



Solution

Routes of Drug Administration

With Advantages and Disadvantages

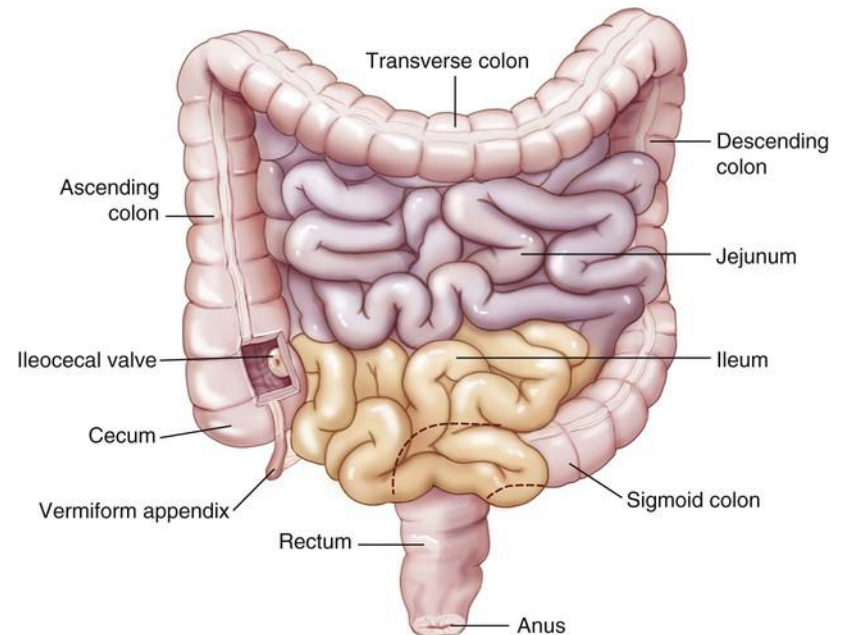
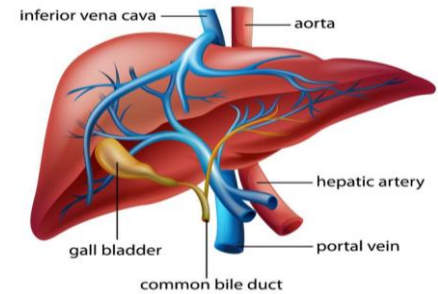
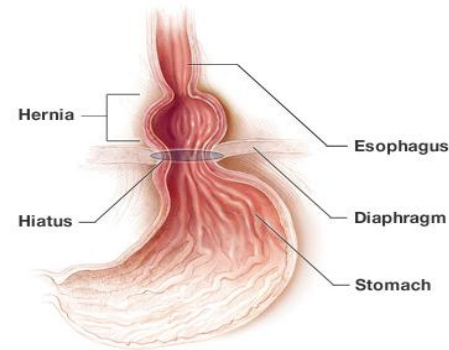
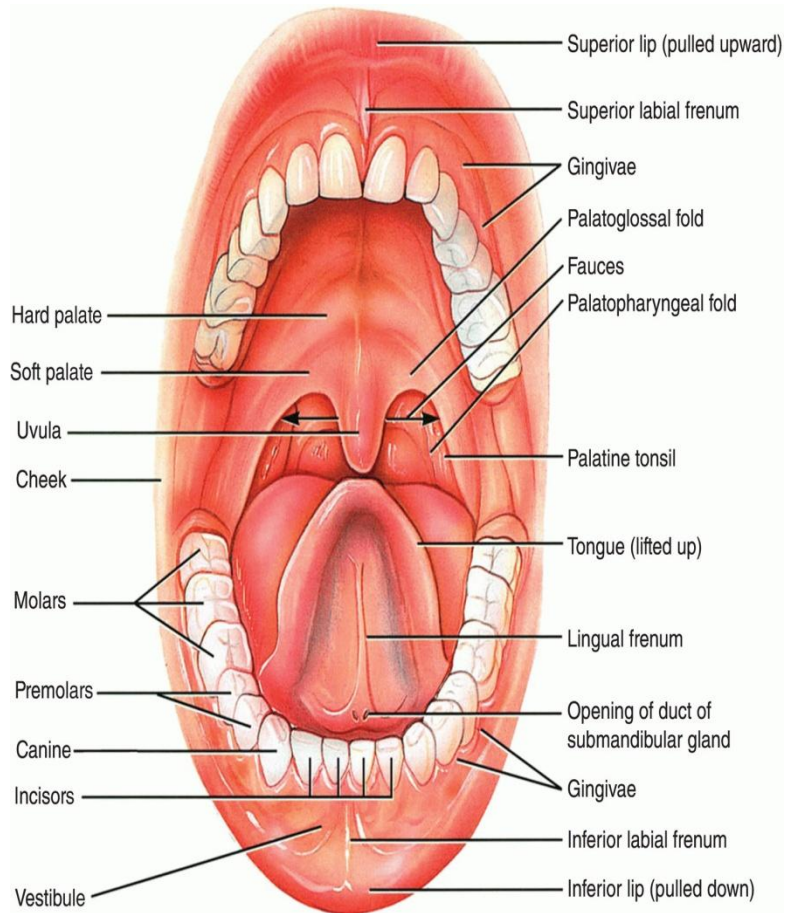
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Route of Administration

