

Need of Two Doses of COVID Vaccine

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ABSTRACT

The epidemic has affected the lifestyle in one or other way, made the world economies to stop, forced to change our work style and connect with our close peoples, and forcing medical systems to their highest possible state. As a result, significant production efforts are needed to ensure that needs are fully met. While the vaccine is effective, its efficacy will be harmed if sufficient doses are not manufactured in time. When the vaccinations were originally tested, participants had a relatively mild immune reaction after receiving the first dose of COVID vaccine, followed by a robust reaction after receiving the second dose. We learned a lot from the second wave of coronavirus. It not only highlighted the disease's unpredictability, but it also provided insight into the various ways we can prevent a potential third wave of COVID. Despite of this, some people are still hesitant to get the vaccination or feel that missing their second dose of COVID is a viable choice. But you should be aware that vaccinations are our only means of protection against the virus, with the second COVID dose being the more crucial of the two dosages. You are not completely protected from the virus until and unless you receive the two doses. Getting both doses of these vaccines increases your chances of receiving full immunity. Only receiving one dose of the vaccine will not provide you with full protection or the vaccine's full efficacy. Receiving one dose of the two-dose vaccinations provides some protection, albeit we don't know the entire level of the protection or how long it will persist.

Key words: COVID-19, Vaccination, Two doses, COVID, Vaccine

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INTRODUCTION

The severe acute respiratory syndrome coronavirus produced the first human case of coronavirus sickness, often known as COVID-19, in Wuhan, China in December 2019. On March 11, 2020, the World Health Organization announced the outbreak a pandemic. COVID-19 is a virus that causes mild to severe respiratory difficulties in most people [1]. We learned a lot from the second wave of coronavirus. It not only highlighted the disease's unpredictability, but it also provided insight into the different methods we may avert a potential third wave. Despite all of the upheaval, some people are still hesitant to get the vaccination or feel that missing their second dose is a viable choice. But you should be aware that vaccinations are our sole means to stay away from the virus, with the second COVID dose being the most crucial of the two [2]. You are not completely protected from the virus until and unless you receive the two doses. During the trial phase for each and every of the two-dose vaccinations, researchers found that after a

specific period of time, the rate of COVID-19 immunity remains same with only one dosage, but that the second dose helped to increase immunity to greater rates. The most compelling reason to acquire both doses is simple: greater protection against COVID-19. With such high rates of efficacy, obtaining both doses protects you not only from COVID-19, but also from major disease and hospitalisation as a result of being sick. Booster injections, in general, assist our immune system to remember or learn about a virus for a longer time. "Not everyone has the same reaction or develops the same amount of immunity after the first treatment," she explains. "Just because everyone in your family has received their first dosage doesn't imply they all have the same level of protection. We're protecting ourselves, our families, and our society by ensuring everyone receives their second dosage. The greater the number of people who receive both vaccinations, the closer we will be to herd immunity [3]."

LITERATURE REVIEW

"When a large part of the population has been vaccinated or has enough antibodies to fight an infection, it is called as herd immunity or population/community immunity. Considering the children, adults and the elderly peoples are all vulnerable to the dangerous coronavirus, it is essential that every person, fall under the eligibility

criteria, get our self-vaccinated as early as possible. If you are feeling that there is no need of vaccination done considering that you are young healthy or you are not having any co morbidity, it is important that we protect the one who are more vulnerable to get the disease in our society and that can only be full filled through vaccination at large level and in large number. Neutralising antibody levels for the delta form were much lower than for the alpha variant in people who had only received one dose of the vaccination [4]. That is, the findings revealed that while a single dosage could still provide better protection than no vaccination, persons who had only received a single dose would be less well protected than they were before the delta version arose [5]. Clinical experiments first revealed the advantages of priming with COVID-19 vaccinations. The immunological responses of persons who received one or two vaccination doses were compared in early investigations of the now licenced COVID-19 vaccines [6]. People exhibited higher levels of antibodies to combat the virus after the second dosage, indicating that taking more than one dose would likely boost vaccination efficacy. This prime-boosting strategy was then tested in larger clinical studies. Protection against symptomatic COVID-19 was reported to be 52 percent with the Pfizer/BioNTech vaccination 12 days after the first dose (immunity takes time to build) [7]. After the second, protection increased to 95%. "The second shot strengthens your immunity, giving you even more protection against becoming critically ill from the COVID-19 virus," she explained [8]. "The second dosage not only boosts cellular immunity for extended protection, but it also improves resistance to other strains. It is fact that you can be infected with virus after having vaccination, but because of herd immunity, you are at low risk of getting infected.

