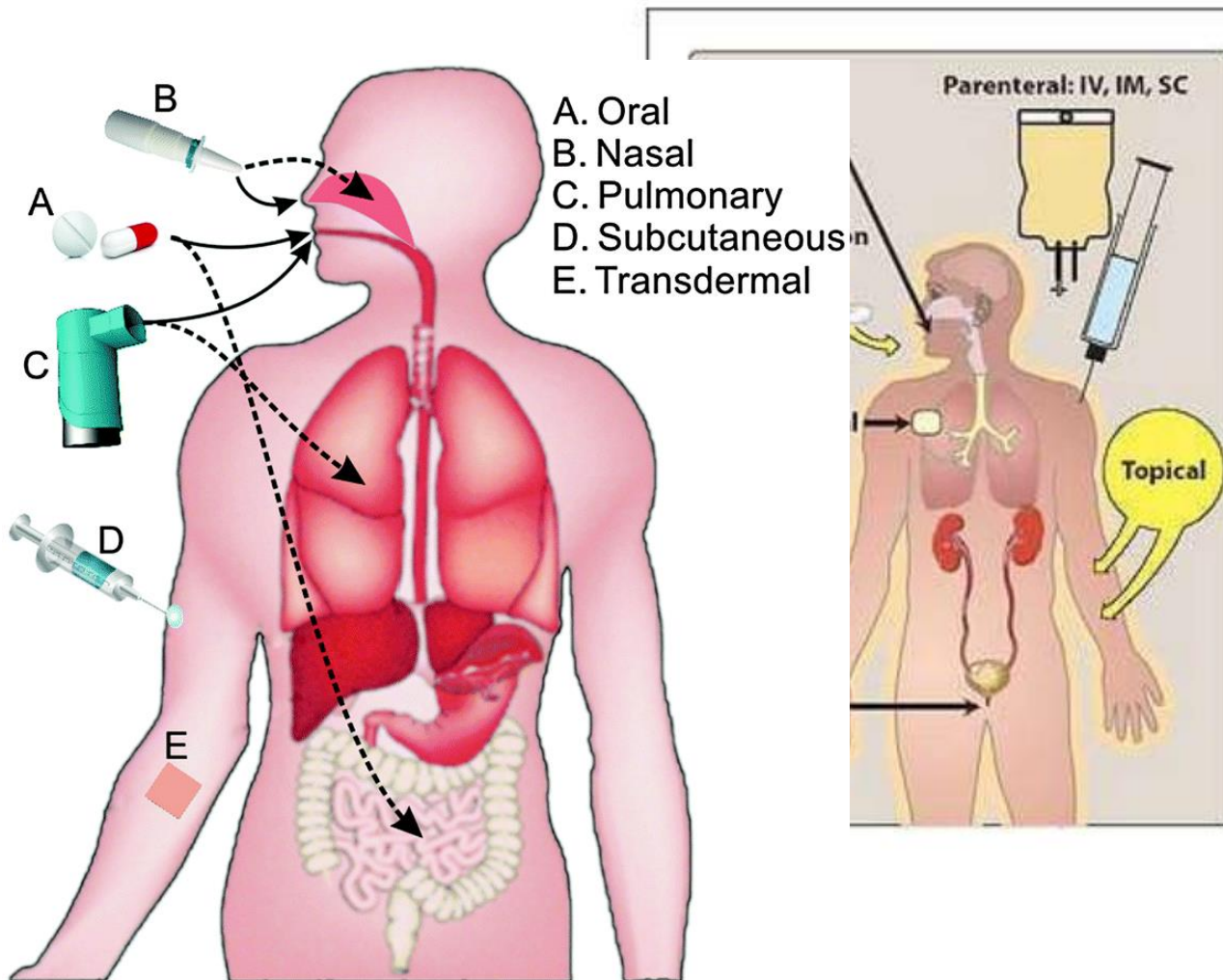


How Drugs Enter The Body



How Drugs Enter The Body

- Oral Administration
- Injection
- Inhalation
- Absorption Through Membranes
- Other methods

Oral Administration

substance is ingested through the mouth - digested and absorbed in gastrointestinal tract - passes through liver - carried to the brain through the circulatory system.

-Most absorption occurs in 5 to 30 minutes, but is not completed for up to 6 to 8 hours

-Slowest method

Injection

bypasses the digestive tract.

Intravenous -injected directly into a vein drug arrives in the brain within 15 seconds; effect are irreversible

Intramuscular - injected into a large muscle group, slower absorption

Subcutaneous - injected under the skin, slowest absorption

Inhalation

smoke or vapors of a substance are drawn into the lungs.