Enteral	Parenteral	Other
Oral Route	Intramuscular Route	Topical Route
Buccal Route	Intramuscular Route	Inhalation Route
Buccal/Sublingual	Subcutaneous Route	Rectal & Vaginal
	Intrathecal Route & Intradermal Route	

* In some books there is several classes, which are part of above class

Oral Route of Administration



Oral Route of Administration

Advantages

1. Convenient
2. Self medication is possible
3. Painless and user friendly
4. Varieties are available
5. Low cost
6. No issue of sterilization *
7. Compact in size
8. Withdrawal is possible

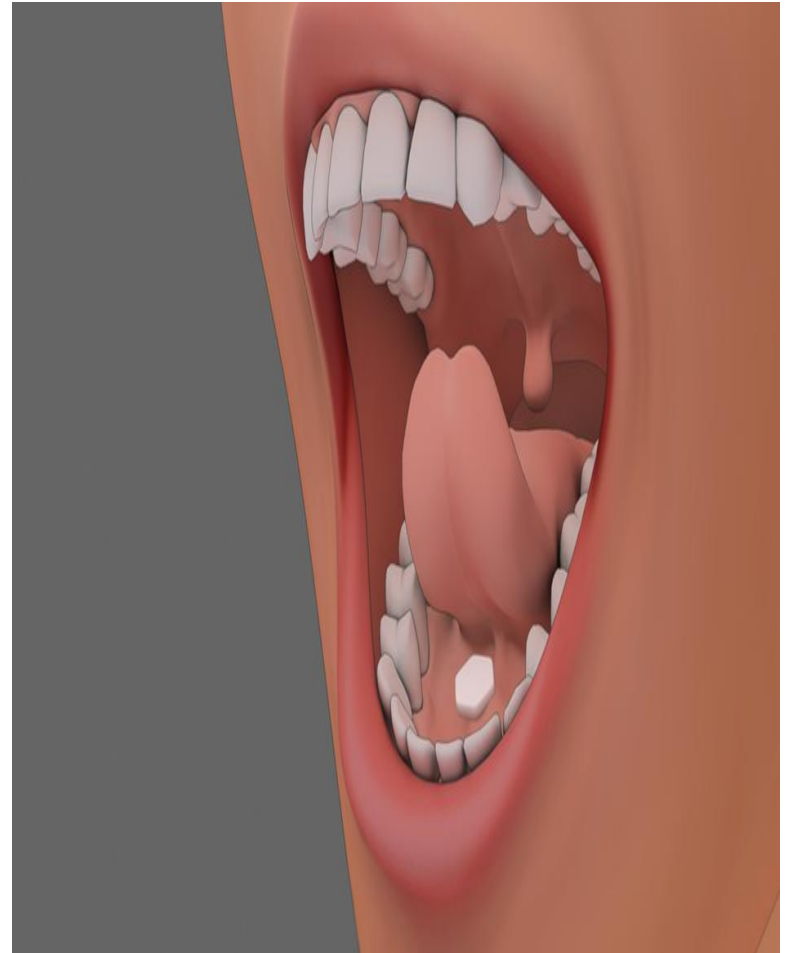
Disadvantages

1. Slow onset of action
2. Degradation in GIT
3. First pass metabolism
4. GIT irritation
5. Unpleasant taste
6. Food-Drug Interaction
7. May be vomit out
8. Not for unconscious

*** Does not mean contaminated**

Buccal/Sublingual

It is closely related to the oral route; however, The tablet is to be dissolved **under the tongue (sublingual)** or in the pouch of the cheek (buccal). Nitroglycerin, for heart patients, in tablet form is more likely the most frequently administered sublingual drug.