If you are getting vaccinated you are not only lowering your risk of infection but also you are contributing safety towards society by decreasing the risk of spread of virus. When you done with your first dose of vaccine, your body starts producing antibodies against the virus [9]. These antibodies support our immune system to fight against virus if you are exposed to the virus, decreasing your chances of getting infected [10]. All three vaccinations, like the original strand, will protect you from dangerous disease and lower the chances of getting admitted in the hospital [11]. We should not take the corona virus very lightly it is very dangerous disease. It affects whole world at the same time. World health organisation declared this outbreak as pandemic on 12th march two thousand twenty. Persons who got vaccinated if they are exposed to the virus and gets infected suffer only mild to moderate form of disease in opposite to this peoples who are not vaccinated suffers severe form of disease. Getting vaccinated not only we protect our self from getting infected but also we protect the community from spread of transmission of virus [12]. Vaccine is the first and last we open in our hand to stop the spread of viral spread we all should follow some basic rules such as hand wash, wearing mask while coming in contact with other person, crowded space and social distancing. These basic rules we all should follow. Based on evidences we can say

those peoples who gets their vaccination done have low virus particles in their nose and mouth and chances of spreading of virus to others are very less [5]. This vaccination is very important. Because getting vaccine done its not only protects you, but also stop the virus from spreading to your close persons and friends. Every country on this planet should insist their people to get their vaccination done. Politician, teacher, social worker plays important role in this. First dose of vaccine only stimulate our body to produce antibodies against infecting organism but we cannot rely only on single dose of vaccine, we must get our second dose of vaccination done as it boost our immunity. Antibodies produced help our body to win against infecting organism. Second dose of vaccine gives strength to our immunity [13]. Whether you are elderly, young or healthy you must go through two dose vaccination process to protect our family, friends, closed persons we should ensure that everyone should get their two dose vaccination done.

DISCUSSION

Getting the second dose also sends a powerful reminder for your immune system to attack when necessary. The second dosage is given to increase the specificity of the antibody generated. We need to do a better job of educating people about the second shot and offering opportunities for them to return for it [14]. A recent research of antibodies generated in saliva following vaccination with Covid-19 vaccine highlights the necessity of a second vaccine dosage as well as the need to update vaccinations to tackle emerging strains of concern. The study found that following the second vaccine dosage, the amount of antibodies generated and the protection provided by immunisation rose significantly, demonstrating the value of obtaining the second dose. COVID-19, affects the entire world socially, economically and mentally. To break all the restrictions and to resume our normal life each and every country should be vaccinated.

Even though patients who received their first dose of the vaccination exhibited some protection against symptomatic COVID-19 infection, it is proven that the immune response to one dose of the vaccine is quite sufficient [15]. It's likely that those who only get a single dose of the COVID vaccination won't gain complete immunity to COVID-19 infection, putting them at risk of developing vaccine-resistant versions of COVID. There is also risk that those who just receive a single dosage would believe they are immune to COVID infection and will not receive a further treatment. There is no proof that a single dosage of COVID-19 provides adequate long-term protection against infection. The assumption that a second dose is not necessary is a major potential roadblock to completion. Although the evidence for first-dose effectiveness is still inconclusive, we based our question on the CDC's instructions at the time of the survey, which indicated explicitly that vaccines may not be protected until a week or two after the second dose. Vaccines are believed to give superior protection against Covid-19 by around 44% of persons. 20 percent feel the

vaccinations give very good protection before the second dosage, and 36 percent are dubious, 1 to 2 weeks after the second dose (as recommended by the CDC). The public may have been unclear about the necessity for a second dosage since public health specialists disagreed about the proportional advantages of postponing it. A current investigation on the efficacy of the first dosage has yielded a variety of estimates, some of which are far greater than those based on early research. Furthermore, the introduction of new vaccination options provides consumers with a choice that may help them overcome hesitancy; however, when combined with discussions about delaying second doses of other vaccines, this development may increase public confusion and uncertainty about the two-dose protocol, undermining efforts to ensure that as many people as possible return for their second dose. Finally, receiving only one dose of a two-dose COVID-19 vaccination isn't as effective as receiving the entire series. The second dose is strongly advised due to the propagation of the virus and its varieties, as well as the enormous health danger they provide. The first dosage helps your immune system develop, while the second enhances your infection resistance [16]. If we just have one dosage in our high-risk group, those who will have an influence on the health-care system, and we obtain lesser efficacy there, we'll be in danger. When immunity and clinical protection in a population has fallen below a rate regarded sufficient, booster doses (now one or two doses of COVID-19 vaccine depending on the product) are given. A booster dose's goal is to restore vaccination efficacy.

