

3. Controlled Human Infection Model (CHIM)

Prelims: Science & Technology- Biotechnology

Mains: GS-III- Awareness in the fields of IT, Space, Computers, Robotics, Nano-Technology, Bio-Technology

Why in News?

- ▶▶ The Department of Biotechnology (DBT) is close to finalising three projects involving Indian and European scientists to develop new influenza vaccines using a Controlled Human Infection Model (CHIM).

CHIM:

- ▶▶ In a Controlled Human Infection Model (CHIM) study, a well-characterized strain of an infectious agent is given to carefully select adult volunteers.
- ▶▶ This is done in order to better understand human diseases, how they spread, and find new ways to prevent and treat them.
- ▶▶ These studies play a vital role in helping to develop vaccines for infectious diseases.
- ▶▶ Such studies, which are being employed in vaccine development in the US, the UK and Kenya, are being considered in India.

Significance:

- ▶▶ A CHIM approach will speed up the process whereby scientists can quantify whether potential vaccine candidates can be effective in people and identify the factors that determine why some vaccinated people fall sick and others do not.
- ▶▶ CHIM models help vaccine-makers decide whether they should go ahead with investing in expensive trials.

Concerns:

- ▶▶ The risk in such trials is that intentionally infecting healthy people with an active virus and causing them to be sick is against medical ethics.
- ▶▶ It also involves putting human lives in danger.