Buccal/Sublingual

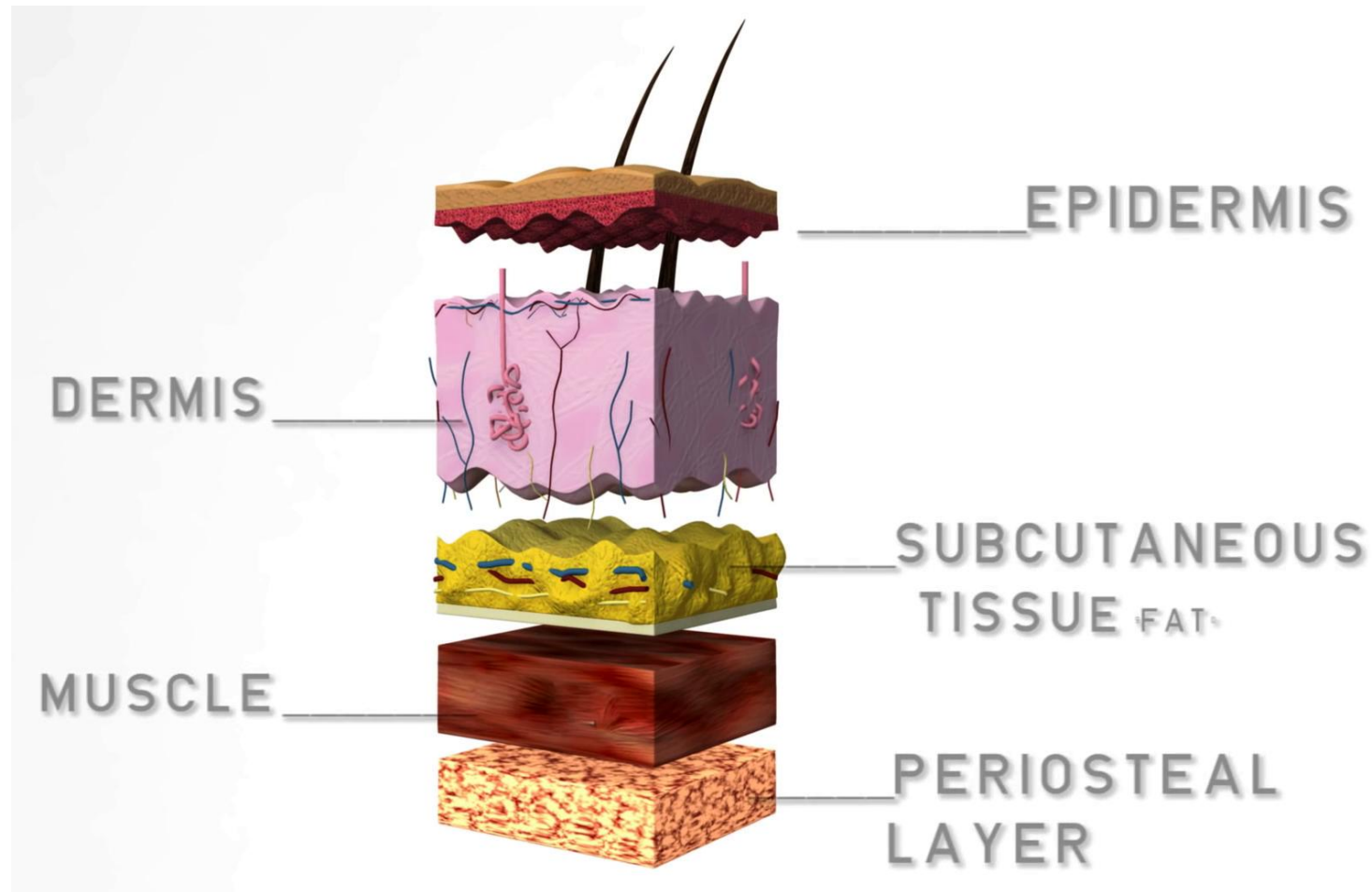
Advantages

1. Rapidly Absorbed
2. Bypass GIT
3. Fast onset of action
4. No GIT irritation
5. No Interaction with food
6. Drug stability

