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SPUTNIK LIGHT TO BOOST VACCINATION COVERAGE





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By: PRINCE MISHRA



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1B, 2nd Floor, Pusa Road Karol Bagh, New Delhi-110005, (Adjacent to Karol Bagh Metro Gate No. 8)







SPUTNIK LIGHT TO BOOST VACCINATION COVERAGE

INTRODUCTION

- In a move that will further strengthen the global fight against the coronavirus pandemic, Russia authorised the one-shot Sputnik Light version of its Covid vaccine for use.
- The Sputnik Light vaccine demonstrated 79.4 per cent efficacy compared to 91.6 per cent for the two-shot Sputnik V.
- According to Russia's health ministry, Gamaleya National Research Center of Epidemiology and Microbiology, and the Russian Direct Investment Fund – who are the developers of the vaccine, the data for Sputnik Light was taken 28 days after it was administered as part of the country's mass vaccination program between December 5th and April 15th.
- They said the vaccine has proven effective against all new strains of coronavirus. A single dose of the vaccine will cost under 10 dollars.
- The one-shot regimen will allow for the immunization of a larger number of people in a shorter period of time.
- Russia has named India, South Korea and China among the countries that will produce Sputnik Light.

On this edition of The Big picture, we will discuss with experts in detail about this one-shot Sputnik Light vaccine and how it will boost global vaccination coverage against coronavirus.

EDITED EXCERPTS FROM THE DEBATE



How efficient is Sputnik Light?

 Sputnik Light demonstrated 79.4% efficacy, according to an analysis of data gathered 28 days after the shot was administered as part of Russia's mass vaccination programme between December 2020 and April 2021.



Phase I and II of the safety and immunogenicity study of Sputnik Light had demonstrated that it can elicit the development of antigen specific IgG antibodies in 96.9% of individuals on the 28th day after vaccination, and that elicits the development of virus neutralising antibodies in 91.67% of individuals on the 28th day after immunisation.



Production capacity

- Essentially it will use the same production capacity that exists. India is the leading production hub for Sputnik V.
- Russian Direct Investment Fund (RDIF) has reached agreements with the leading pharmaceutical companies in the country such as Gland Pharma, Hetero Biopharma, Panacea Biotec, Stelis Biopharma, Virchow Biotech aimed at production of more than 850 million doses per year.
- About half of these doses can be used as a single dose vaccine.
- Dmitriev promised that Sputnik Light will cover all the existing mutations within the next two months.



What about Sputnik V?

- India has already approved Russia's two-dose vaccine Sputnik V.
- However, it is yet to be rolled out for people.
- The Drugs Controller General of India (DCGI) **approved the Sputnik V** in April after Dr Reddy's Laboratories conducted a successful bridge trial.
- Russia will develop the vaccine, and Dr Reddy's will sell the vaccine in India.
- The first batch of 1.5 lakh doses of the vaccine has already arrived in Hyderabad, and another batch (with an identical amount of vaccines) is expected in a few days.

CONCLUSION

While boosting efficacy when taken in combination with other vaccines, Sputnik Light offers strong value in initial vaccination and re-vaccination. Furthermore, it can also be used as a booster jab for other vaccines.

VALUE ADDITION

What exactly is Sputnik Light vaccine?

- Sputnik Light is nothing but the first shot or dose of Sputnik V vaccine.
- The single-dose regiment allows for immunisation of a larger number of people in a shorter time frame, furthering the fight against the pandemic during the acute phase



Sputnik V Vaccine

- Sputnik V is a **two-dose** vaccine made from:
 - ➤ recombinant adenovirus 26 (Ad26)
 - ▶ adenovirus 5 (Ad5) (Common cold-causing viruses)
- The first dose (Ad26) is the prime vaccine and the second (Ad5) is the booster shot.
- The Sputnik Light vaccine is made from Ad26, which is the first part of the Sputnik V vaccine.
- The Sputnik V vaccine works in a similar way to others developed by Oxford/AstraZeneca and Janssen/Johnson & Johnson.
- It uses a cold-type virus, engineered to be harmless, as a carrier to deliver a small fragment of the coronavirus to the body.
- Sputnik V is a two-dose vaccine taken at a gap of three weeks.
- The unique feature of it is that the antigens in the first and second dose are different from each other. In other vaccines, both doses are the same.

How some of the COVID vaccines compare?

How some of the Covid-19 vaccines compare						
Company	Doses	Storage				
RNA						
Pfizer (BioNTech)	11	-80 to -60°C (6 months) and 2 to 8°C (for up to 5 days)				
Moderna Moderna		-25 to -15°C (6 months) and 2 to 8°C (for 30 days)				
Viral vector						
Oxford-AstraZeneca	11	2 to 8°C (6 months)				
Sputnik V (Gamaleya)		-18.5°C (liquid form) 2 to 8°C (dry form)				
Johnson & Johnson (Janssen)		2 to 8°C (3 months)				



Company	Doses	Storage			
Inactivated virus				III I	
CoronaVac (Sinovac)	FF	1	2 to 8°C		
Sinopharm		Ī	2 to 8°C		
Covaxin (Bharat Biotech)	FF	Ī	2 to 8°C		
Protein-based					
Novavax		1	2 to 8°C		
Source: Wellcome Trust, BBC research				BBC	



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