

# Sputnik V Vaccine

September 18, 2020

Russia has begun releasing its coronavirus vaccine, Sputnik V, to the general public as developers prepare to conduct large-scale clinical trials while administering the shot to civilians. It is the **first country to grant approval for a COVID-19 vaccine.**

## Features of the Vaccine

- The Sputnik V is a vaccine **developed by the Gamaleya research institute in coordination with the Russian defence ministry.**
- It is **based on a proven vaccine against adenovirus – the common cold.**
- The vaccine is expected to provide immunity from SARS-CoV-2, the virus that causes COVID-19, for up to two years.
- The vaccine is **administered in two doses and consists of two serotypes of human adenovirus**, each carrying an S-antigen of the new coronavirus, which enter human cells and produce an immune response.
- It is a so-called **viral vector vaccine**, meaning it employs another virus to carry the DNA encoding of the needed immune response into cells.

## Issues With the Vaccine

- Scientists in Russia and elsewhere have questioned the **speed of the development and lack of transparency.**
- The Sputnik V – in homage to the world's first satellite launched by the Soviet Union – has **not yet completed its phase-three trial**, which involves wide-scale testing with thousands of participants.
- Phase 3 trial, which involves tens of thousands of people and can take months, is the only way to prove if an experimental vaccine is safe and really works. By

comparison, **vaccines entering final-stage testing in the U.S. require studies of 30,000 people each.**

- Experts have warned that vaccines that are not properly tested can cause harm in many ways – from harming health to creating a false sense of security or undermining trust in vaccinations.

### Effectiveness of Vaccination

- A small study from China had shown in June that antibody levels in up to 40% of asymptomatic patients of COVID-19 had dropped drastically eight weeks after having been released into the blood.
- It indicated that they may be susceptible to reinfection and even that vaccination may not work as intended.
- However, an Icelandic study showed that around 90% of some 1,800 patients who had recovered from COVID-19 had demonstrable levels of antibodies for over two months after infection.