SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES

Affiliated To The Tamil Nadu Dr. MGR Medical University, Chennai
Approved by Pharmacy Council of India, New Delhi.
Coimbatore -641035

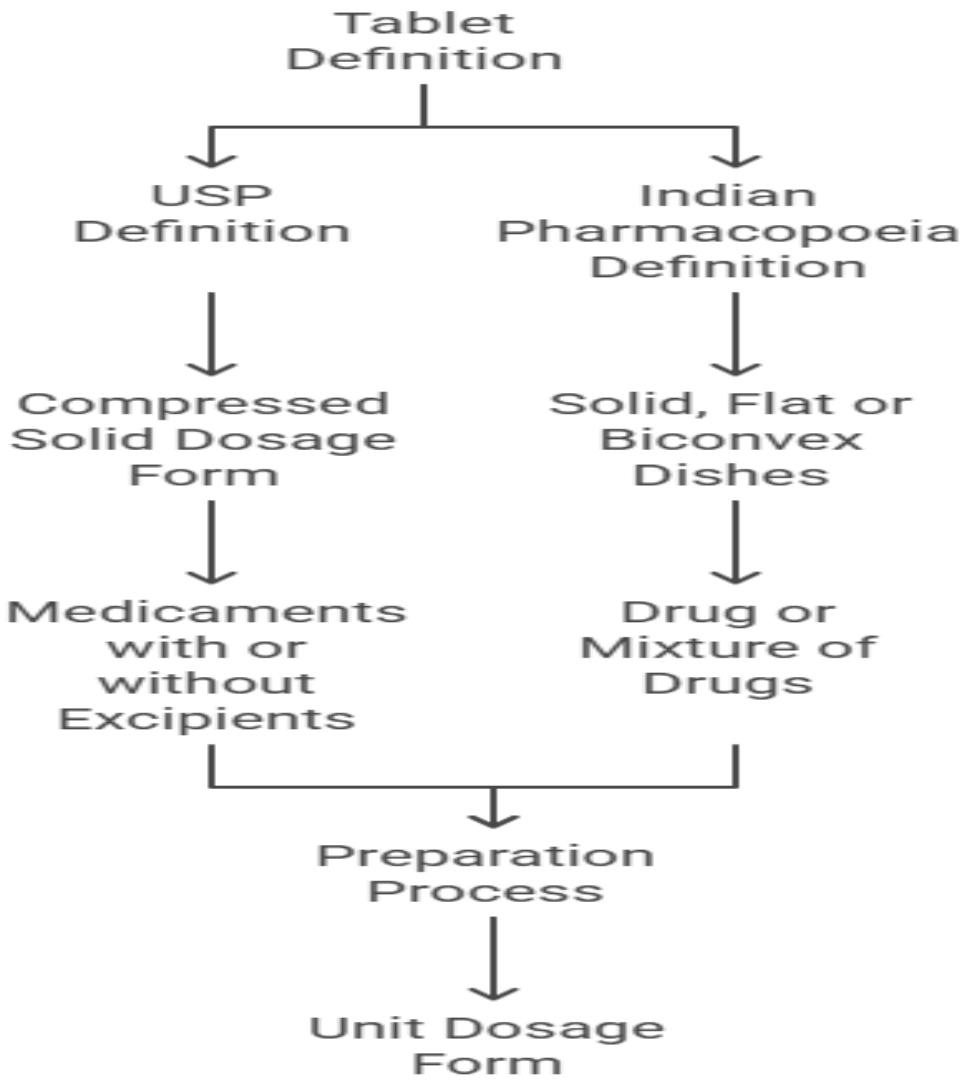
COURSE NAME : INDUSTRIAL PHARMACY I (BP 503 T)

