

# **Topic Wise content**

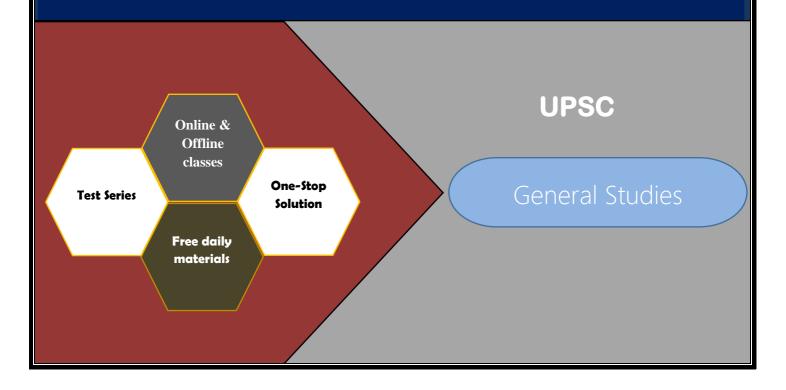


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# Molnupiravir: A Drug for Covid-19

Notes for civil services preparation





## Molnupiravir: A Drug for Covid-19

Recently, it is claimed that Molnupiravir, an oral drug, can cut the risk of hospitalisation in **Covid-19** patients by half, in phase 3 trials.

• In India, the Optimus Group recently announced the results of phase 3 clinical trials, which found 91.5% of patients given the drug tested **RT-PCR** (**Reverse Transcription Polymerase Chain Reaction**) negative.

# **Key Points**

#### Molnupiravir:

- It belongs to a class of **broad spectrum antiviral drugs callednucleoside analogues**.
- They act by interfering with the function of **viral RNA** (**Ribonucleic Acids**) **polymerases** which are enzymes thatmake new viral RNA in infected cells.
- RNA is a polymer of ribonucleotides and 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.
- It works by causing viruses to make errors when copying their own RNA, introducing mutations that inhibit replication.
- It was initially invented as a drug for the influenza virus.

## **Mechanism:**

- These drugs work by preventing the process of replication of the virus inside human cells.
- A virus is a biological agent that can self-replicate inside a host cell. The infected cells by viruses may produce thousands of newcopies of the original virus at an extraordinary rate.
- It **alters critical enzymes** that were necessary to the virus for replicating in the human body cells.
- As of now, the **Emergency Use Authorization is awaited** for the drug but currently, it can be administered as a pill in a **5-day regimen.**

