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The Relationship between Established Immunity and the Type of Covid 19 Vaccine

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Abstract

Statement of problem: Corona virus epidemic which started in 2019, has caused a widespread disaster around the world. Many efforts have been to develop safe and effective vaccines to prevent Covid-19 disease, and eventually a number of vaccines with different platforms have been licensed for use in various countries. Numerous studies have shown that these different structures of Covid 19 vaccines each uniquely activate and strengthen the host immune system, and therefore the immunity obtained from each vaccine is different. In this article, we will discuss the difference between the structures of Covid 19 vaccines and its effect on immunity obtained.

Methodology & Theoretical Orientation: An electronic search applying specific Mesh terms like Covid 19, Vaccines, Immunity was carried out in PubMed and Google Scholar databases to collect data from 2020 until 2021, considering basic, pre-clinical, clinical and review studies. 42 relevant articles, focused on "Covid-19 vaccines and immunity" were selected and explored. Findings: According to the latest studies, all the Covid-19 vaccines platform will establish an acceptable immunity in the host. However, it has been shown that vaccines containing killed or inactivated virus produce lower immune responses than vaccines containing live virus and require booster doses.

Conclusion & Significance: Undoubtably, all different types of Covid-19 vaccines can exclusively establish a good host immunity response. Therefore, the best solution to overcome this pandemic is to accelerate global vaccination and trust the outcome.

Table:

Name of Vaccine	Type of Vaccine	Immunity Obtained
Pfizer-BioNTech	RNA Virus	90%
Moderna	RNA Virus	95%
Oxford-AstraZeneca	Viral Vector	60-90%
Sputnik V	Viral Vector	92%
Johnson and Johnson	Viral Vector	70-90%
Sinopharm	Killed/Inactivated Virus	60-80%
Bharat Biotech	Killed/Inactivated Virus	60-75%
Novavax	Subunit Vaccine	90-98%

Table 1: Comparison between different types of Covid-19 vaccines and immunity obtained.

Biography

Dr Kimia Ghods has her expertise in researching and passion in improving the general knowledge. Due to widespread effect of covid-19 pandemic on people's lives around the world, she has published several articles nonstop in domestic and foreign journals regarding different aspects of covid-19 disease from its early symptoms up to its vaccines common side effects. At the end, she would like to aware all the readers about the latest findings of this pandemic and play a small part in aiding world health organization to conquer this disease.

Publication

He, Q., Mao, Q., Zhang, J., Bian, L., Gao, F., Wang, J., Xu, M., & Liang, Z. (2021). COVID-19 Vaccines: Current Understanding on Immunogenicity, Safety, and Further Considerations. Frontiers in immunology, 12, 669339. https://doi.org/10.3389/fimmu.2021.669339

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