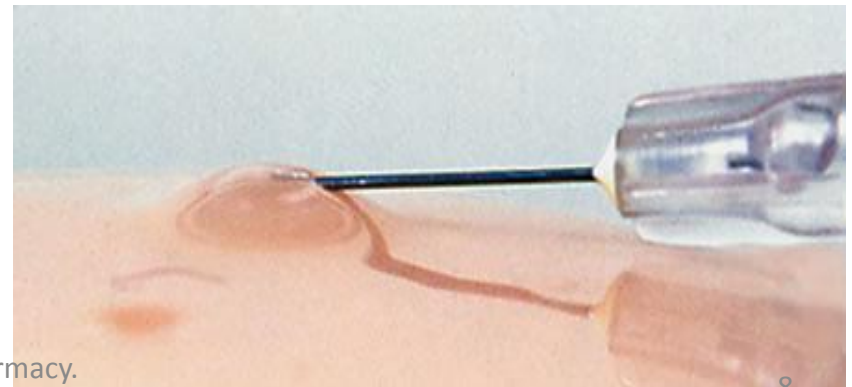
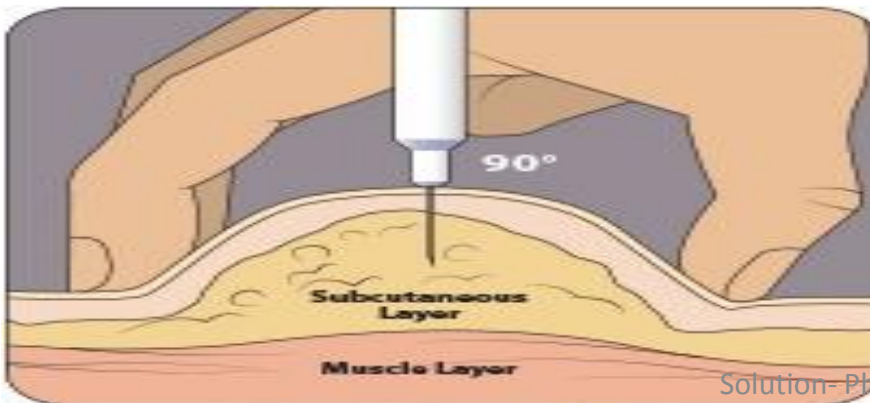
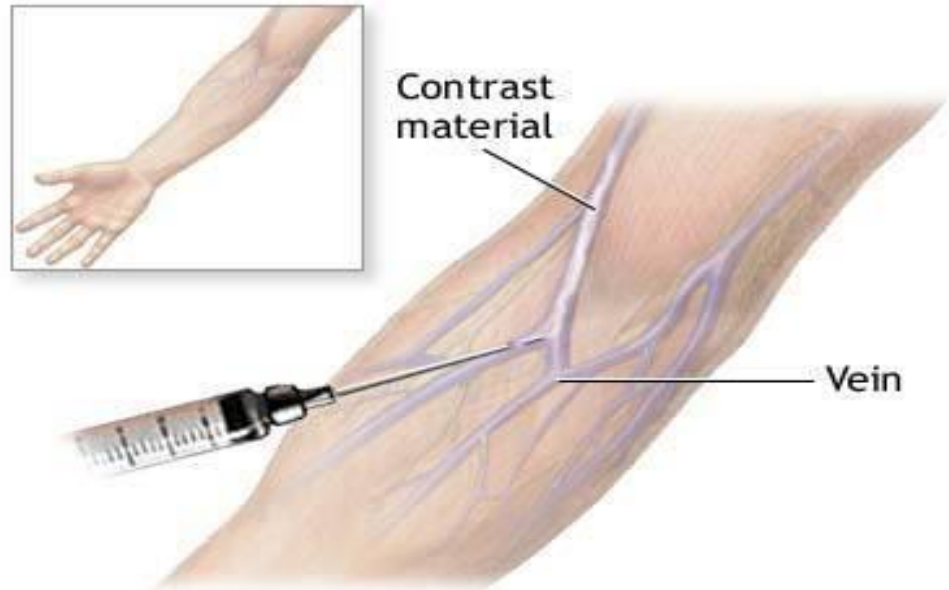
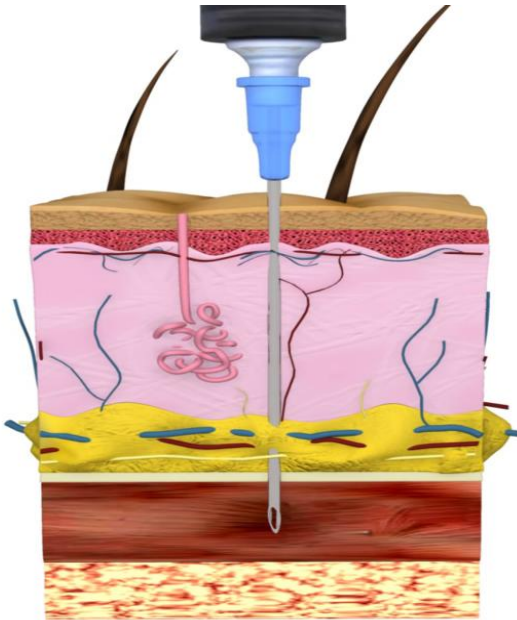
Disadvantages

