

# Dosage forms

## Types of dosage forms

Prepared By:  
Upasana M. Patel  
Assistant Professor  
M.Pharm



# **TYPES OF DOSAGE FORMS AND THEIR DEFINITIONS**

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**Definition:** The manner in which drug substance are presented in the market (e.g- solids, liquids or semi solids)

## **Need for convert drug to dosage forms:**

- 1 Accurate dose.
- 2 Protection e.g. coated tablets, sealed ampoules.
- 3- Protection from gastric juice.
- 4- Masking taste and odor (to make palatable).
- 5- Placement of drugs within body tissues.
- 6- Sustained release medication.
- 7- Controlled release medication.
- 8- Optimal drug action.
- 9- Insertion of drugs into body cavities (rectal, vaginal)
- 10- Use of desired vehicle for insoluble drugs.



## **Need for different dosage form of same drug**

To minimize discomfort and instant relief and improve patient compliance

## **Desirable properties of dosage form:**

### **Should:**

- Convenient to handle, use and store
- Stable during storage and use
- Withstand mechanical shock during transport
- Flexibility in different drug strength
- Provide expected therapeutic effect
- Extent, drug release, onset, intensity, duration of action predictable
- Economical and elegant



# Classification



Based on

Physical state

Route of Administration

Site of Application

Uses

# CLASSIFICATION

Based on Physical state



**SOLID**

**SEMI-SOLID**

**LIQUID**

**GAS**

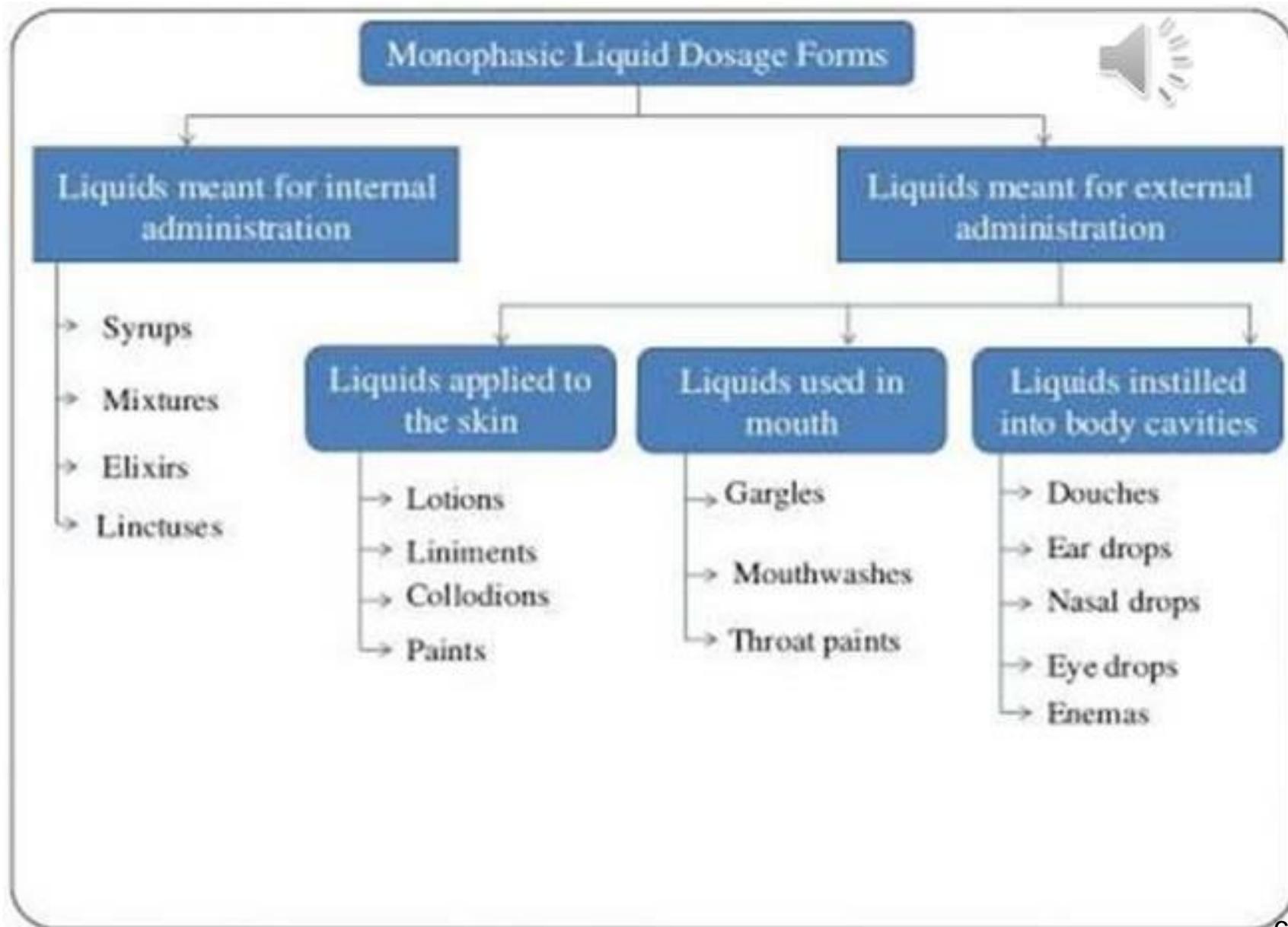
1. Unit solid:-  
\_tablets  
\_capsules  
2. Bulk dosage form:-  
\_powder  
\_Dusting powder

