



King Saud university
College Of Applied medicine

Corona vaccines
Infection disease (CHS231)
Doctor: Mohammed Fawzi Farhat
second semester of the academic year 2022-2023

Students

7. Mohammed Almousa
8. Salman Alotaibi
9. Abdualziz Alzahrani
10. Abdualziz Alanzi (Leader)
11. Rashed Motaieb
12. Rayan Alquzi
























Introduction

COVID-19 vaccines are a critical prevention tool.

Getting vaccinated against COVID-19 reduces your chances of contracting the virus that causes COVID-19 and spreading it. Vaccines can also assist in the prevention of major illness and death.

Getting vaccinated against COVID-19 is a better strategy to build protection than getting sick with COVID-19. COVID-19 vaccine protects you by eliciting an antibody response without causing you to become ill. [1]

Types of covid-19

Company	Type	Doses	Storage
 Oxford Uni-AstraZeneca	Viral vector (genetically modified virus)	x2 	 2 to 8°C (6 months)
 Moderna	RNA (part of virus genetic code)	x2 	 -25 to -15°C (7 months)
 Pfizer-BioNTech	RNA	x2 	 -80 to -60°C (6 months)
 Gamaleya (Sputnik V)	Viral vector	x2 	 -18.5°C (liquid form) 2 to 8°C (dry form)
 Sinovac (CoronaVac)	Inactivated virus (weakened virus)	x2 	 2 to 8°C
 Novavax	Protein-based	x2 	 2 to 8°C
 Janssen	Viral vector	x1 	 2 to 8°C (3 months)

[2]

Contraindications of corona vaccines

A contraindication to one mRNA COVID-19 vaccine should be considered a contraindication to other COVID-19 vaccines made with that vaccine platform. For example, a person who is contraindicated for Comirnaty (Pfizer) would also be contraindicated for Spikevax (Moderna).

Contraindications to Pfizer and Moderna COVID-19 vaccines are:

- anaphylaxis to a previous dose of an mRNA COVID-19 vaccine (Pfizer or Moderna)
- anaphylaxis to any component of the vaccine, including polyethylene glycol (PEG). [2]

Contraindications to Vaxzevria (AstraZeneca) are:

- anaphylaxis after a previous dose
- anaphylaxis to any component of the vaccine, including polysorbate 80
- history of capillary leak syndrome
- thrombosis with thrombocytopenia (TTS) occurring after a previous dose.[2]

Contraindications to Nuvaxovid (Novavax) are:

- Anaphylaxis after a previous dose
- Anaphylaxis to any component of the vaccine, including polysorbate 80.[2]

Precautions of corona vaccines

Precautionary conditions for Pfizer and Moderna COVID-19 vaccines

People with a history of any of the following conditions can receive a Pfizer or Moderna COVID-19 vaccine. But advice should be sought from a GP, immunisation specialist or cardiologist about the best timing of vaccination and whether any additional precautions are recommended:

- recent (within the past 3 months) myocarditis or pericarditis
- acute rheumatic fever or acute rheumatic heart disease (with active myocardial inflammation)
- acute decompensated heart failure.[2] [3]

Precautionary conditions for AstraZeneca

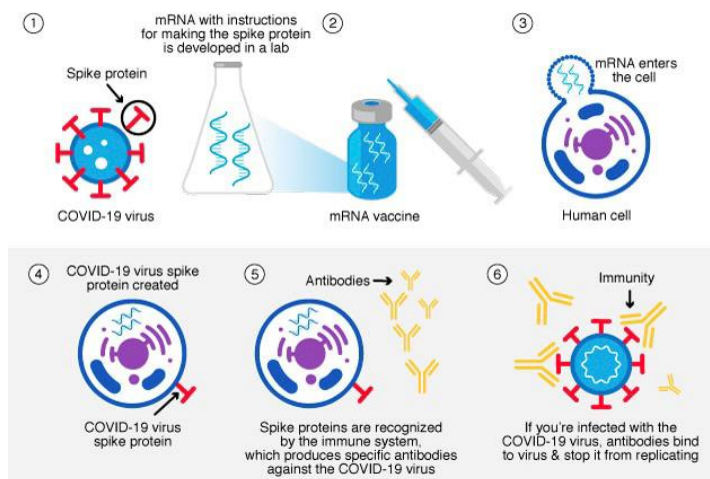
Pfizer or Moderna are recommended instead of AstraZeneca in people of any age with a history of:

- cerebral venous sinus thrombosis (CVST)
- heparin-induced thrombocytopenia (HIT)
- idiopathic splanchnic (mesenteric, portal, splenic) thrombosis
- antiphospholipid syndrome with thrombosis. [2] [3]

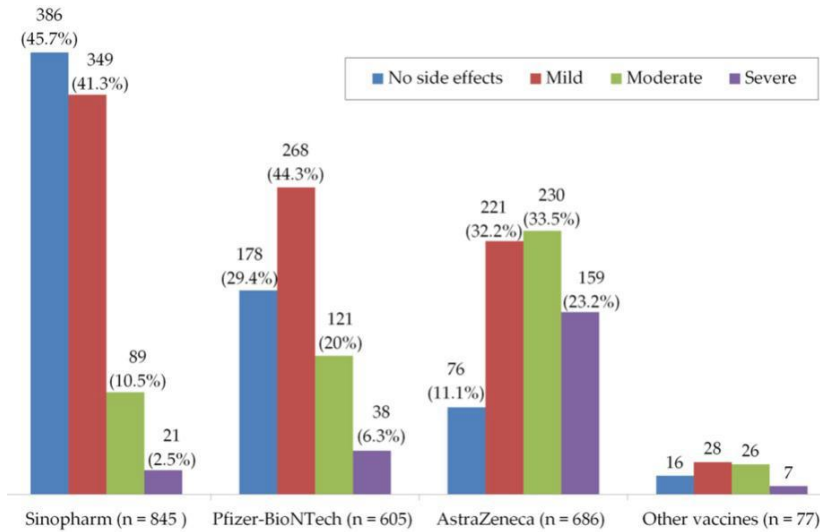
Precautionary conditions for Novavax

There are no specific precautionary conditions for the use of Novavax vaccine.[2] [3]

Mode of action of the vaccines



[1]



[4]

References:-

- ▶ [1] Understanding mRNA COVID-19 vaccines. Centers for Disease Control and Prevention. Accessed Jan 6, 2021.
- ▶ [2] Shimabukuro TT, Cole M, Su JR. Reports of anaphylaxis after receipt of mRNA COVID-19 vaccines in the US-December 14, 2020-January 18, 2021. *Jama* 2021;325:1101-2.
- ▶ [3] Rosenberg, Eli S., et al. "COVID-19 vaccine effectiveness in New York state." *New England Journal of Medicine* 386.2 (2022): 116-127.
- ▶ [4] Hatmal, M. M., Al-Hatamleh, M. A. I., Olaimat, A. N., Hatmal, M., Alhaj-Qasem, D. M., Olaimat, T. M., & Mohamud, R. (2021, May 26). Side effects and perceptions following COVID-19 vaccination in Jordan: A randomized, cross-sectional study implementing machine learning for predicting severity of side effects. MDPI. from <https://www.mdpi.com/2076-393X/9/6/556/html>