1. Inconvenience
2. Loss of efficacy if swallowed
3. Limited availability
4. Small dose limit

Parental Route of Administration



Parental Route of Administration



Parental Route of Administration

Advantages

1. Very fast onset of action
2. Avoid first pass
3. No degradation in GIT
4. No food Interaction in GIT
5. Prime consideration in clinical condition
6. Parenteral therapy is required for drugs that are not effective orally

Disadvantages

1. The dosage form must be administered by trained personnel
2. It is difficult to reverse its physiological effect
3. Painful
4. Expensive
5. Should be fully sterilized

Transdermal Route



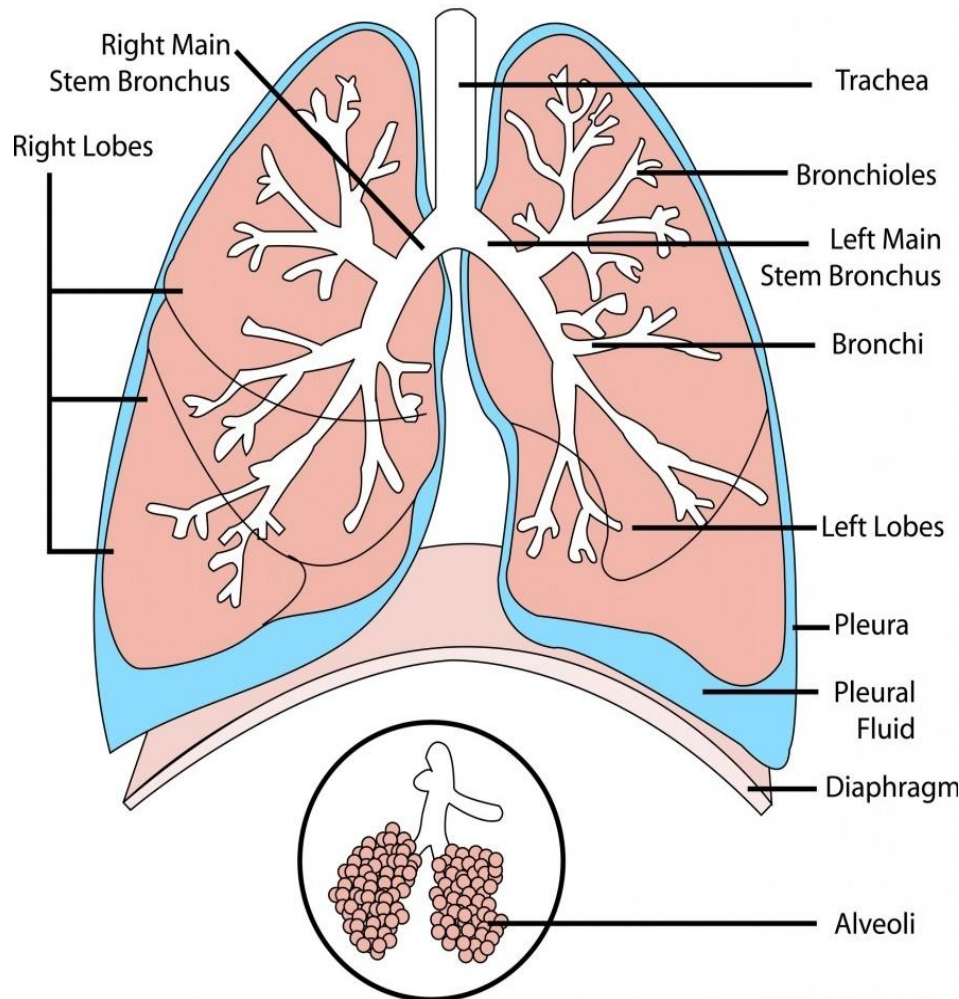
Advantages

Avoid first pass. Mask Taste and Pain
Easy in use, Easy in withdrawal
Controlled release, Comfortable in application. Free from drug intervals, Single application multiple day use.

Disadvantages

Insufficient dose. Skin Irritation, Dose Inaccuracy. Improper adhesive. May not be comfortable. Expensive.

