



mRNA Vaccines

Moderna

- Who Can Get It?
 - All persons 18 years or older
- Number of Doses
 - 2
- How far apart are the doses?
 - 28 days (4 weeks)
- Effectiveness
 - 94.1%, 14 days after the second dose
- What About the Other 6%?
 - 6% were infected by the virus, but their symptoms were milder, and recovery was easier.
- Is it effective against variants?
 - Yes
- Is It safe?
 - Yes, extensive testing has determined this vaccine to be safe.

Pfizer

- Who Can Get It?
 - All persons 16 years or older
- Number of Doses
 - 2
- How far apart are the doses?
 - 21 days (3 weeks)
- Effectiveness
 - 95%, 14 days after the second dose
- What About the Other 5%?
 - 5% were infected by the virus, but their symptoms were milder, and recovery was easier.
- Is it Effect Against Variants?
 - Yes
- Is it safe?
 - Yes, extensive testing has determined this vaccine to be safe.



Recombinant Vaccines

Johnson & Johnson (Janssen)

- Who Can Get It?
 - All persons 18 years or older
- Number of Doses
 - 1
- Effectiveness
 - 66%
- What, What? ONLY 66%?
 - This does not include the proportion of people who did get it but had a much less severe disease.
 - Symptoms were much less severe hence recovery was easier.
- Is it Effective Against Variants?
 - Yes
- Is It Safe?
 - Yes, extensive testing has determined this vaccine to be safe.



How do m-RNA vaccines work?

m-RNA stands for messenger RNA. It is a type of genetic material that carries instructions on how to build proteins. Different strings of m-RNA give rise to different proteins. One such string of m-RNA is present in the vaccine. It carries the instructions to build a single protein called the “spike protein”. A thin layer of fats covers the m-RNA to protect it from damage. Your cells build spike proteins using the instructions on the m-RNA. Like a sketch artist drawing the face of a person with instructions given to them. The spike protein helps your body recognize the COVID-19 virus’ protein. The m-RNA gets destroyed when the spike protein gets made. The spike protein cannot cause disease and is safe.

How do recombinant vaccines work?

Recombinant vaccines also work by delivering m-RNA with instructions for the spike protein. The only difference is that they use the outer shell of a different, harmless virus to protect the m-RNA. This outer shell and the m-RNA gets destroyed and do not cause any disease.

Resources:

Information about Moderna vaccine -

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/Moderna.html>

Information about Pfizer vaccine -

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/Pfizer-BioNTech.html>

Information about Janssen vaccine -

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/janssen.html>

Further details about m-RNA vaccines -

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/mrna.html>

Further details about recombinant (aka viral vector vaccines) -

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/viralvector.html>