V SEM / III YEAR

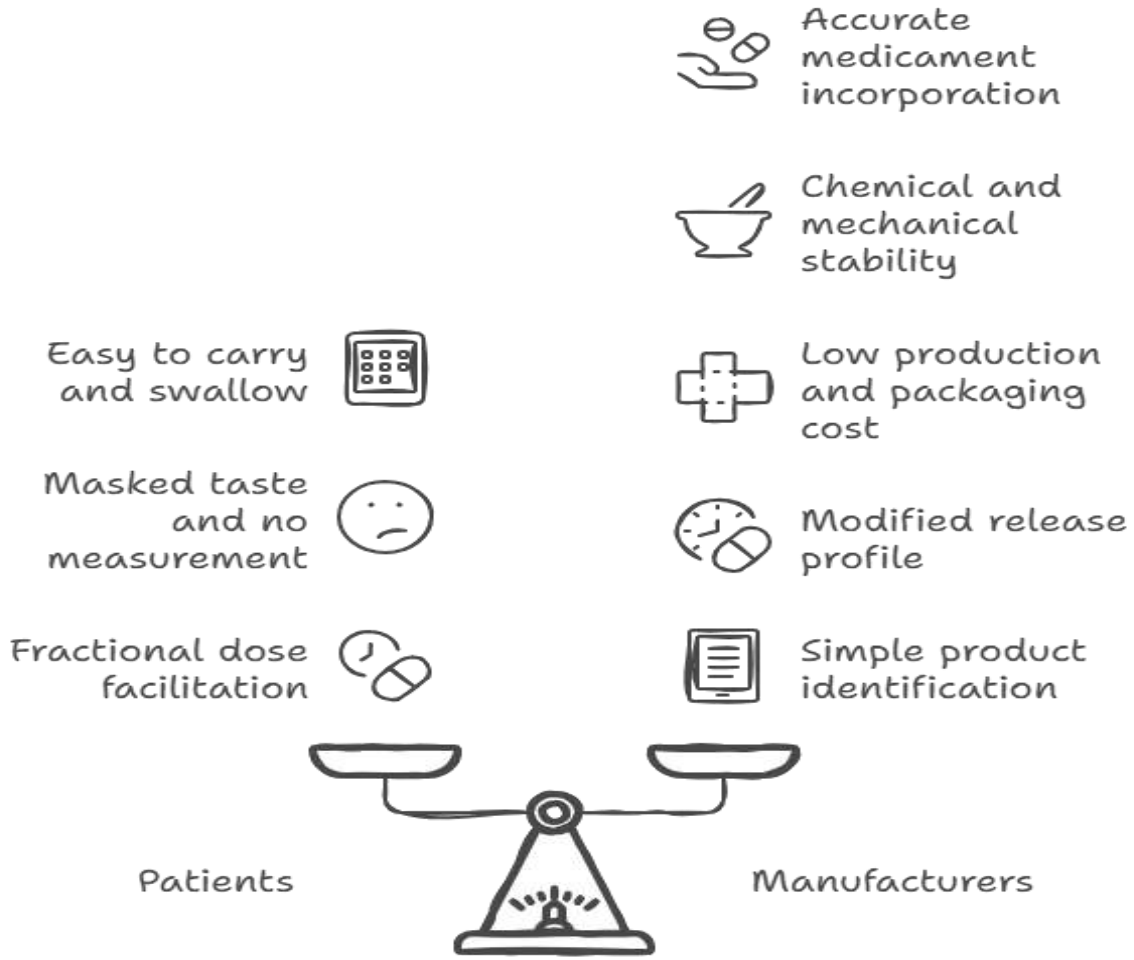
TOPIC 1 : TABLETS

SUB TOPIC: Introduction, Ideal characteristic, Classifications

Tablet



Tablets offer advantages for both patients and manufacturers.



Disadvantages of Tablet Dosage Form

Swallowing Difficulty

For children and unconscious

Taste and Odor Issues

Requires encapsulation or coating

Poor Drug Absorption

Limits bioavailability of the drug

Compression Resistance

Drugs resist forming compacts

Tablet Types

Tablet Ingested Orally

Sugar Coated Tablets

Enhances taste and appearance.

