



## IIT-B Designs UV Sanitiser

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### Why in News

Recently, the **Industrial Design Centre (IDC)** of **Indian Institute of Technology (IIT), Bombay** has developed a **portable UltraViolet (UV) sanitiser**.

It can sterilise wallets, purses and other small items that are passed on from hand to hand.

### Key Points

- The UV sanitiser has been made **using stainless steel kitchen containers and aluminium mesh** and is in the **proof-of-concept stage** right now.
- It's design is based on a study published in a journal PubMed, by the US National Library of Medicine.
  - The study demonstrates how **ultraviolet C Light can inactivate Severe Acute Respiratory Syndrome Coronavirus, Crimean-Congo Haemorrhagic Fever (CCHF) Virus and Nipah Virus.**
- **Objects might be carriers of the viruses** and sanitising gel cannot be used on every object humans come in contact with like papers, files, currency notes and phones.
- **Other contributions by IDC:**
  - IDC is also working on projects on sanitising bigger surfaces and working on different models.
  - The institute has also been making its own **cotton masks**, which are **double-layered and washable**.
  - IDC has also **collaborated with a company called Applied Systems** to **manufacture face shields using helmet visors**.
  - IIT also **developed apps** to help **keep quarantine violations in check**.

### Crimean-Congo Haemorrhagic Fever

- It is a **viral haemorrhagic fever** usually transmitted by ticks.

- It can also be **contracted through contact with viraemic animal tissues** (animal tissue where the virus has entered the bloodstream) during and immediately post-slaughter of animals.
- CCHF outbreaks constitute a threat to public health services as the virus can lead to **epidemics**, with a **high case fatality ratio** (10-40%).
- CCHF is endemic in all of Africa, the Balkans, the Middle East and in Asia.
- **Symptoms:**
  - Fever, muscle ache, dizziness, neck pain, backache, headache, sore eyes and photophobia (sensitivity to light).
  - There may be nausea, vomiting, diarrhoea, abdominal pain and sore throat early on, followed by sharp mood swings, confusion, depression and liver enlargement.
- **Treatment:**
  - General supportive care with treatment of symptoms is the main approach to managing CCHF in people.
  - The **antiviral drug ribavirin** has been used to treat CCHF infection with apparent benefit. Both oral and intravenous formulations seem to be effective.
  - There are **no vaccines widely available for human or animal use**. In the absence of a vaccine, the only way to reduce infection in people is by raising awareness of the risk factors and educating people about the measures they can take to reduce exposure to the virus.

**Source: IE**