



# Incovacc, Intranasal Covid-19 Vaccine

## Why in News?

Bharat Biotech's intranasal vaccine, [BBV154 or Incovacc](#) is the world's first intranasal vaccine to be approved as a booster dose for [Covid-19](#).

## What is Incovacc?

- **About:**
  - The nasal vaccine is a **recombinant replication-deficient adenovirus vectored vaccine** with a pre-fusion stabilized spike protein.
- **Significance:**
  - With the vaccine **being delivered through a nasal spray**, it will **do away with the need for needles and syringes** currently required for all the [Covid-19 vaccines](#) available.
  - It will also **reduce dependence on personnel trained to give shots**.
  - Incovacc is **effective for [Omicron variants](#)** that replicate in the upper respiratory tract before entering the lungs.
- **Mechanism:**
  - As the vaccine is given nasally, it **triggers an immune response in the mucosal membrane**.
  - BBV154 may **produce local antibodies in the upper respiratory tract** which may provide the potential to reduce infection and transmission.
  - Since the nasal vaccine **gives local immunity (in the nose where the virus first enters)**, it can be said that it is more likely to be effective at preventing **transmission** than the current generation of vaccines we have.
- **Booster Dose:**
  - This is the **second heterologous booster** to be included in the vaccination programme after [Corbevax](#).
    - In homologous boosting, a person is injected with the same vaccine that was used for the two previous doses. In heterologous boosting, **a person is injected with a different vaccine from that was used for the primary dose**.
  - It has **previously received the nod** to be used as a **primary dose**.
  - Incovacc will be available as a booster dose only for those **above 18 years of age who have got 2 doses of either [Covaxin or Covishield](#)**.
    - It will **not be administered to any other category, for now, including those who have already taken booster dose**.
    - **Those who have taken Covishield and Covaxin can now take this nasal vaccine** as a heterologous booster dose.

## UPSC Civil Services Examination, Previous Year Questions (PYQs)

**Q. In the context of vaccines manufactured to prevent COVID-19 pandemic, consider the following statements: (2022)**

1. The Serum Institute of India produced COVID-19 vaccine named Covishield using mRNA platform.

2. Sputnik V vaccine is manufactured using vector-based platform.
3. COVAXIN is an inactivated pathogen-based vaccine.

**Which of the statements given above are correct?**

- (a) 1 and 2 only  
(b) 2 and 3 only  
(c) 1 and 3 only  
(d) 1, 2 and 3

**Ans: (b)**

**Exp:**

- COVISHIELD vaccine is based on the platform which uses a recombinant, replication-deficient chimpanzee adenovirus vector encoding the SARS-CoV-2 Spike (S) glycoprotein. Following administration, the genetic material of part of coronavirus is expressed which stimulates an immune response. **Hence, statement 1 is not correct.**
- Sputnik V is the world's first registered vaccine based on a well-studied human adenovirus vector platform. It has been approved for use in 71 countries with a total population of 4 billion people. The vaccine is named after the first Soviet space satellite. The vaccine's efficacy is 97.6%, based on the analysis of data on the incidence of coronavirus among Russians vaccinated with both vaccine components between December 5, 2020 and March 31, 2021. **Hence, statement 2 is correct.**
- Covaxin is an inactivated viral vaccine. This vaccine is developed with Whole-Virion Inactivated Vero Cell-derived technology. They contain inactivated viruses, which cannot infect a person but still can teach the immune system to prepare a defence mechanism against the active virus. **Hence, statement 3 is correct.**
- **Hence, option (b) is correct.**

**Source: IE**

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