Enteric Coated Tablets

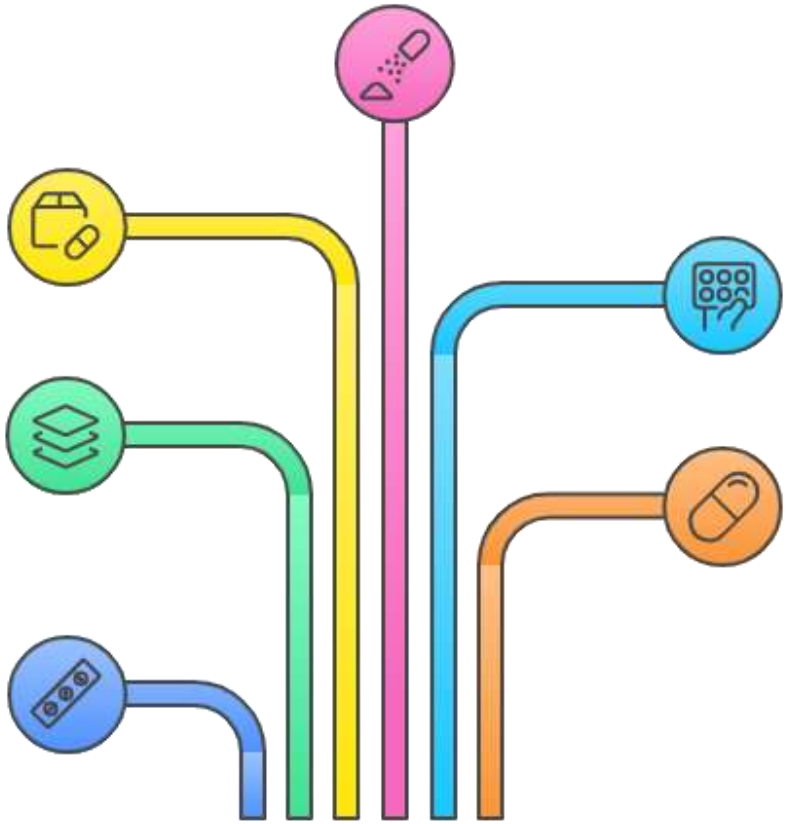
Protects medication from stomach acid.

Multiple Compressed Tablets

Ideal for layered medication release.

Compressed Tablets

Suitable for general use and easy to swallow.



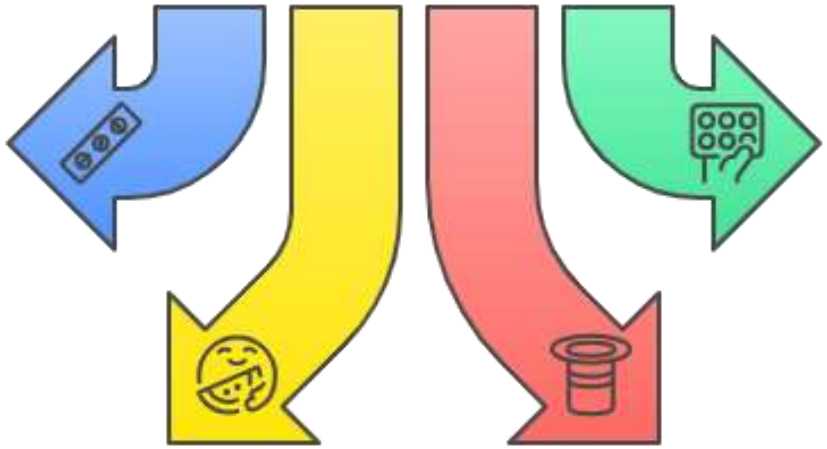
Film Coated Tablets

Provides a smooth, easy-to-swallow surface.

Chewable Tablets

Convenient for those who have difficulty swallowing.

Tablets used in the oral cavity



Buccal Tablets

Absorbed through the cheek, suitable for sustained release.

Sublingual Tablets

Rapid absorption under the tongue, ideal for quick relief.

Lozenges

Slow dissolution, used for throat soothing.

Dental Cones

Localized dental treatment, used in dental applications.

Tablet Administered by other Routes

Tablets for Solution Preparation

Effervescent Tablets

Dissolve in water to release carbon dioxide

Dispensing Tablets

Designed for easy measurement and administration

Hypodermic Tablets

Formulated for injection

Tablet Triturates

Finely divided tablets that dissolve quickly

TABLET INGESTED ORALLY

Compressed Tablets

Formation

Formed by compression, no special coating. Made from powdered, crystalline, or granular materials.