Inhalational Route



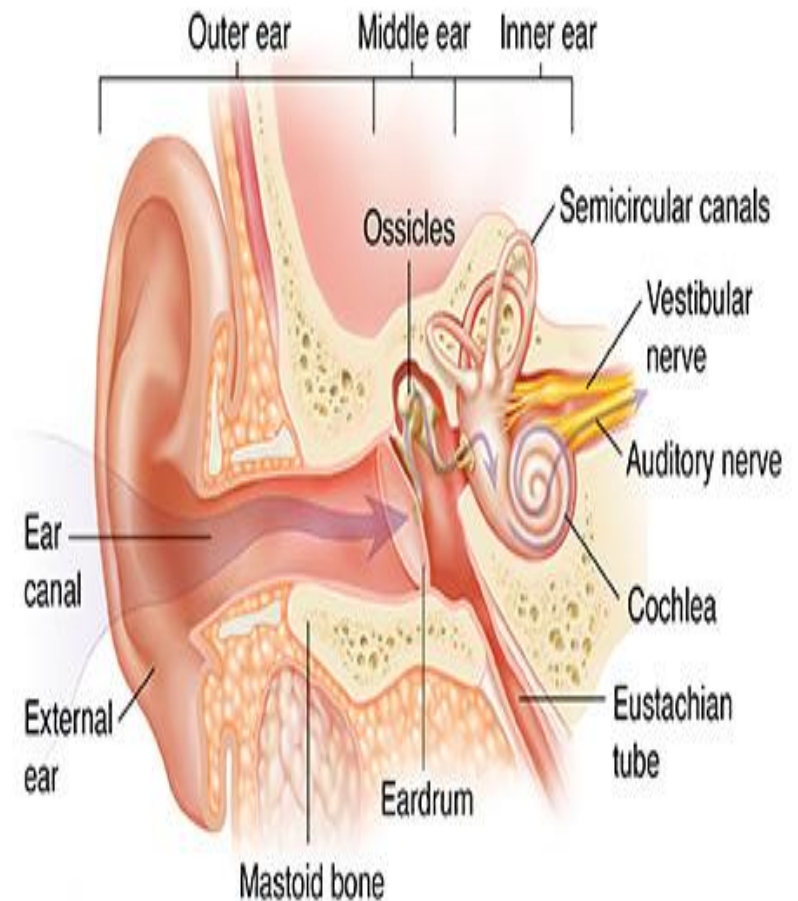
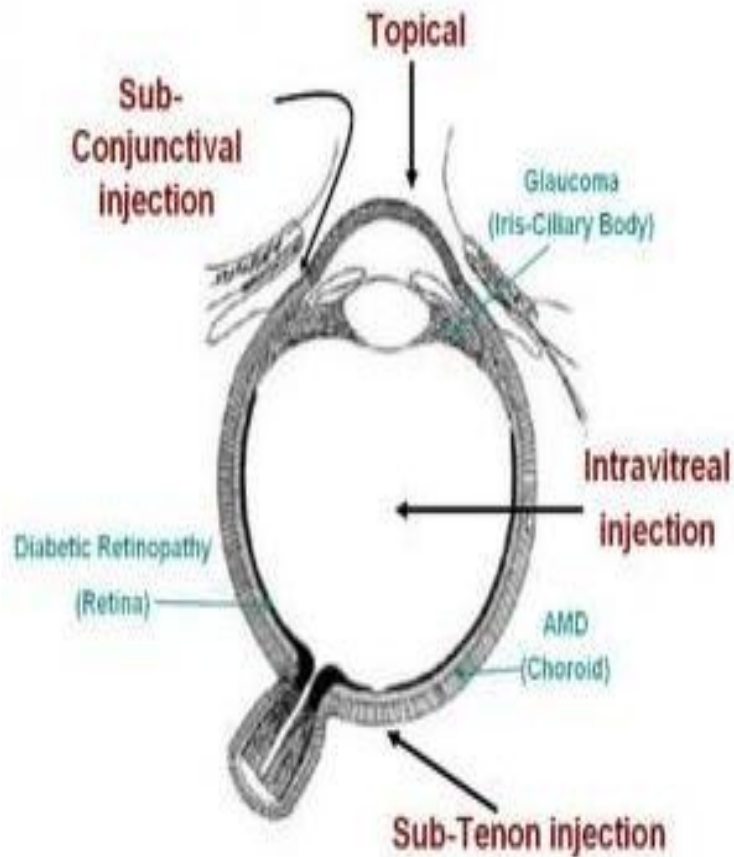
Advantages

Fast onset. Avoid first pass. Direct effects. Absorption is gas efficient. Targeted drug site. Minimize irritation. No pain. No interaction.

