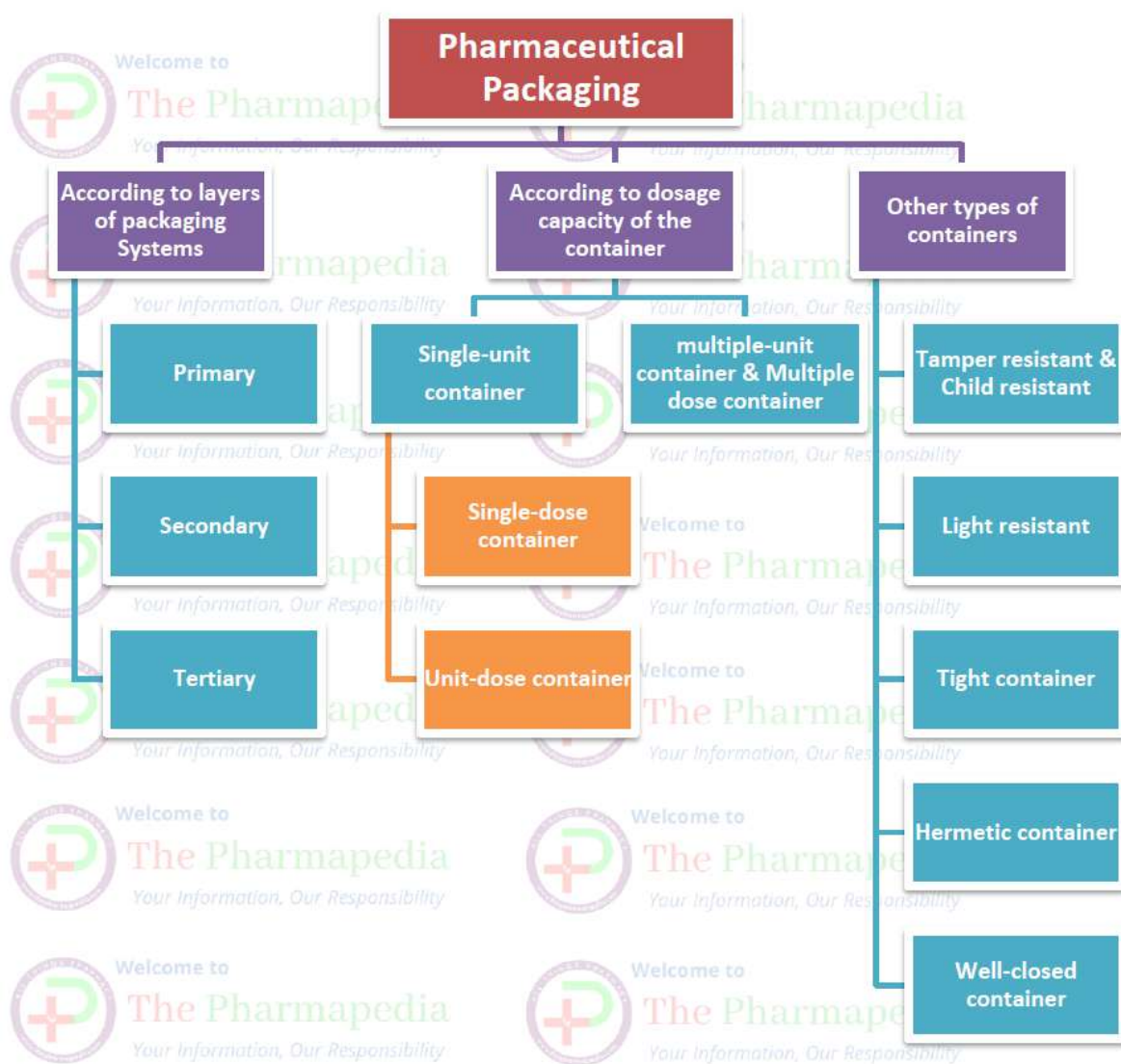


# TYPE OF PACKAGING | PHARMACEUTICS

Pharmaceutical Packaging systems are also classified in three class as



Type of Pharmaceutical Packaging

## Type of packaging system According to layers system, classified into 3 groups

### 1. PRIMARY PACKAGING

Pharmaceutical Packaging (as per layers of packaging Systems) systems are classified in three class Primary, secondary & Tertiary.