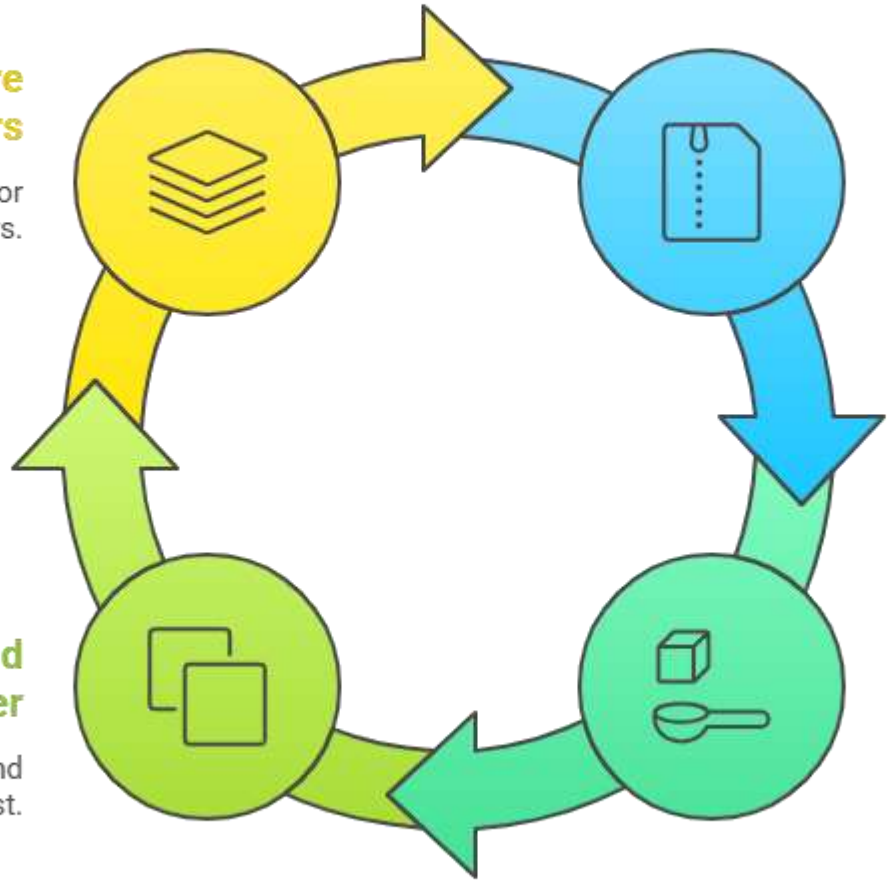
Drug Absorption

Water soluble drugs disintegrate in the stomach. Drug contents absorbed in the gastrointestinal tract.

