



Antibody Kits for COVID-19

Why in News

Recently, the Indian Council of Medical Research (ICMR) has invited manufacturers to supply **5 lakh antibody kits** for diagnosis of COVID-19 infection.

- The antibody test will help in screening suspected patients.

Key Points

▪ The Antibody Test

- The antibody test for **COVID-19** will act as a **screening process** that will give quick results in a few hours.
- The antibody test detects the body's response to the virus. It gives an indication that a person has been exposed to the virus.
- If the test is positive, the swab is collected and an Ribonucleic Acid (RNA) test is done using the Polymerase Chain Reaction (PCR) kit. Therefore, this is a **two-stage process**.
- However, the antibody test **does not not definitely indicate that a person is infected with COVID-19 infection**. It is **only for screening**.

▪ Currently, India is **only conducting the conventional RT-PCR test (Reverse Transcription Polymerase Chain Reaction)**.

▪ Antibody Kits vs RT-PCR Test

- RT-PCR test detects the **virus genetic material, which is the RNA**.
- The antibody test detects the body's response to the virus.
- RT-PCR provides direct evidence whereas antibody kits provide the indirect evidence.

▪ Need for Antibody Kits

- **Shortage of the PCR kits** and thus the test is complicated, expensive and time-consuming.
 - The antibody test will be where a large number of people are being quarantined and where everybody cannot undergo an RNA test.
- **Results of Testing in South Korea**
 - The antibody test was done in South Korea, one of the few countries which has been able to flatten the pandemic curve.
 - In South Korea, people with a history of travel and contact are screened using the antibody kit.
 - Then, a large number of suspected patients were being quarantined in the country through contact tracing of just a single patient.

Ribonucleic Acid

- RNA is an important **biological macromolecule** that is present in all biological cells.
- It is principally involved in the **synthesis of proteins, carrying the messenger instructions**

from Deoxyribonucleic acid (DNA), which itself contains the genetic instructions required for the development and maintenance of life.

- In some **viruses, RNA, rather than DNA, carries genetic information.**

Contract Tracing

- Contact tracing is the process of identifying, assessing, and managing people who have been exposed to a disease to prevent transmission.

Indian Council of Medical Research

- Indian Council of Medical Research (ICMR) is the **apex body in India for the formulation, coordination and promotion of biomedical research.**
- Its mandate is to **conduct, coordinate and implement medical research** for the benefit of the Society; translating medical innovations into products/processes and introducing them into the public health system.
- It is funded by the Government of India through the **Department of Health Research, Ministry of Health & Family Welfare.**

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