

Drug Delivery

- Drug delivery is the method or process of administering pharmaceutical compound to achieve a therapeutic effect in humans or animals.

- Most common methods of delivery include the preferred non-invasive peroral (through the mouth), topical (skin), transmucosal (nasal, buccal, sublingual, vaginal, ocular and rectal) and inhalation routes.

Drug Delivery

- Many medications such as peptide and protein, antibody, vaccine and gene based drugs, in general may not be administered using these routes because they might be susceptible to enzymatic degradation or can not be absorbed into the systemic circulation efficiently due to molecular size and charge issues to be therapeutically effective.
- Protein and peptide drugs have to be delivered by injection.

Novel Drug Delivery System

- **“Novel Drug delivery System (NDDS)** refers to the approaches, formulations, technologies, and systems for transporting a pharmaceutical compound in the body as needed to safely achieve its desired therapeutic effects. It may involve scientific site-targeting within the body, or it might involve facilitating systemic pharmacokinetics; in any case, it is typically concerned with both quantity and duration of drug presence”.

Novel Drug Delivery System

- Novel Drug delivery is often approached via a drug's chemical formulation, but it may also involve medical devices or drug-device combination products. Drug delivery is a concept heavily integrated with dosage form and route of administration.

Novel Drug Delivery System

- NDDS is advanced drug delivery system which improves drug potency, control drug release to give a sustained therapeutic effect, provide greater safety, finally it is to target a drug specifically to a desired tissue.

Novel Drug Delivery System

- NDDS is a system for delivery of drug other than conventional drug delivery system.
- NDDS is a combination of advance technique and new dosage forms which are far better than conventional dosage forms.

Why do we need NDDS?

- The conventional dosage forms provide drug release immediately and it causes fluctuation of drug level in blood depending upon dosage form.

Why do we need NDDS?

- Therefore to maintain the drug concentration within therapeutically effective range need novel drug delivery system.