

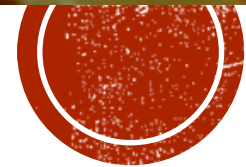


Routes of drug administration and dosage forms

By

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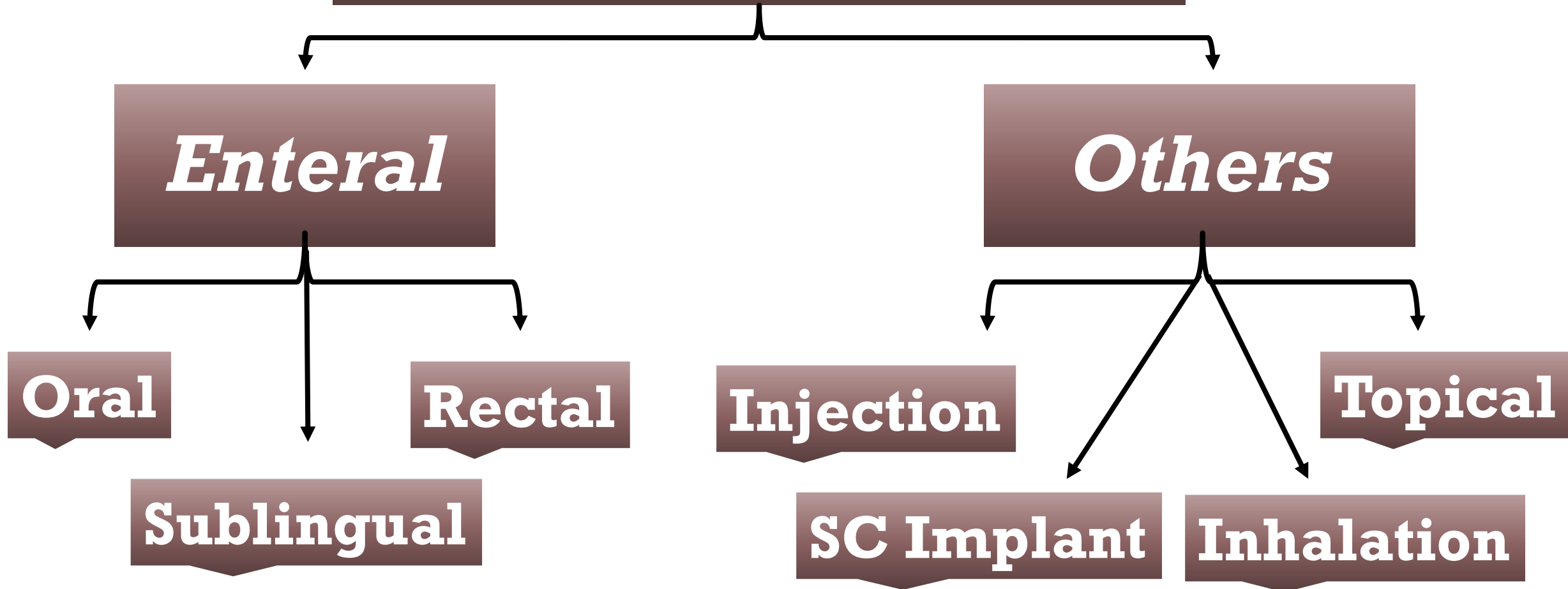
ILOS



- Recognize different routes of drug administration.
- Identify different dosage forms for inhalation.
- Enumerate advantages and disadvantages of inhalation route.
- Analyze advantages and disadvantages of SC implantation route.
- Mention examples of drugs given by SC implantation route .



Routes of Administration



Inhalation..

- ❑ Drugs given by inhalation are absorbed through the thin alveolar epithelium to reach to pulmonary circulation
- ❑ **Advantages:** Drugs given by inhalation are rapidly absorbed from the lungs due to the large surface area and rich blood supply of the alveoli.
- ❑ **Disadvantages:**
 - Inaccurate dosing.
 - Drug may irritate pulmonary epithelium.



Inhalation..

□ Dosage Forms of drugs given by inhalation:

1. Gas: as oxygen, and nitrous oxide (general anesthetic)



2. Volatile liquid (vapor)
halothane (general anesthetic)



Inhalation..

❑ Dosage Forms of drugs given by inhalation:

3. Solution

- ❑ Administered as aerosol by means of a nebulizer or atomizer e.g. salbutamol (bronchodilator).
- ❑ Aerosols provide high local concentration for action on bronchi, minimizing systemic effects.

