

3. Sodium Hypochlorite: The Chemical in the Spray

Prelims Syllabus: Science and Technology

Mains Syllabus: GS-II Government policies and interventions for development in various sectors and issues arising out of their Design and Implementation

Context:

- Recently, in various places, migrant workers who returned from Delhi were showered with a disinfectant, apparently to sanitise them. The chemical in the spray was a sodium Hypochlorite Solution.

Sodium Hypochlorite and its Uses:

- Sodium hypochlorite is commonly used as a bleaching agent, and also to sanitise Swimming Pools.
- As a common bleaching agent, sodium hypochlorite is used for a variety of cleaning and disinfecting purposes.
- A normal household bleach usually is a 2-10% sodium hypochlorite solution.
- At a much lower 0.25-0.5%, this chemical is used to treat skin wounds like cuts or scrapes.
- An even weaker solution (0.05%) is sometimes used as a handwash.
- It releases chlorine, which is a popularly used disinfectant.
- However, large quantities of chlorine can also be Harmful.

Is the Chemical Safe?

- Sodium hypochlorite is corrosive and is meant largely to clean hard surfaces.
- It is not recommended to be used on human beings, certainly not as a spray or shower. Even a 0.05% solution could be very harmful for the eyes.
- A 1% solution can cause damage to the skin of anyone who comes in contact with it.
- It can cause itching or burning and is not approved to be used on humans
- If it gets inside the body, it can cause serious harm to Lungs.

Does the Chemical get rid of the Novel Coronavirus?

- The WHO recommends homemade bleach solutions of about 2-10% concentration to clean hard surfaces to clear them of any presence of the novel coronavirus.
- Cleaning hard surfaces with this solution can disinfect them not just from novel coronavirus but also help prevent flu, food borne illnesses, and more.

A Cause for Concern:

- In Delhi, officials have reported that a 1% sodium hypochlorite solution was used in the spray applied on migrant workers' belongings.
- The concentration in other places, including those used on buildings or vehicles, is not very clear.
- The solution should always be used in a well-ventilated area, while wearing gloves and protective equipment.
- These instances of spraying sodium hypochlorite on migrants, could be harmful to them, particularly, the children.

