

Coronavirus Disease 2019 (COVID-19)

What You Need to Know About Viral Vector Vaccines

This fact sheet provides information on the safety and effectiveness of viral vector vaccines. For more information, see Public Health Ontario's [COVID-19 Vaccines: Viral Vector-based Vaccines](#) or visit [COVID-19 Vaccines](#) webpage.

About viral vector COVID-19 vaccines

- Viral vector vaccines are designed to produce an immune response that protects us against the virus that causes COVID-19.
- The two currently authorized viral vector vaccines are AstraZeneca/COVISHIELD and Janssen (Johnson and Johnson) vaccine.
- AstraZeneca/COVISHIELD is given as a 2-dose vaccine series; Janssen is a 1 dose vaccine.



How do viral vector vaccines work

- A viral vector vaccine is a modified, weakened version of a different virus (not the virus that causes COVID-19), called a vector.
- The vaccine works by providing our cells with genetic instructions on how to produce a copy of a protein that is found on the surface of the COVID-19 virus.
- These viral proteins, known as antigens, are recognized by the body which starts an immune response.
- The vaccine does not give you the virus or cause an infection. After our cells make copies of the protein, they destroy the viral vector from the vaccine.



Viral vector vaccines are safe and effective

- The viral vector vaccines were authorized by Health Canada after they were shown to be safe, effective and of high quality in clinical trials with 87,000 people.
- In clinical trials, the efficacy of viral vector vaccines was between 67% (Janssen) and 82% (AstraZeneca/COVISHIELD when interval between 2 doses > 12 weeks) in preventing COVID-19 disease.
- Both vaccines have been shown to be highly effective in preventing severe disease, including hospital stays as well as deaths from COVID-19.
- The vaccines cannot give you COVID-19.
- The vaccines do not interfere with COVID-19 test results used to look for infection and do not give false positive test results.
- More research is being done to determine how long the vaccine protection lasts and if it will prevent others around you from getting sick with COVID-19

Like every vaccine, there may be possible side effects

- The most common side effects are pain at the injection site, fatigue and headaches.
- Other common side effects can include: fever, chills, muscle pain and joint pain.
- These side effects usually occur within 1-2 days after vaccination and go away within 1-3 days.
- Viral vector vaccines (AstraZeneca/COVISHIELD and Janssen) have been associated with a very rare blood clotting condition, known as vaccine-induced immune thrombotic thrombocytopenia (VITT). For further information about VITT and AstraZeneca/COVISHIELD and Janssen vaccines please see the following resources:
 - Ontario COVID-19 Science Advisory Table: [Vaccine-induced immune thrombotic thrombocytopenia \(VITT\) following adenovirus vector COVID-19 vaccination: lay summary](#)
 - Ministry of Health: [COVID-19 Vaccine Information Sheet, version 5.0](#)

Continue to protect yourself and others

- Until vaccines are widely available, it is important to continue to protect yourself and those around you from COVID-19.
- Keep practicing protective measures such as washing your hands, physical distancing, covering your mouth when you cough, wearing a mask and following local public health guidance.

Learn about the virus

To learn more and access up-to-date information on COVID-19, visit the Ontario Ministry of Health's website: ontario.ca/coronavirus.

For more information please contact: _____

The information in this document is current as of May 26, 2021