4. Finely micronized powder

- ❑ Disodium cromoglycate used in prophylaxis of bronchial asthma given by a special inhaling device called spinhaler.



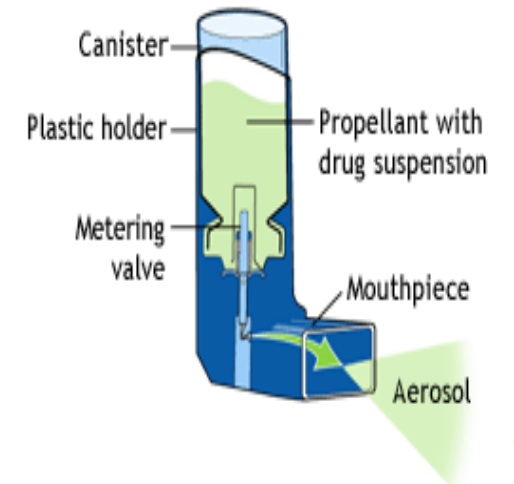
Tools for inhalation



Discus



Turbuhaler





Don't forget to advice your patient to **rinse mouth with water** especially **after inhaling steroids** to prevent deposition of particles in oral cavity , reducing the incidence of **oropharyngeal candidiasis** and **hoarseness of voice.**

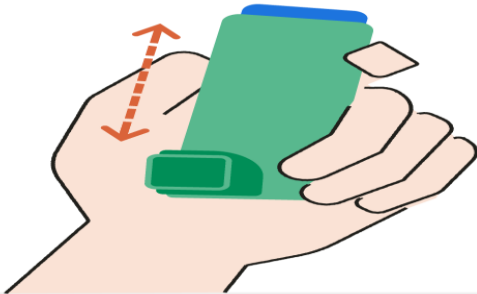


How to Use an Inhaler

Read the instructions that come with your rescue inhaler. Each inhaler may have slightly different instructions. Use the inhaler only while standing or sitting, not lying down.

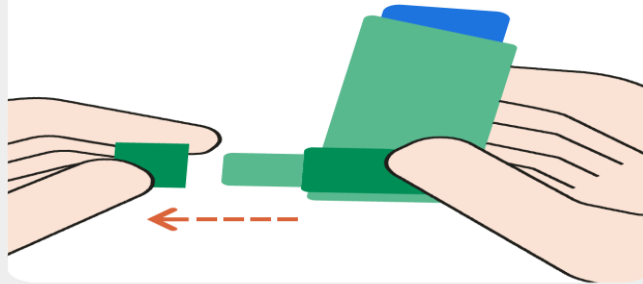
1

Shake the inhaler for a few seconds



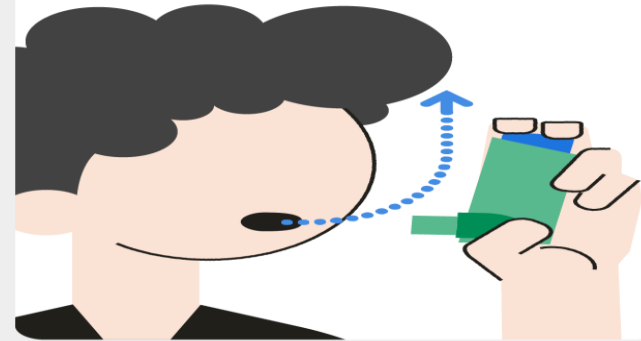
2

Remove the cap



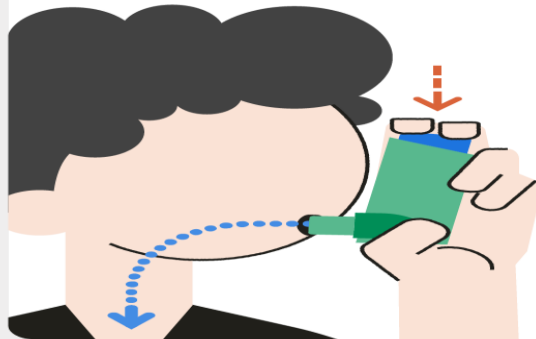
3

Exhale



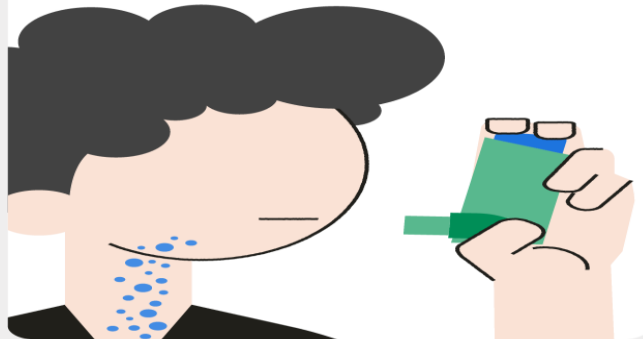
4

Press down while inhaling



5

Hold your breath for 10 seconds



6

Exhale slowly



How to use a turbuhaler

Turbuhalers can be used by children over 8, and adults.