Factors to be considered

Waning immunity: There are yet to be established immunological correlations of protection or duration of protection. In the short term, studies have found a link between vaccine efficacy/effectiveness against symptomatic disease and mean neutralising antibody titers induced by those vaccines, but it is not clear whether decreasing titers over a period of time since vaccination are indicator of decreasing vaccine effectiveness, especially against VoCs [17]. While studies on vaccine immunogenicity imply that antibodies remain for at least six months, neutralising antibodies has been observed to fade. While there is less protection against SARS-CoV-2 infections, there is still protection against serious diseases.

Vaccine effectiveness: Most studies on duration of protection are observational studies. Although often difficult to interpret due to confounding factors 4, emerging data consistently show a decline in vaccine effectiveness against infection and milder forms of COVID-19 over time. With respect to duration of protection against disease requiring hospitalization, current data show an overall continued high level of effectiveness, although data vary across age-groups, target populations, and products [17]. The vast majority of current infections are observed in unvaccinated populations, and if breakthrough infections occur in

vaccinated persons, they are in most cases not more severe than those seen in unvaccinated persons [6].

Global vaccine supply and global and national equity

Decisions on whether or not to add a second dose to a national immunisation programme should be based on the quality of evidence about the need for these doses, their safety and efficacy, and vaccine availability across the world. Giving booster doses to a huge number of individuals while many have yet to get their initial dose goes against the concept of national and global equality. Prioritizing booster doses above speed and breadth in the initial dose coverage might jeopardise global pandemic mitigation efforts, with major health, social, and economic ramifications for individuals [18].

CONCLUSION

Clinical experiments first revealed the advantages of priming with COVID-19 vaccinations. The immunological responses of persons who received one or two vaccination doses were compared in early investigations of the now licenced COVID-19 vaccines. People exhibited higher levels of antibodies to combat the virus after the second dosage, indicating that taking more than one dose would likely boost vaccination efficacy. Only getting one dosage isn't as effective as getting the complete second dose. The second dosage is strongly suggested due to the virus's propagation and the considerable health danger it poses. In India, primary COVID vaccines such as Bharat Biotech's Covaxin and the Serum Institute of India's Covishield should be given in two doses. Even if you've already had the first dose of the vaccination, you must get the second injection.

The second dosage of Covishield can be administered after a 12 weeks hiatus, but the second dose of Covaxin can be taken after 4-6 weeks following the first dose. Only first dose of COVID vaccination gives partial protection, which shows you are at risk of contracting serious COVID infections. Given the new variants that have emerged, it is even more important that you take your vaccination process seriously and follow all of the health officials' guidelines. This strategy of giving patients numerous doses is referred to as "prime-boosting" by immunologists. Essentially, you stimulate the immune system by teaching it what it's searching for with the first vaccine. The immune system is then assaulted again once it has had time to respond to the priming. When the immunological response learnt the first time is put into practise on the second encounter, it is amplified. There's another reason to obtain your second dosage now: new coronavirus strains that are causing worry. These are coronavirus strains with genetic changes that make them more transmissible, less resistant to vaccination protection, more difficult to detect, or cause more severe sickness. Getting your second injection and being completely vaccinated not only reduces your odds of developing COVID-19, but it also assures little to no symptoms if you do. Aside from that, recent findings have revealed that those who have received all of their vaccines are not more vulnerable to

the Delta and Delta plus variants than those who have had only one dose. The second vaccination injection is the most crucial since it delivers complete viral protection. Furthermore, receiving first and second dose of the COVID vaccination can help us acquire herd immunity, which can help us limit the virus's spread in communities. The importance of the second dosage can be attributed to a variety of factors. For starters, it's critical to safeguard oneself against contracting the virus. However, it's equally critical to avoid transmitting it to others.

A vaccine is for our own protection against coronavirus disease. Vaccination against COVID-19 advised for everyone. It is very crucial to take the second dose of COVID vaccine on scheduled time since it increases our immunity on another level. Despite the fact that patients who done with their first dose of the vaccination shows modest protection against symptomatic COVID-19 infection, the immune response to a single dose of the vaccine is not very much strong. What happens if everyone gets the same dose of vaccine is not known. People vaccinated with only single dose of vaccine are less immune against COVID-19 infection, increasing the chance of SARS-CoV-2, the virus that causes COVID-19, becoming vaccine-resistant. There is also a chance that people who just get one dosage will think that they will not get COVID-19 infection and won't need to be treated again. There is no proof that a single dosage of COVID-19 is effective at preventing infection over the long term.

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