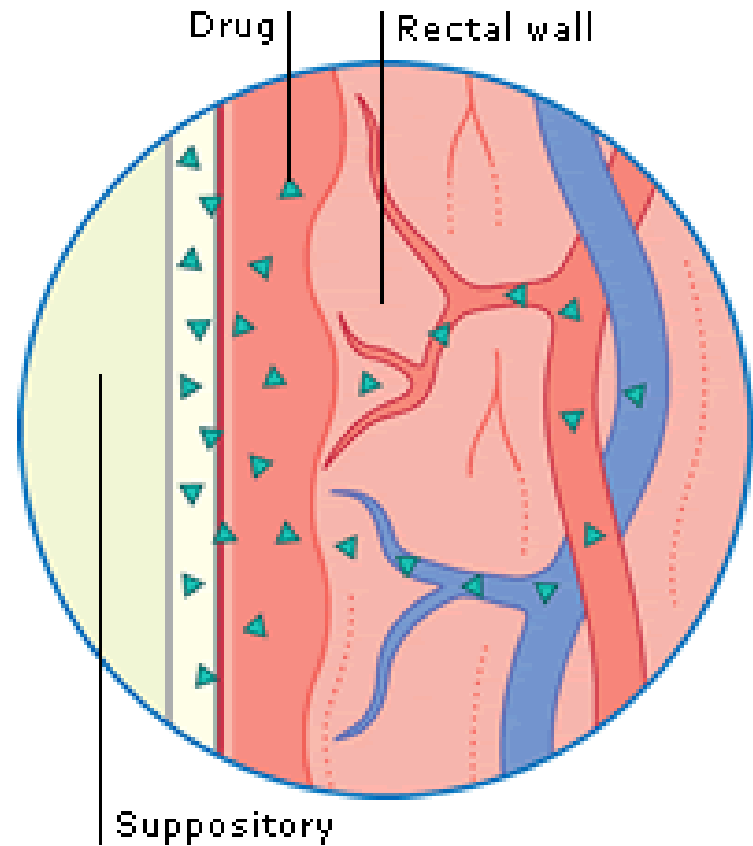
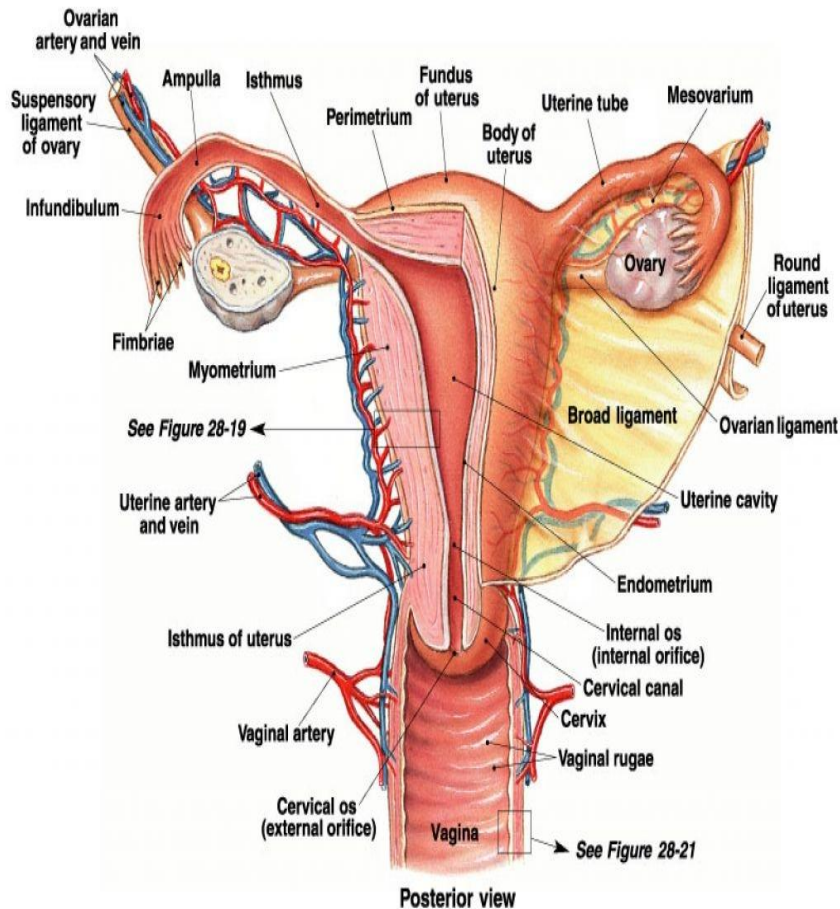
Disadvantages

