

Nano-pharmaceuticals

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Why in news?

Evaluation recommendations created by DBT, ICMR and Center Drug Standard Control Organization (CDSCO) for nano-pharmaceuticals in India have been released.

What are Nano-pharmaceuticals?

- An area where the **sizes of drug particles or therapeutic delivery systems function in nanoscale** is the emergent field of nanopharmaceuticals.
- They come from the use of nanotechnology in medical therapy.
- The **limitation of conventional therapeutics**, which allows the targeting of active agents at the specific site of illness, is being solved by nanopharmaceuticals.
- Such nanopharmaceutical precision targets **minimize toxic systemic side effects** which lead to improved patient adherence.

Benefits:

- It brings a revolution in treatment strategies as drugs and therapeutic molecules are delivered specifically. In many conditions of disease, they offer greater efficacy and less toxicity. Particularly in cancer treatment they will be very useful.
- The guiding principles cover all aspects of testing from identifying and categorizing nano-pharmaceuticals to the current clinical collection of pharmacovigilance.
- It will give new and more affordable innovators and drug manufacturers an important boost to optimize their research and develop medicines.