Made with Napkin

Compressed Tablet

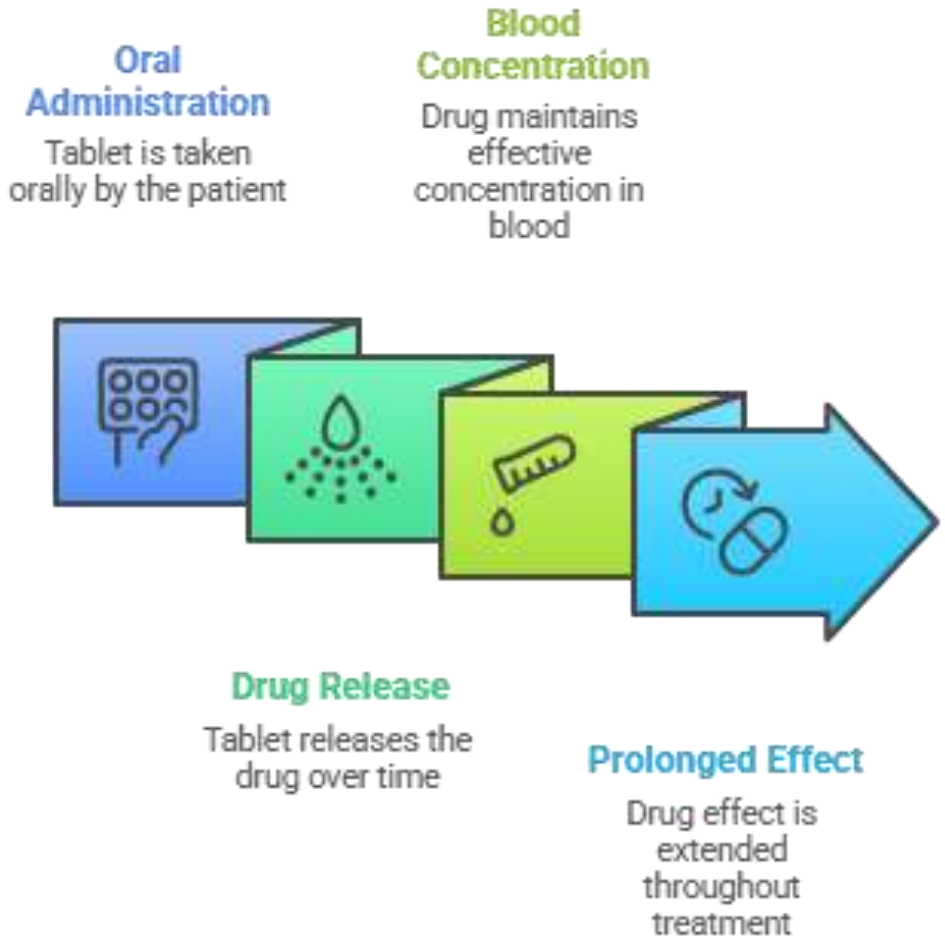
Multiple Compressed Tablet



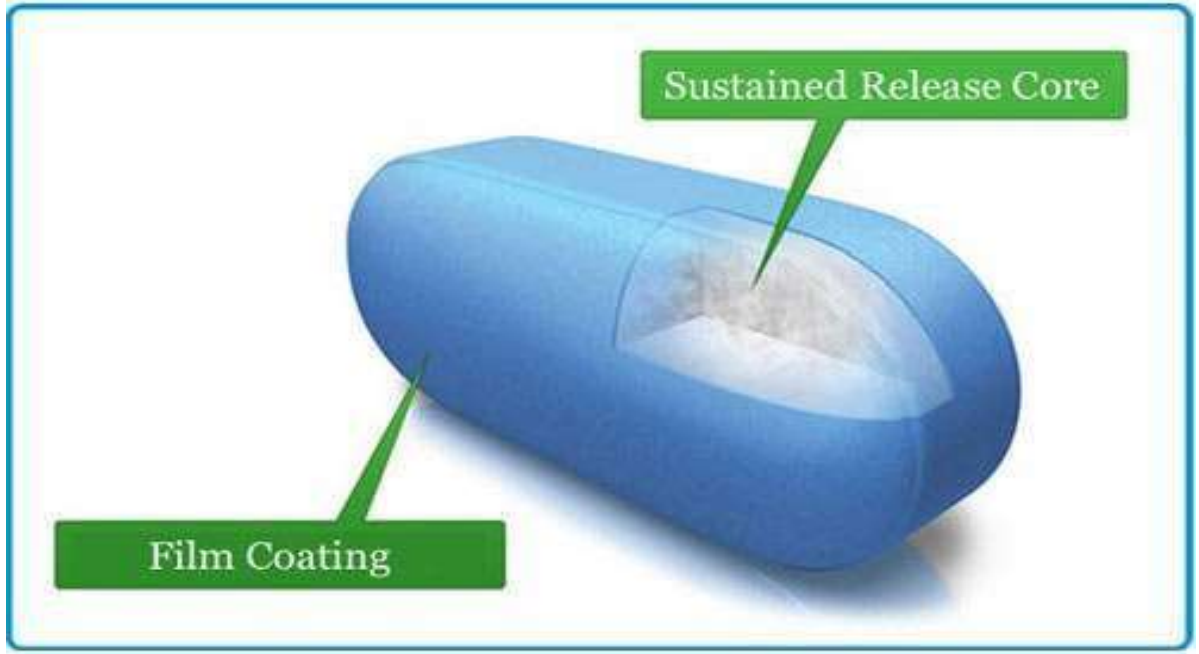
Made with Napkin

Multiple Compressed Tablet

Sustained Action Tablet



Sustained Action Tablet



Enteric Coated Tablets

Definition

Compressed tablets designed to bypass the stomach and disintegrate in the intestine.

Coating

Coated with materials resistant to acidic pH but disintegrate in alkaline pH.

Made with Napkin

Enteric Coated Tablet

Sugar Coated Tablets

Masking Taste

Sugar coating masks bitter taste and unpleasant odor.

Elegant Appearance

Sugar coating makes the tablet look more appealing.

Protection

Sugar coating protects the drug from atmospheric effects.

Sugar Coated Tablet

Film Coated Tablets

Composition

Compressed tablets with a polymer film coating.

