

## Who should or shouldn't take the COVID-19 vaccine

Jyoti Sharma / Sanjeev Kumar Varshney

New Delhi, May 18 (India Science Wire): More than 1.23 crore people have registered till the first week of May 2021 through Co-Win and Arogya Setu platforms in response to the opening of online registrations for Covid-19 vaccination for those who are above 18. A total of about 150 million shots have been given to date. Though, these cover only 11.5% of India's population. The first phase of vaccination in India covered the frontline workers and the citizens' over-45s. It has now been opened for all above 18 years in India from May 1. Demand for vaccination has suddenly grown many folds after the devastating second wave of Covid-19. But there are many myths and misconceptions about the COVID-19 vaccine who should or should not take it. There are several categories of people who are quite not clear if they should go for vaccination. This article describes the scientific basis if they should go for it or defer.

**Should pregnant women be vaccinated?** Dr. Soumya Swaminathan, chief scientist at the World Health Organisation (WHO) has stated that *“globally, it has been observed that pregnant women are at a higher risk of complications and that of premature birth because they already have a low respiratory reserve and therefore vaccinating them is perhaps the best option available.”* A recent study published in the American Journal of Obstetrics and Gynaecology revealed that vaccine-induced immune responses were significantly greater than the response to natural infection and immune transfer to neonates occurred via placenta and breastmilk. The American College of Obstetricians and Gynaecologists (ACOG) also recommends that the COVID-19 vaccine should not be withheld from pregnant or breastfeeding individuals. The COVID-19 vaccine is not a live virus vaccine, the mRNA present in the vaccine degraded quickly and cannot interfere with cell functions.

Pregnant women may receive the vaccine if they are at high risk of exposure to the COVID-19 virus or very likely to be in contact with people with COVID-19. Though, Covid-19 vaccines currently being used in India are not recommended by the Indian health authorities for pregnant women.

**Can breastfeeding (lactating) women get the vaccine?** As per the WHO recommendations, breastfeeding women be vaccinated against COVID-19 and continue breastfeeding after vaccination. Currently, there are no data on the safety of COVID-19 vaccines in breastfeeding people or on the effects of mRNA vaccines on the breastfed infant or milk production/excretion. Though, early studies demonstrate secretion of the antibodies in the breastmilk which may protect the breastfed infant. The Centers for Disease Control and Prevention (CDC), USA stated that COVID-19 vaccines are non-replicating vaccines. They can produce immune responses but do not reproduce inside host cells.

**People who would like to have a baby:** There is currently no evidence that any vaccines, including COVID-19 vaccines, cause fertility problems. There is no evidence showing a link between menstruation, fertility, and vaccines. Anyone can take the vaccine during her period cycle also. The clinical studies are undergoing for any possible side effects and the

findings will be reported as they become available. At present, all future parents are encouraged to take the COVID-19 vaccine.

**People with allergies:** Yes, people with severe allergic reactions to foods, oral medications, latex, pets, insects, and environmental triggers may get vaccinated. Though, people with a severe allergic reaction (anaphylaxis) to any component of the COVID-19 vaccine or injectable (intramuscular or intravenous) medication should NOT receive the vaccine.

**People with chronic disease or suppressed immune systems?** The vaccine is safe and effective in people with chronic diseases including hypertension, diabetes, asthma, pulmonary, liver, or kidney disease, as well as chronic infections that are stable and controlled. Though specific efficacy and safety data are not yet available for people with immunosuppression or autoimmune conditions. Only limited clinical data is available against HIV- infected persons with the well-controlled disease. This group of people should be counselled by health professionals on the potential for reduced immune responses before vaccination.

**Frail and elderly people:** The frail and elderly are at risk of becoming very sick from COVID-19 that is why they can be severely affected by even mild illness. They should be carefully considered on a case-by-case basis for the COVID-19 vaccines.

**Those who already had COVID and recovered:** The answer is yes as the experts do not yet know how long you are protected from getting sick again after recovering from COVID-19. However, people who were treated for COVID-19 with monoclonal antibodies or convalescent plasma should wait 90 days before getting a COVID-19 vaccine.

**People who recently diagnosed with COVID-19:** Yes, the person who was recently diagnosed with COVID-19 can get the first dose four weeks after onset of symptoms or a positive test (whichever is earlier). The second dose may be received after the completion of the isolation period. The isolation period may be counted for 10 days or 10 days plus 24 hours with no fever and an improvement in symptoms.

**Children below 18 years:** Recently, Pfizer's COVID-19 vaccine is authorized for use for ages 12 to 15 in Canada and the United States. Children may receive the two shots of the same dose as an adult. This authorization comes at a time when people under the age of 18 account for 1 of every 5 newly reported coronavirus infections in the USA. In the vaccine clinical trial, there were no cases of COVID-19 infection in the children who received the vaccine and had high levels of antibodies in their blood.

**Who should not take the vaccine:** Any people who have an allergy to any component of the vaccine should not take it. To date, the vaccine has only been recommended for children in the USA. However, currently, Indian health authorities do not recommend vaccination of children below 18 years of age, even if they belong to a high-risk group. People with thrombocytopenia (low blood platelet count) should also take extra caution while taking the vaccination.

**Preventive measures to be taken after vaccination:** The fully vaccinated people can be with other unvaccinated people from one household and may gather indoors to other vaccinated people without wearing masks. It is also essential that fully vaccinated people should continue to wear masks and stay 6 feet apart from other people in public or visiting with unvaccinated people from multiple households.

Vaccines will work with the immune system so it will be ready to fight the virus after getting exposure. Many studies and evidence support that fully vaccinated people are less likely to be infected without showing symptoms (called asymptomatic infection) and potentially less likely to spread the virus that causes COVID-19 to others. However, further investigation is ongoing.

All adults should take the vaccination on the individual's conditions and risk of exposure. Others having any doubt should consult their health practitioner before taking the vaccination. The head of the WHO urged wealthier nations to postpone their plans to give the COVID-19 vaccines to children and teenagers. Priorities should be given to the health workers, people at high risk, old people above 65 years of age, and low-income countries. Wearing masks and staying 6 feet apart from others would help to reduce the chance of being exposed to the virus or spreading it to others. (India Science Wire)

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