Cream  
Paste  
Gel  
suppositories

1. Monophasic liquid:-  
\_syrup  
\_solution  
2. Biphasic liquid:-  
\_emulsion  
\_suspension

\_Inhaler  
\_aerosols

Miscellaneous



Based on Route of administration



<b>Oral</b>	<b>Parenteral</b>	<b>Rectal</b>	<b>Urethral</b>
1. Powders	1. Solutions	1. Suppositories	1. Suppositories
2. Tablets	2. Suspensions	2. Enemas	
3. Capsules	3. Emulsions	3. Ointments	<b>Sublingual</b>
4. Solutions	<b>Intra respiratory</b> - Aerosols		1. Tablets
5. Suspensions	<b>Trans dermal</b>	<b>Vaginal</b>	2. Lozenges
6. Emulsions	1. Ointments	1. Suppositories	
7. Syrups	2. Creams	2. Tablets	<b>Intranasal</b>
8. Elixirs	3. Powders	3. Ointments	1. Solutions
9. Magmas	4. Pastes	4. Creams	2. Sprays
10. Gels	5. Lotions	5. Douches	3. Inhalations
11. Cachets	6. Plasters	<b>Conjunctival</b> - Ointments	
12. Pills	<b>Intra ocular</b> – Solutions, Suspensions, Ointments		

## Site of Application

1. Skin- Ointments, creams, lotions, liniments
2. Eye- Solutions, ointments, creams
3. Tooth- Tooth powder, tooth paste
4. Hand- Hand creams, lotions, hand washings
5. Foot- Creams, ointments, dusting powders
6. Hair- Hair cream, hair lotions, shampoos, hair fixing
7. Nasal- Solutions, sprays, inhalations



## Uses

1. Internal – all preparations except external
2. External – Ointments, lotions, creams, powders, solutions, liniments, paste, hair dyes, hair colorants

## **Definitions : Solid dosage forms**

- **Powders:** Solid dosage forms containing finely divided particles in micron size
- **Tablets:** Solid dosage form containing medicaments with or without excipients
- **Granules:** Aggregate of particles
- **Capsules:** Drug enclosed with gelatin capsule
- **Cachets:** Drugs enclosed with wafer sheet of rice
- **Pills:** Small tablet containing excipients
- **Lozenges:** Solid preparations containing sugar and gum used to medicate mouth and throat
- **Suppositories:** Solid dosage containing medicaments with suitable suppository base that inserted in to the body cavities other than mouth, like rectum, nose, ear
- **Poultices:** Solid dosage form converted to paste like preparation used externally in the skin to reduce inflammation



## **Definitions: Liquid dosage forms**

1. **Collodions:** Liquid preparations for external use having nitro cellulose used to protect the skin
2. **Droughts:** Liquid preparations for oral containing medicaments available in single dose or multiple dose
3. **Elixirs:** Liquid preparation for oral containing medicaments with suitable excipients
4. **Emulsions:** Biphasic liquid dosage form for oral containing medicaments in which fine oil globules dispersed in continuous phase
5. **Suspensions:** Biphasic liquid dosage form for oral containing medicaments in which fine solid particles suspended in continuous phase
6. **Enemas:** Liquid preparation for rectal containing medicaments



- 7. Gargles:** Concentrated aqueous solutions for external use used to treat throat infections
- 8. Gels:** Aqueous colloidal suspensions containing medicaments used as antacids
- 9. Linctuses:** Viscous, liquid oral preparations used to relief cough 
- 10. Lotions:** Liquid preparations for external application usually applied without friction
- 11. Liniments:** Liquid preparations for external application usually applied with friction
- 12. Mixtures:** Liquid oral preparations containing one or more medicaments
- 13. Mouth washes:** Concentrated aqueous solutions for external use used to treat mouth infections and oral hyginic

**14.Nasal drops:** Liquid preparations containing medicaments that are instilled in to the nose with a dropper used to treat nose infections and blockage of nose

**15.Paints:** Liquid preparations for external application to the skin or mucous membrane with soft brush

**16.Solutions :** Clear liquid preparation containing with or without medicaments used to internal or external preparations

**17.Syrups:** Sweet, viscous, concentrated liquid preparations containing with or without sugar and medicaments



## **Definitions: Semisolid dosage forms**



1. **Ointments:** Semisolid dosage forms for external use containing with or without medicaments with suitable ointment base
2. **Creams:** Semisolid dosage forms for external use containing with or without medicaments with suitable fatty base
3. **Paste:** Semisolid dosage forms for external use containing high proportion of finely powdered medicaments with suitable fatty base
4. **Gels:** Transparent semisolid dosage forms for external use containing hydrophilic or hydrophobic base with gelling agents
5. **Poultices:** Semisolid dosage forms for external use containing medicaments applied to the skin to hold the dressing and protective

## **Definitions: Gaseous dosage forms**

1. **Aerosols:** Suspension of fine solid or liquid particles with gas used to apply drug to respiratory tract having atomizer with in device
2. **Inhalations:** Internal liquid preparations containing medicaments dissolved in suitable solvent or if insoluble suspended in the propellant
3. **Sprays:** Gaseous preparations of drugs containing alcohol applied to mucous membrane of nose or throat with atomizer or nebulizer



*Thank you*