Protection

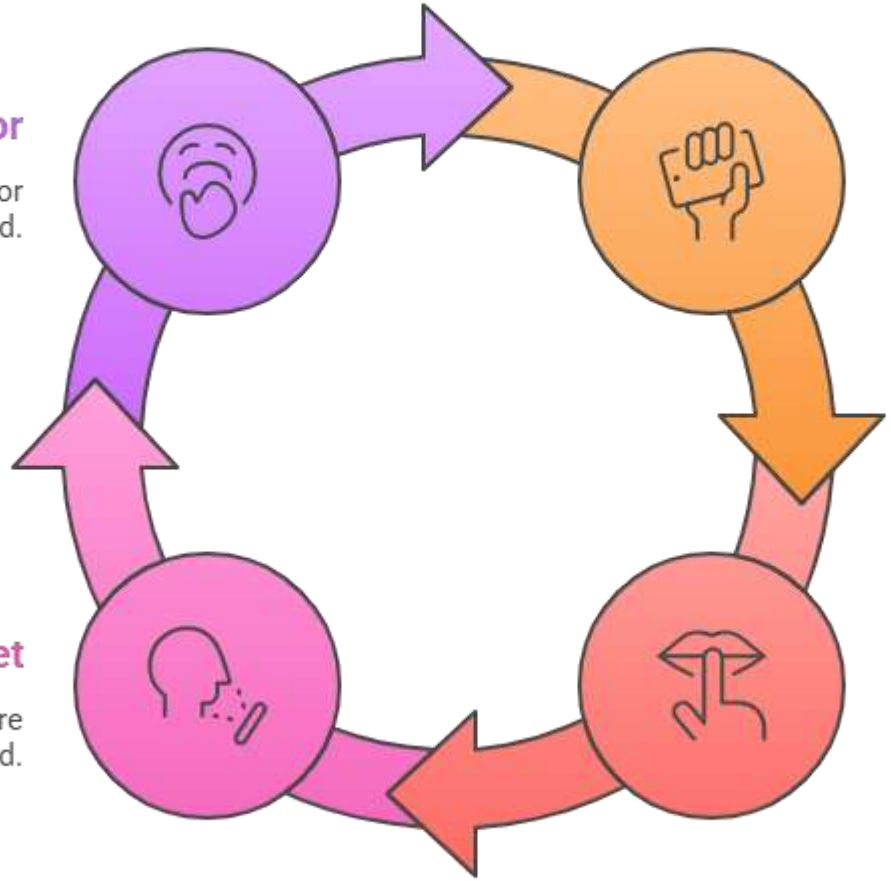
Protects the medicament from atmospheric effects.

Characteristics

Tasteless, with little weight increase, less elegant than sugar coated.

Film Coated Tablet

Chewable Tablet



Taste and Flavor

Enjoyable taste and flavor are experienced.

Break Tablet

Tablet is broken into smaller pieces.

