

Anti- COVID drug 2-deoxy-D-Glucose (2-DG)

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In news

Anti- COVID drug 2-deoxy-D-Glucose (2-DG) has been launched commercially.

About Deoxy-D-Glucose (2-DG)

- The anti-Covid therapeutic application of 2-DG has **been jointly developed by:**
 - The Institute of Nuclear Medicine and Allied Sciences.
 - Defence Research and Development Organisation (DRDO).
 - Dr Reddy's Laboratories.
- It received the nod(emergency use approval) of the Drug Controller General of India's on May 1, 2021
- It can be administered only upon prescription to hospitalised moderate to severe Covid-19 patients as an additional therapy to the existing care, under the supervision of a qualified physician.
- The drug will be supplied to both Government and private Covid-19 health facilities across India.
- Each sachet of 2-DG has been fixed at Rs 990 per sachet. The government institutions will receive at a subsidized rate.
- The drug is available in powder form in a sachet, and can be taken orally after dissolving in water
- The drug, 2-DB will be sold commercially under the brands 2DGTM.
- According to Dr Reddy's Laboratories, the drug has a purity of 99.5 percent.
- Its selective accumulation in virally infected cells

makes this drug unique.

- The drug reportedly reduces a patient's average recovery time by two and a half days and oxygen demand by up to 40 per cent.
- According to the government, 2-DG being a generic molecule and an analogue of glucose, it can be easily produced and made available in large quantities.

Who cannot use it(restricted usage)?

The 2DG should not be given to pregnant and lactating women and patients below 18 years.

The uncontrolled diabetes, severe cardiac problem, ARDS, severe hepatic and renal impairment patients have not been studied yet with 2DG, and hence caution should be exercised.

How does it work?

2-DG, made of the generic molecule along with an analogue of glucose, accumulates in the virus-infected cells of the body and prevents the invasion of the virus from one cell to another. Viral synthesis and energy production of the virus is cut short, stopping it from growing faster helping Covid patients to no longer depend on supplemental oxygen and recover faster.