CEP Centre for Effective Practice

Vaccines at a glance Version 8, June 4, 2021

Turn the page for more in-depth information on each topic
Updated information is highlighted

		Pfizer	Moderna	AstraZeneca	Janssen (J&J)
Trial efficacy	Overall efficacy rate (clinical trial data)	95.0%	94.1%	59.9%	66.9%
	Efficacy rate against severe disease	>1-14 days after dose 2: **75-100%**	14 days after dose 2: **100%**	After dose 2: **100%**	28 days after dose: **85.4%**
	Number of trial participants who developed severe disease	1 vaccine/9 placebo	0 vaccine/30 placebo	0 vaccine/8 placebo	4 weeks after: 5 vaccine/34 placebo
Variants	Against variants **without** E484K mutation (higher transmission)	**B.117: 70-94%**, 14-21 days after 2nd dose	**B.117: 85.7%,** 15 days after 2nd dose	**B.117: 65-74%** after 1st dose	*Unknown*
	Against variants **with** E484K mutation (higher transmission, increased severity)	*Likely reduced*	*Likely reduced*	*Likely reduced*	**B.135: 81.7%** against severe disease after 28 days
	Variant-specific vaccine development underway	Y	Y	Y	Y
Type	Type	mRNA	mRNA	Viral vector	Viral vector
	Contain live virus?	N	N	N	N
Admin	Number of shots	2	2	2	1
	Minimum interval between shots	21 days	28 days	12 weeks	-
	Different vaccine 2nd dose	Y (mRNA for 1st/2nd dose)	Y (mRNA for 1st/2nd dose)	Y (mRNA for 2nd dose)	-
Specific pops	Children	12-18	N	N	N
	Adults > 65	Y	Y	Y	Y
	Pregnant/breastfeeding	Y	Y	Y	Y
	Immunocompromised	Y	Y	Y	Y
Common side effects**	Pain at injection site	Y	Y	Y	Y
	Fatigue	Y	Y	Y	Y
	Headache	Y	Y	Y	Y
	Muscle pain	Y	Y	Y	Y
	Chills	Y	Y	Y	Y
	Joint pain	Y	Y	Y	Y
	Fever	Y	Y	Y	Y
	Nausea, vomiting or diarrhea	N	N	Y	Y (nausea)

Vaccines in depth

Variants	Research is ongoing into the effect of the vaccines against the variants. Some limited data are available; for an evidence review see Efficacy of vaccines against VOCs (COVID-END). For ongoing updates, see Emerging Evidence: Vaccines and variants (CEP)
Type	As none of the vaccines contain live virus, reassure patients that they cannot cause COVID-19. For more information about how the vaccines work, see Types of COVID-19 Vaccines (CEP), and for more answers to patient questions about the vaccines, see Ensuring Patient Confidence in Vaccines (CEP)
Ethics	One contributor to low vaccine confidence in Black and Indigenous communities is the historic exclusion of these communities from medical research – or the inclusion without informed consent. It's important that each vaccine trial included consenting participants of diverse racial and ethnic backgrounds. For more resources on understanding vaccine confidence in Black and Indigenous communities, see Ensuring Patient Confidence in Vaccines (CEP)
Admin	An effort is underway to accelerate the pace of 2nd doses and shrink the interval between doses. For more information about plans and currently eligible groups, see Provincial Vaccine Rollout (CEP). Those who received AstraZeneca as their first vaccine dose are eligible to choose whether to receive AZ, or either the Pfizer/Moderna vaccine for their second dose. If you received a first dose of Moderna or Pfizer, it is recommended that you get the same vaccine for your second dose. However, the provincial and federal governments now recommend that these two vaccines may be 'mixed and matched' if supply is not available for the original vaccine you got. For more information, see Emerging Evidence: Mixed Vaccine Schedule
Specific pops	Health Canada has approved the use of the Pfizer vaccine in children 12-15. Studies on vaccine efficacy in children as young as 6 months are currently underway. See "Do the vaccines work in children?" (CEP) Pregnant/breastfeeding individuals are encouraged to receive the vaccine. For more information see Emerging Evidence: AstraZeneca and Janssen (Johnson & Johnson) Safety (CEP) Immunocompromised can receive the vaccine with informed consent. For more information see Emerging Evidence: Immunocompromised populations
AEFI	The AstraZeneca vaccine is currently not in use for 1st doses, our of an abundance of caution due to the small risk of blood clots. Reports of myocarditis/pericarditis in individuals vaccinated with an mRNA vaccine are emerging from Israel, France, and the U.S. The condition often has no symptoms and heals on its own. Cases seem to occur predominantly in adolescents and young adults, more often in males than females, more often after the second dose of the vaccine, and typically within 4 days after vaccination. See Emerging Evidence: Adverse Events for more information. **Allergies**: CSACI identifies the risk for serious allergic reaction for all vaccines as low. For more information, including who should see an allergist before vaccination, see Emerging evidence: Adverse events (CEP)
Side effects	Share our patient after-care guide, including how to treat side effects: CEP Aftercare sheet (Pfizer/Moderna and AZ/JJ versions) **Some patients given the Moderna vaccine may experience delayed localized injection site reactions ~8 days post vaccination including erythema, induration, and tenderness. These typically resolve within 4 to 5 days without the use of antibiotics. See Emerging evidence: Adverse events (CEP) For more detailed information about side effects for each vaccine, see Pfizer, Moderna, AstraZeneca and Janssen (CEP)

Developed by:

CEP Centre for Effective Practice

June 2021

cep.health