

Ricin Poison

Prelims: Current events of national and international importance | Science

Why in news?

The Gujarat Anti-Terrorist Squad arrested three men for allegedly trying to produce a lethal chemical compound called Ricin.

- **Source** - Ricin is essentially a protein that can be extracted from the **castor bean** (***extremely lethal—just 1 mg in food can kill an adult***).
 - Castor is largely grown industrially for the production of castor oil in countries such as India, Brazil, and China.
 - The seeds typically contain 30% to 60% castor oil, with ricin accounting for **1% to 5%** of the weight of the solid residue.
 - The plant is widely available, and the poison is not very difficult to extract from the seeds.

*Ricin - listed as **Schedule 1 toxin** under the **Chemical Weapons Convention** — substances that pose the highest risk of being used as a chemical weapon, this list also includes sarin gas and blister agents such as mustard gas.*

- **Working** - It works by binding to ribosomes and halting protein synthesis in cells, depending on which organs absorb it, this can lead to multi-organ failure and death.
- **Symptoms** - Ingesting ricin can lead to severe vomiting and diarrhoea - which can become bloody, low blood pressure, hallucinations and seizures, multi-organ failure, and death.
- **Treatment** - There is **no antidote or specific treatment** for ricin poisoning, and the treatment is symptomatic.
- **Challenge** - Diagnosing ricin poisoning, a significant challenge because it is **so uncommon**, doctors generally do not consider it as a possibility during a patient's initial visit.
- **Historical use** -

- **Military Interest** - Studied by the U.S. in WWI and WWII, Iraq attempted to develop it as an inhalable agent in 1980.
- **Criminal Use** - Assassination of Bulgarian journalist Georgi Markov in London (1978).

Reference

[Indian Express | Ricin poison 'terror plot'](#)