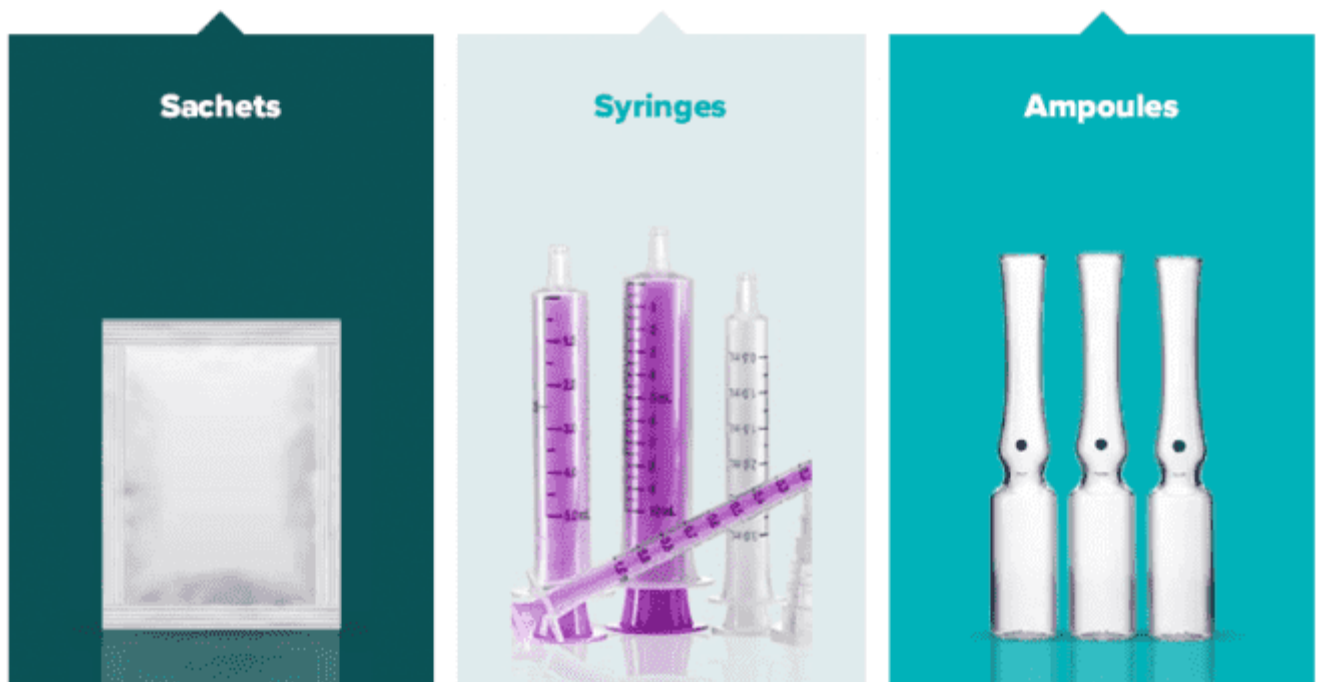
**Primary packaging component are the components which are in direct contact with the Pharmaceutical dosage form, e.g. liners, bottles, desiccant in bottles and blister films.**

Primary packaging may have a direct effect on the product shelf-life & protect the drug from the environment (moisture, gases, and light).

**Example:- ampoules and vials, prefilled syringes, IV containers, blister packs, Bottles, liners, desiccant in bottles and Sachet packaging etc.**



Primary Packaging



Primary Packaging

## 2. SECONDARY PACKAGING

- The secondary packaging system is **outside the primary packaging** and used to **group primary packages together**.
- secondary packaging **are not in direct contact with the dosage form, e.g. cartons, and overwraps for blisters**.
- **These components generally provide protection and labelling for the primary container.**
- Example: cartons, boxes, shipping containers, injection trays, etc.

**Cartons**

Secondary Packaging



Secondary Packaging

**Boxes**

Secondary Packaging



Secondary Packaging

## 3. TERTIARY PACKAGING

A tertiary packaging system is used for **bulk handling and shipping** e.g., barrel, container, edge



protectors, etc

## Type of packaging system According to dosage capacity of the container

### 1. SINGLE-UNIT CONTAINER

A single-unit container is one that contains a only a unit quantity of medication which can be used one time.

A single-dose container is a single-unit container designed for parenteral administration only, while a unit-dose container is a single-unit container intended for solid oral dosage forms.

### 2. MULTIPLE-UNIT CONTAINER

A multiple-UNIT container is one that encloses multiple doses and permits multiple withdrawals of oral dosage forms, while a multiple-dose container is a multiple-unit container designed for parenteral administration only.

## Others different types of containers

### 1. LIGHT-RESISTANT CONTAINERS-

Drugs that undergo photo-oxidation need to be packaged in light-resistant containers. Light resistant container protects the contents from the effects of actinic light by means of opaque covering and/or stored in a dark place (USP standard: Not more than 10% transmission at any wavelength between 290-450 nm).

### 2. WELL-CLOSED CONTAINERS

Well-closed containers protect their contents from extraneous solids and liquids and from loss of article under normal conditions of handling, storage and distribution.

### 3. TIGHT CLOSED CONTAINER-

For moisture-sensitive drugs, protects the contents from vapors, from loss or deterioration of article from effervescence, deliquescence or evaporation under normal conditions of handling, storage and distribution.

### 4. AIR TIGHT CONTAINER:

Air tight container is impermeable to solids, liquids and gases under ordinary conditions

### 5. A HERMETIC SEALED CONTAINER

A hermetic container is impervious to air or any other gas under normal conditions of handling, storage and distribution. (e.g. one that is "impervious to... gas") is necessary.

## 6.TAMPER-EVIDENT/RESISTANT

**Tamper-evident/resistant container is fitted with a device or mechanism that reveals whether the container has been opened.**



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## 7.CHILD RESISTANT CONTAINER

**Child resistant container is one that is difficult for children under 5 years of age to open within a reasonable time and that is not difficult for normal adults to use properly.**



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