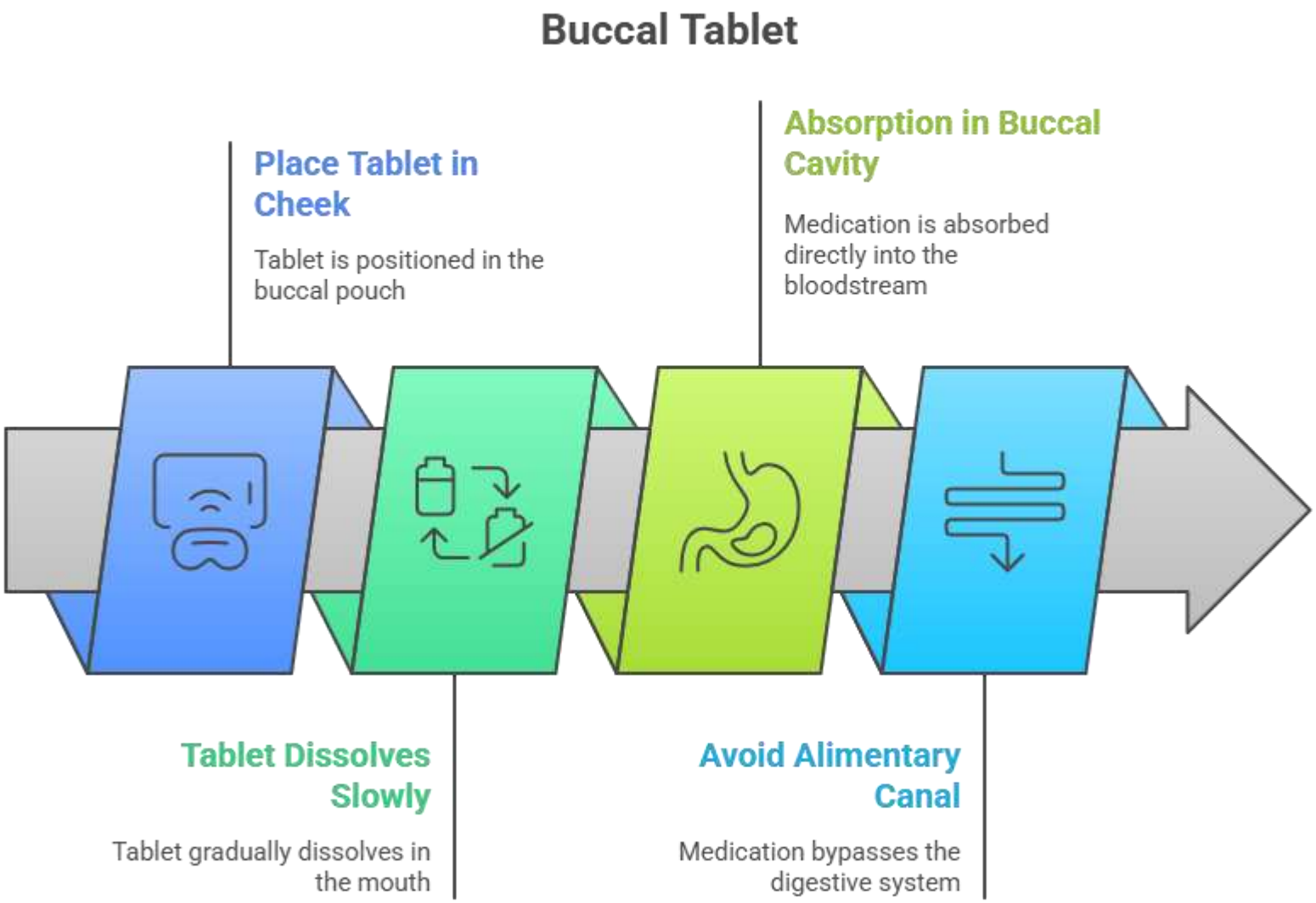
Swallow Tablet

Chewed pieces are swallowed.

Chew Tablet

Pieces are chewed in the mouth.

Chewable Tablet



Buccal Tablet

Sublingual Tablets

Placement

Tablets are placed under the tongue.

Dissolution

They dissolve or disintegrate quickly.

Absorption

Absorption is direct, bypassing the GIT.

Sublingual Tablet

Lozenges Tablets

Local Effect

Designed to exert a local effect in the mouth or throat. Commonly used to treat sore throat and control coughing.

May contain local anaesthetics, antiseptics, antibacterial agents, and astringents. Prepared by compression or moulding.

