

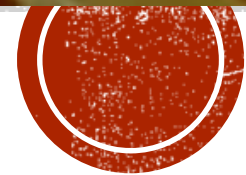


Routes of drug administration and dosage forms

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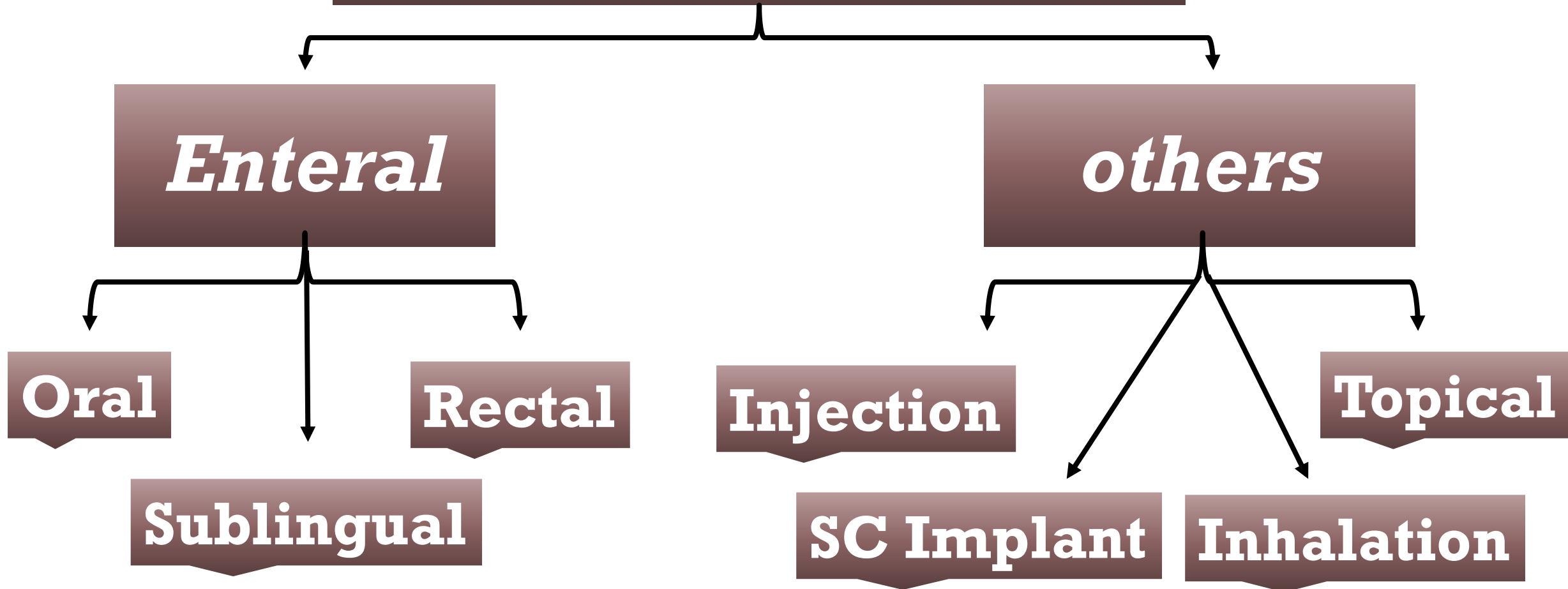
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- Recognize different routes of drug administration.
- Identify difference between cream and ointment.
- Enumerate advantages of TDS.
- Identify dosage forms of topical route.
- Mention dosage form of TDS route.



Routes of Administration



Topical Administration..

❖ Drugs used for topical application to mucous membrane and skin include:

A- Local Effect on Mucous Membranes and Skin:

1. Eye

- Eye drops
- Eye Ointment
- Eye lotion

❑ Preparation for eye should be **STERILE**

❑ **Some systemic absorption occurs when eye drops are given (how?), and can result in side effects (e.g. bronchospasm in asthmatic patients using Timolol eye drops for glaucoma)**

❑ When you put **drops** in your **eye**, the **drops** can become “pumped” into the tear system if you blink. Once in contact with the vascular nasal mucosa, relatively rapid absorption of drugs into the bloodstream can occur.



2. Ear

- Ear drops



3. Vagina

- Vaginal ovule
- Vaginal douche
- Vaginal cream
- Vaginal tablet



4. Nose

- Nasal drops
- Nasal spray



5. Mouth

- Mouth wash
- Gargle
- Lozenge



6. Skin

- **Ointment:** Fatty base + active drug



- **Cream:** Prepared from a base which is miscible with water. Cream is less greasy than ointment.



- **Lotion:** These are aqueous preparations that are applied to the skin without rubbing e.g. calamine lotion.



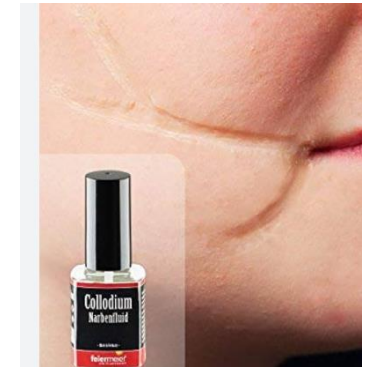
6. Skin

- **Powder:** applied to the skin e.g. talc powder



- **Liniment:** A preparation of an irritant e.g. camphor intended to be applied to the skin by rubbing.

Liniment are usually used for their **counter-irritant effects**



- **Collodion:** A solution of nitrated cellulose in a mixture of ether and alcohol. After evaporation of ether and alcohol a thin flexible layer remains on skin. It is used for protection of wounds or in surgery.



Topical Administration..

❖ Drugs used for topical application to mucous membrane and skin include:

B- Transdermal Delivery System (TDS):

❑ This is application of drugs to the **skin for systemic effects**

e.g., Nitroglycerin adhesive discs (**patches**)

❑ **Advantages of TDS**

- Prolonged blood levels with minimal fluctuations.
- Avoidance of hepatic first-pass elimination.



Wrap Up!



Let's
THiNK



Exercise 1



1) Mention the name of the dosage forms

(A) (B)

2) Mention the route of administration.

3) List Four (4) Advantages of that route.



Exercise 2



1) Mention the Name & Route of administration of the dosage forms:

(A) (B) (C).....

2) Mention ONE (1) Disadvantages for Each route of administration



Exercise 3

Mention the name of that dosage form and its route of administration

List 2 advantage of that route

List 2 disadvantages



Exercise 4

- a- Mention this route of drug administration
- b- Mention 3 advantages of this route.
- c- Disadvantages oh this route.



Exercise 5

- a. Mention this route of drug administration
- b. Regarding this route, could it result in systemic side effects? Explain with example



Exercise 6

- Mention this route of drug administration
- Mention characteristics of drugs given by this route
- Mention 3 advantages of this route



Exercise 7



- Which type of diseases can be transmitted by this route of administration?**
- What is the precaution with this type of Injection?**
- How can you avoid the occurrence of the anaphylactic shock?**