1. Unscrew the cap of the turbuhaler anticlockwise and lift off.



2. Hold the turbuhaler upright. Load it by turning the coloured base of the turbuhaler to the right as far as it will go.



3. Then twist it back to the left until it clicks. It is now loaded.



4. Breathe out gently, away from turbuhaler. Hold the turbuhaler without covering the air inlets and put the tip of the mouthpiece between your lips. Be sure you make a good seal. Breathe in quickly and deeply through your mouth and hold your breath for 5–10 seconds.



5. Remove the turbuhaler from your mouth and breathe out. Replace the cap and screw it shut.



How to use your diskus inhaler

A Diskus inhaler is a flat, round device that is used to deliver asthma medicines in powder form. It has a dose counter window so you can see how many doses are left. A Diskus inhaler is used for children who are about 8 years old or over.



1. Hold diskus in one hand with thumb-grip facing up. The thumb-grip looks like a hollow spot.



2. Put the thumb of other hand in thumb-grip, push the thumb away so that the cover slides away and the mouthpiece snaps into place.



3. Hold diskus in a level, flat position with mouthpiece facing toward mouth.



4. Slide lever away until it clicks (do this only ONCE.)



5. Turn head and breathe out **AWAY** from the diskus



6. Put mouthpiece to lips and breathe in through mouth quickly and deeply.



7. Remove diskus from mouth and hold breath for 10 seconds. Breathe out slowly.



8. Close the diskus by holding the diskus in one hand, placing thumb of other hand in the thumb-grip and slide it back as far as it will go.



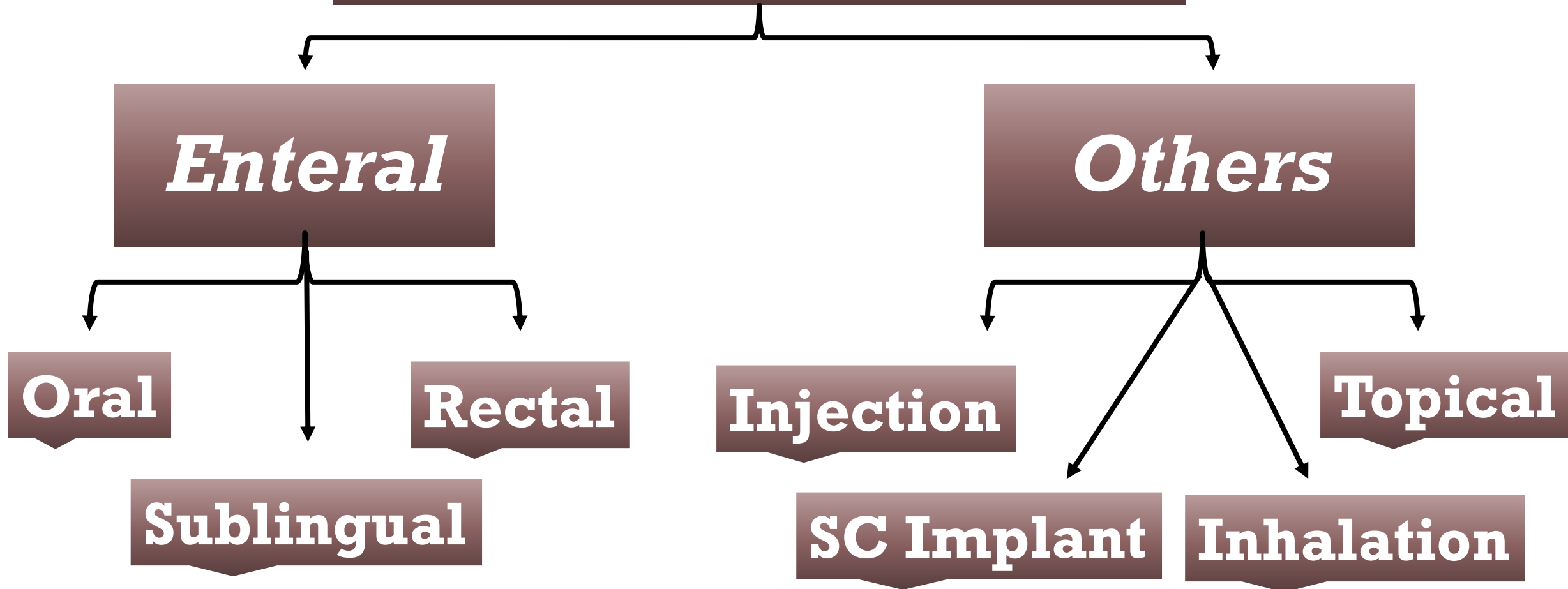
9. Rinse mouth or brush teeth after using.



