the risk of thrombosis in people with COVID-19?**

Infection with COVID-19 has been associated with thrombosis, or blood clots, involving the veins and arteries. The risk of blood clots is highest for individuals admitted to hospital with COVID-19 infection, occurring in about 5% of people admitted to a regular hospital ward and up to 20% for those in the intensive care unit (ICU), on life-support. The risk of blood clots for individuals with COVID-19 but not requiring admission to hospital is lower at about 1%.

### **What should I look for to determine if I may have a blood clot?**

The key symptoms of thrombosis (blood clots) to watch for are swelling, tenderness or redness in the leg, chest pain with slow shallow breathing, shortness of breath, elevated heart rate, light-headedness and coughing up blood. For more details about the signs and symptoms of blood clots visit [www.thrombosiscanada.ca/clots](http://www.thrombosiscanada.ca/clots).

### **Should I receive the vaccine if I have had a previous blood clot?**

Yes, we recommend you receive the vaccine. There is no overall increased risk of developing a blood clot after receiving any of the approved COVID-19 vaccines, or any other vaccine. Having had a previous blood clot may put you at higher risk of future clots, but this is not increased by the vaccine. In fact, because COVID-19 disease often causes blood clots the vaccine will actually provide you with protection against developing another blood clot.

### **Should I receive the vaccine if a family member has had a blood clot?**

Yes, we recommend you should receive the vaccine. There is no overall increased risk of developing a blood clot after receiving any of the approved COVID-19 vaccines, or any other vaccine. Having a family member with a blood clot could put you at higher risk of clots, but this is not increased by the vaccine. In fact, because COVID-19 disease often causes blood clots, the vaccine will actually provide you with protection against developing a blood clot.

### **Should I receive the vaccine if I have a blood clotting tendency such as Factor V Leiden?**

Yes, you should receive the COVID-19 vaccine. Having a blood clotting tendency (such as Factor V Leiden) may put you at higher risk of blood clots, but this is not increased by the vaccine.

People who have COVID-19 are at higher risk of developing blood clots, which occur in about 1 in 20 people who are in hospital with COVID-19 and in about 1 in 100 people who have COVID-19 but are not in hospital. In fact, because COVID-19 disease often causes blood clots, the vaccine will actually provide you with protection against developing another blood clot.

**Should I receive the vaccine if I am taking a blood thinner?**

Yes, you should receive the COVID-19 vaccine. There is a small risk of bruising at the vaccination injection site, but no other serious effects related to being on blood thinning treatment. After, the vaccine is given, apply pressure to the injection site for 3 to 5 minutes to reduce bruising.

**Is there a risk for developing a blood clot (thrombosis) after receiving the COVID-19 vaccine?**

There is no overall increased risk of developing a blood clot after receiving any of the approved COVID-19 vaccines, including the vaccine made by AstraZeneca. However, the AstraZeneca vaccine may be associated with extremely rare cases of serious blood clots including blood clots that occur in the brain called cerebral vein sinus thrombosis (CVST) and are associated with low blood platelets. Healthcare professionals have named it Vaccine-Induced Prothrombotic Immune Thrombocytopenia or VIPIT. These blood clots were found to occur in approximately 1 in 100,000 people who received the vaccine.

**What should I look for if I suspect that I may have Vaccine-Induced Prothrombotic Immune Thrombocytopenia (VIPIT)?**

The symptoms to look for include a persistent and severe headache, vision changes, seizures and other symptoms that resemble a stroke, such as weakness or numbness of the arms or legs, shortness of breath, abdominal or chest pain, swelling and redness in a limb and pallor and coldness in a limb, occurring in the 4 – 20 day period following vaccination for COVID-19. If you have any of these symptoms in that period, it is important that you seek immediate medical attention.

**Should I take ASA to prevent the potential side effect of a blood clot from the vaccines?**

No, there is no evidence that taking ASA before or after receiving a COVID-19 vaccine will have any impact on development of the very rare side effect of blood clots.

**What is cerebral sinus vein thrombosis?**

Cerebral vein sinus thrombosis (CVST) is an uncommon site of thrombosis, occurring in the brain's venous sinuses. Cerebral vein sinus thrombosis typically affects younger people, and women are more likely to be affected than men. The symptoms of CVST include headache that is usually severe and sometimes associated with vision changes, seizures and other symptoms



that resemble a stroke, such as weakness or numbness of the arms or legs. Additional information on CVST can be found at the following link: <https://thrombosiscan.info/CVT-Guide>.

**Disclaimer:** Please note that the recommendations contained herein must be viewed as general guidelines based on current knowledge. Their application must be adapted to individual patients. Thrombosis Canada assumes no responsibility or liability arising from any error or omission or from the use of any information contained herein. You must not rely on the information in this document as an alternative to medical advice from your doctor or other professional healthcare provider.