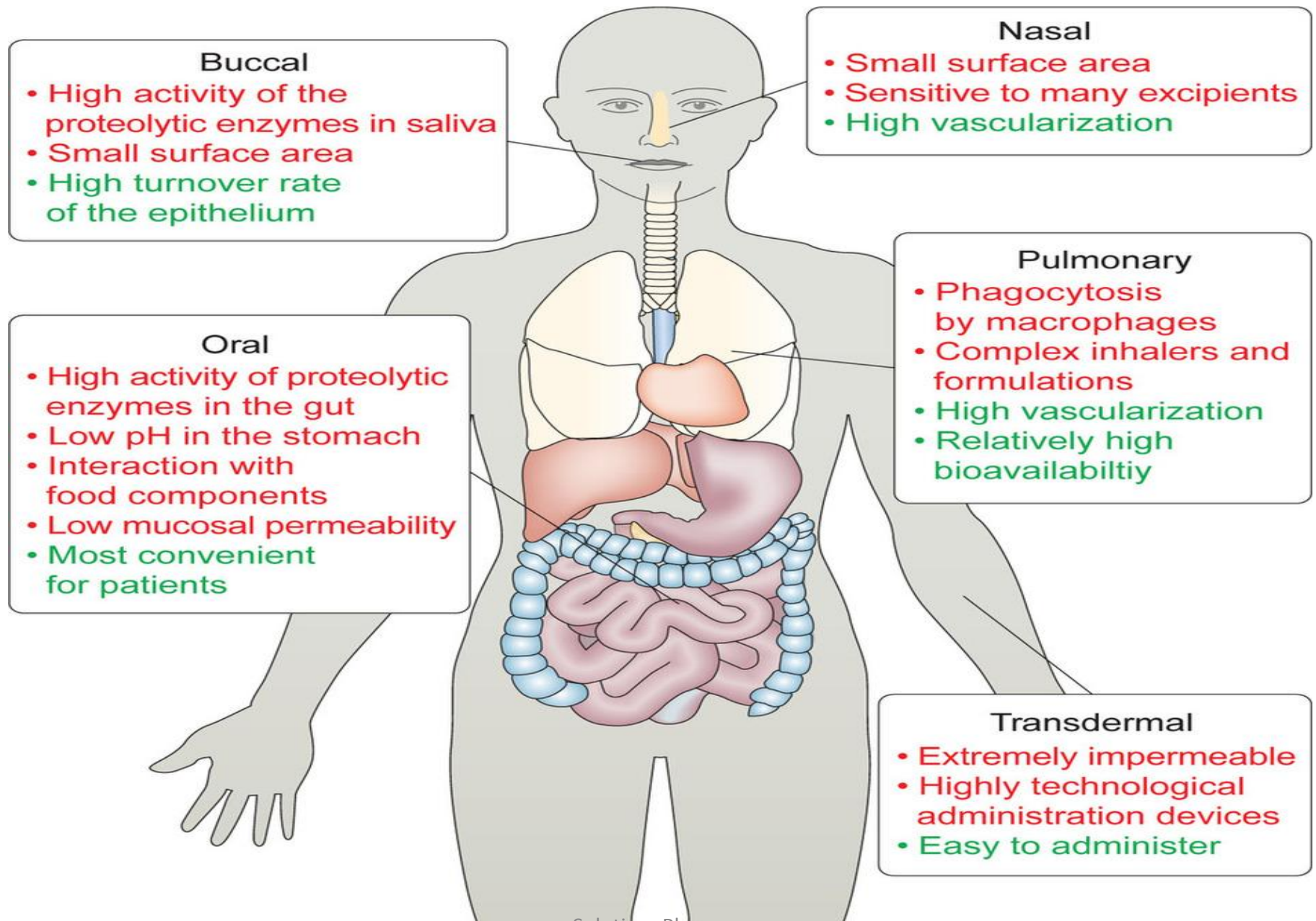
Difficulty in use. Not accurate. Expensive. Minimum duration of action. Concentration dependence. Can be removed by fresh air

Ophthalmic & Ear Route



Vaginal and rectal route





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