Store diskus in a dry place. Does not need washing.



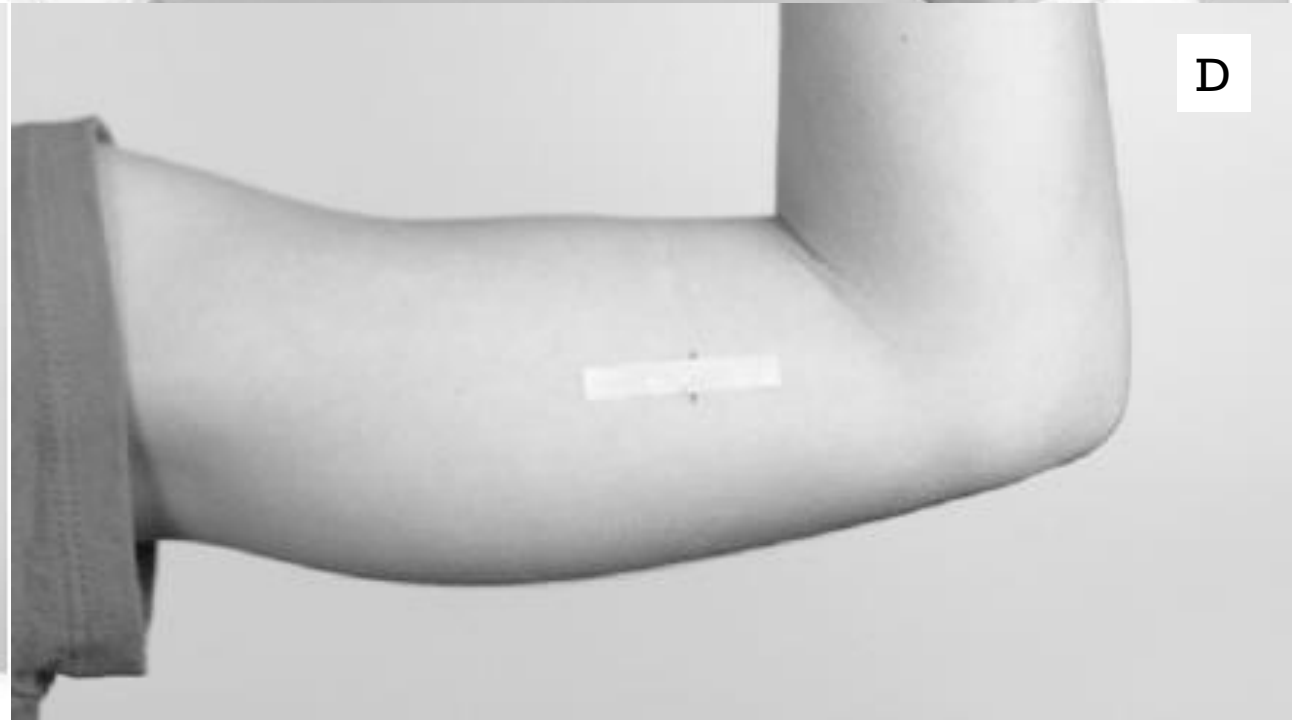
Routes of Administration



SC Implant..

- ❑ Drug is implanted under the skin in a solid pellet form to be absorbed
- ❑ This occurs Slowly over a period of time
- ❑ Some hormones are effectively administered through this route
- ❑ e.g. **Levonorgestrel (Norplant)** implanted sub-cutaneous provides **effective contraception for up to 5 years.**





QUESTIONS

1. *List advantages for inhalation route.*
2. *What is the dosage forms for inhalation route?*
3. *Explain :
SC implant is preferred in case of contraception for long period .*
4. *How can you prevent inaccurate dosing of inhalation??*