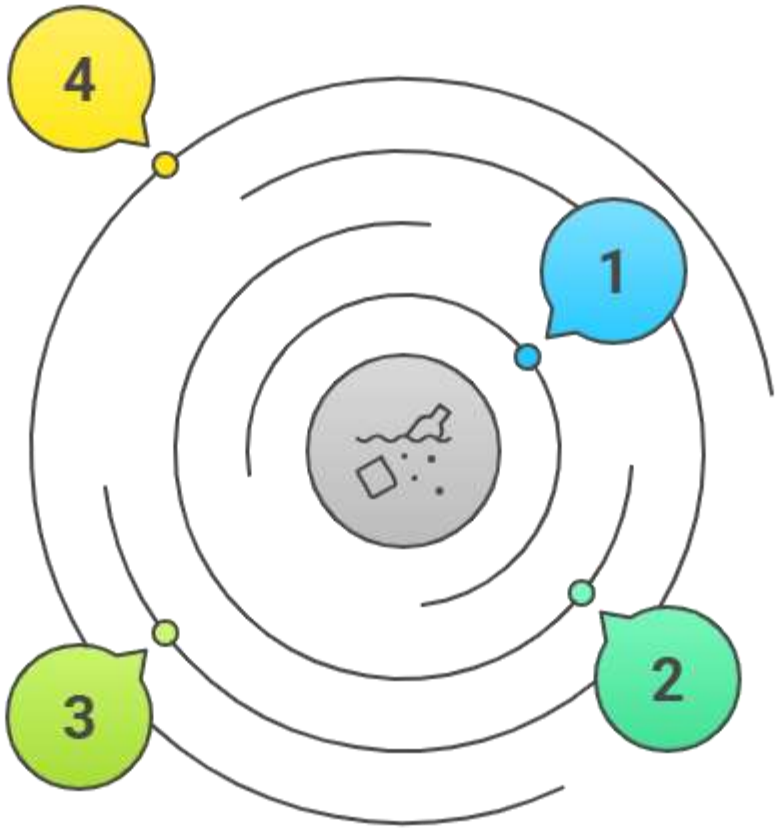
Ingredients

Lozenges Tablet

Dental Cones Tablets

Dissolution Time

Dissolves in 20 to 40 minutes



Purpose

Prevents bacterial growth and reduces bleeding

Composition

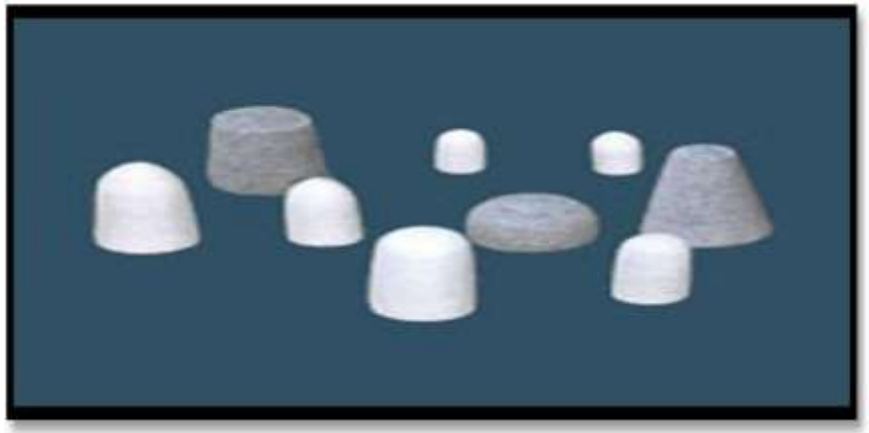
Contains antibacterial compounds and astringents

Excipients

Includes lactose, sodium bicarbonate, and sodium chloride

Made with Napkin

Dental Cones Tablet



Implantation Tablets

Placement — Tablets are placed under the skin via minor surgery.

Absorption — Tablets are slowly absorbed into the body.

Sterility — Implants must be sterile and individually packed.

Hormone Administration — Used for hormone administration, like testosterone steroids.

Birth Control — Exploited for birth control purposes in humans.

Disadvantages — Administration, changing release rate, and tissue reactions.

ImplantationTablet

Vaginal Tablets

Dissolving Tablets

Tablets dissolve slowly in the vaginal cavity.

Shape

Tablets are ovoid or pear shaped for easy insertion.

Uses

Tablets release steroids or antimicrobial agents.

pH

Tablets are buffered to promote antimicrobial action.

Ingredients

Tablets contain soluble components like lactose.

Vaginal Tablet

Effervescent Tablet

1. Reacts with acids to release carbon dioxide.
2. Reacts with bicarbonate to produce effervescence.
3. Enhances effervescence and tablet disintegration.

Sodium Bicarbonate

Citric Acid

Tartaric Acid

Fast Solution Formation

Effervescent Tablet

Dispensing Tablets

Examples

Commonly incorporated drugs include mild silver potentiate, bichloride of mercury, merbromin, and quaternary ammonium compounds.

Convenience

Tablets offer a convenient quantity of potent drug, easily converted into powders for liquids. This eliminates the need to weigh small amounts.

Extemporaneous Compounding

These tablets are primarily for extemporaneous compounding and should not be dispensed as a dosage form.

Dispensing Tablet

Preparing Injectable Solutions

1. Soft, soluble tablets used for injection solutions.
2. Water used to dissolve tablets for sterile solutions.
3. Administration method via injection for quick absorption.

- Hypodermic Tablets
- Sterile Water
- Parenteral Route

→ **Hypodermic Tablet Solutions**

Hypodermic Tablet

Tablet Triturates

Composition

Powders moulded into flat, circular discs. Contains potent substance mixed with diluent.

Disintegration

Intended to disintegrate quickly in moisture. Water insoluble adjuncts are avoided.

Trituration

Name is appropriate because they usually contain triturations. Dilution with inert substance.

Tablet Triturates Tablet

CLASS ASSESSMENT

What type of tablet dissolves under the tongue?

How are tablets classified as a dosage form?

Solid unit dose

Tablets are solid and come in individual doses.

Semi-solid

Tablets are not semi-solid; they are firm.

Aerosol

Tablets are not aerosolized; they are solid.

Liquid

Tablets are not liquid; they are solid.

Why prepare multilayer tablets?

Increase Disintegration Time

Allows for sustained release and prolonged therapeutic effect

Improve Taste Only

Enhances patient compliance but does not address other pharmaceutical needs

Separate Incompatible Drugs

Prevents adverse reactions and maintains drug stability

Reduce Weight Variation

Ensures consistent dosage and quality control

REFERENCES

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Thank You