

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 Vaxzevria™/COVISHIELD and Janssen (Johnson and Johnson) vaccine; however, only AstraZeneca Vaxzevria™/COVISHIELD is currently available in Ontario under limited circumstances.
- AstraZeneca Vaxzevria™/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 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 viral vector vaccines were between 66% (Janssen) and 82% (AstraZeneca Vaxzevria™/COVISHIELD) effective 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.

Note: Very rare blood clots associated with thrombocytopenia have been reported following vaccination with viral vector vaccines. On May 11, 2021, Ontario paused the use and administration of first doses of the AstraZeneca Vaxzevria™/COVISHIELD vaccine. Administration of AstraZeneca Vaxzevria™ as a second dose is currently only indicated under limited circumstances.

Continue to protect yourself and others

- 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 September 29, 2021