- Simplest way to receive a drug**
- Passes from alveoli in the lungs to blood stream and then to the brain**
- Fastest pathway for a drug to enter the body**
- Risk permanent damage to lungs**

Absorption Through Membranes

Intranasal-absorption through mucous membranes in the nose or rectal

Sublingual - absorption occurs under the tongue

Transdermal - absorption occurs through the skin

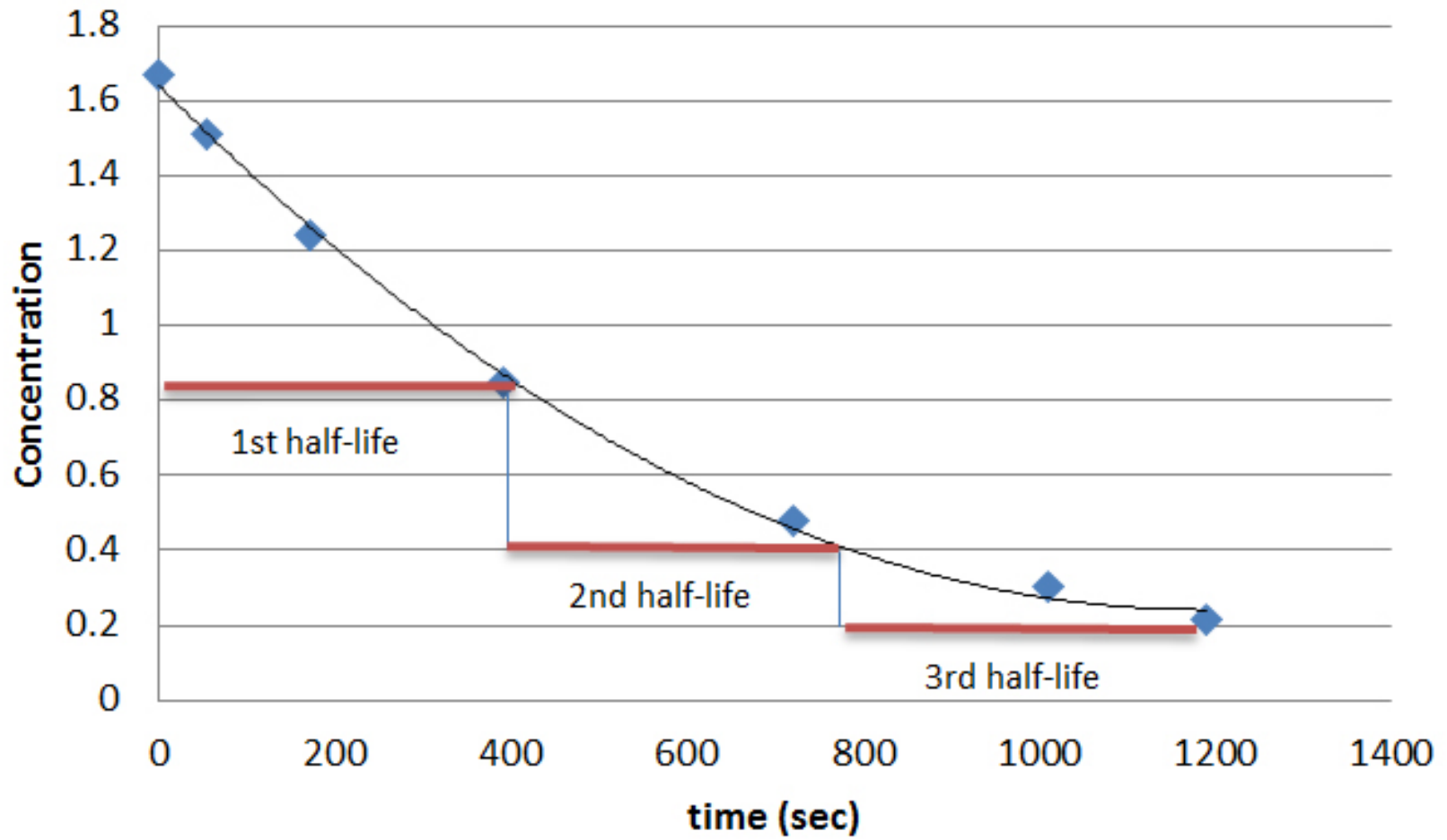
Other methods

for example via eye or ear

Dosage

- Dosage is depended on size of body

Half-life



Factors Effecting the Process of Biodegradation

- Quantity - larger the amount, more quickly metabolized (except for alcohol)
- Type of drug
- Water Soluble substances pass through the body more quickly.

How Drugs Leave The Body

- Urination
- Defecation
- Sweating
- Lung
- Saliva
- Mammary gland

Drug Interactions

Additive: Occurs when two or more drugs combine to produce an effect greater than effect of either drug taken alone.

Additive: $1 + 1 = 2$

Synergistic (hyper additive): $1 + 1 = 6$

Potentiation - a drug with no effect is combined with another drug to cause a toxic effect.

Antagonistic: $2 + 2 = 3$ or 1 or 0

one drug weakens or cancels out the effect of another drug.

- **Adverse Effects:** are unwanted and/or unintended action that may occur during drug therapy. Every drug has the potential to produce adverse effects.
- **Side Effects:** Undesirable but mild unavoidable/predictable pharmacological effects of a drug.
- **Allergic Reactions**