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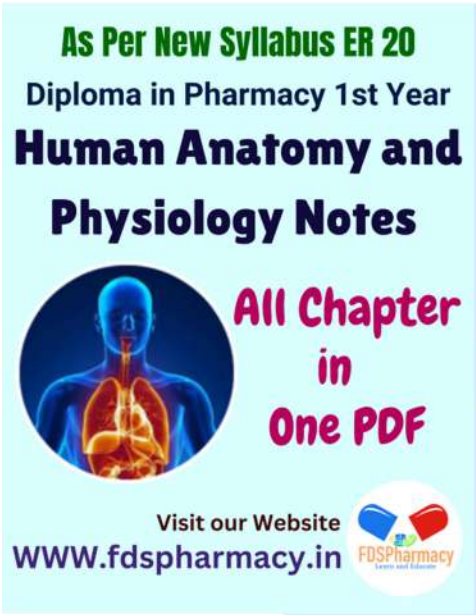
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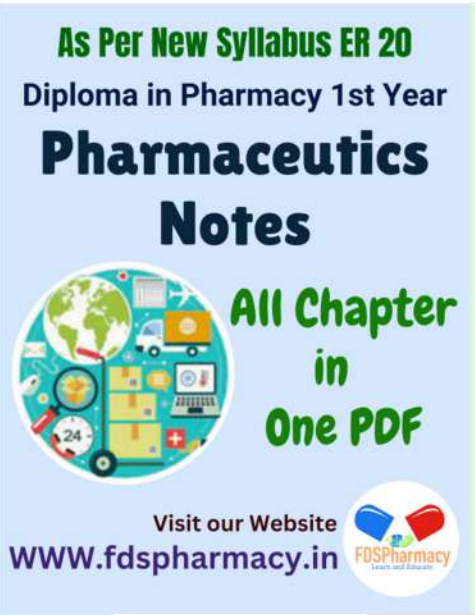
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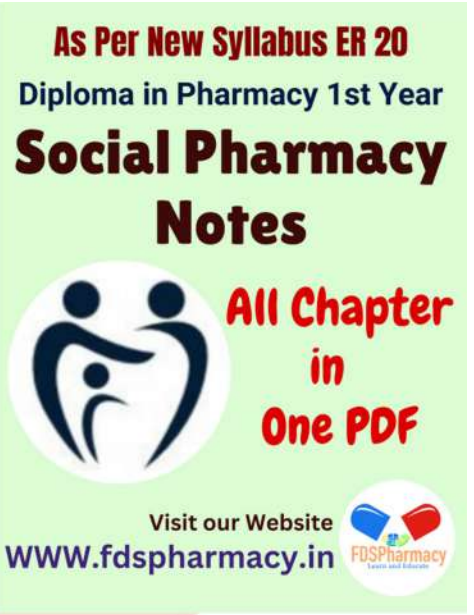
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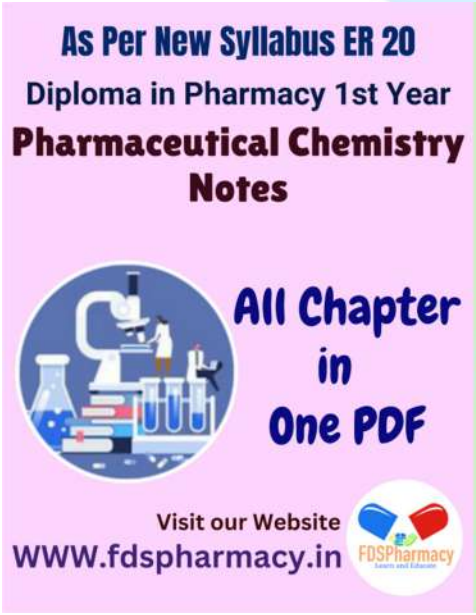
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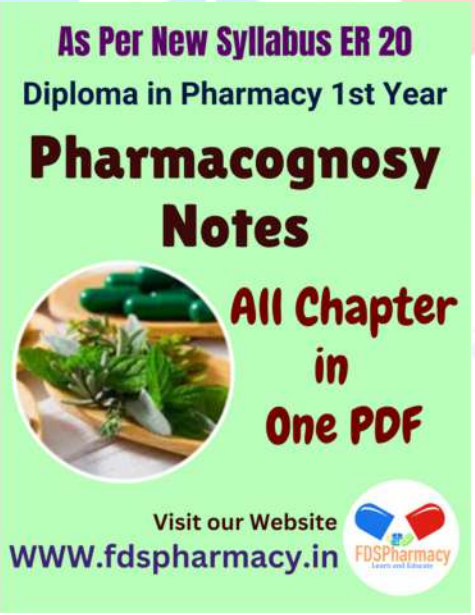
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# Link in Description

# Diploma in Pharmacy 1st Year
# Pharmacognosy
# Chapter 2 : Classification of Drugs


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# Chapter 2

## Classification of Drugs

- Drugs are chemical constituents which are obtained by the natural herbal source or synthetic source Techinically and legally the termdrug are defined in India undwer Drugs and cosmetics Act of 1940
- All medicines for internal or external se of human beings or animals all substance intended to be used for in diagnosis , treatment, migratin or prevention of diseases in human or animals
- Classification is required for each drug because they are not similar in many except like chemicals , mode of action , morphological etc
- If we are not classified them then we face many problems that is drug identification, drug Adverse effect, and drug action

**A method of drug classification should fulfil the following requirements :**

- Simplicity
- Easy applicability
- No confusion

The arrangements of classification have their specific merits and demerits Classification is necessary which could be achived in the following ways

- Alphabetical classification
- Morphological classification
- Taxonomical classification
- Chemical classification
- Pharmacological classification
- Chemotaxonomical classification

➢ **Alphabetical Classification :** The alphabetical classification system is the arrangement of crude drugs is done alphabetically by their latin and English name.

The Pharmacopoeias and reference books categorizing the crude drugs as per this system are :

- ♦ Indian Pharmacopoeia
- ♦ British Pharmacopoeia
- ♦ British Herbal Pharmacopoeia
- ♦ European Pharmacopoeia etc

**Example :** Acacia, Benzoin, Cinchona, Senna , Yellow bees wax, Zedoary

**Merits**

- The system is easily and quick use.
- These avoid confusion .
- Location, tracking and adding drugs entries can be done easily.

**Demerits**

- Alphabetical Classification system of drugs lacks relationship with the previous and successive drugs entries.

## ➢ Morphological Classification

- The morphological classification system the arrangement of crude drugs is done according to the plants parts like leaf , barks , flower , fruit, seed etc.
- Drug based on this classification system are classified into
  - Organised drugs
  - Unorganised drugs

**Organised drugs :** The drugs are obtained directly from the plants parts and contain cellular tissue, Rhizomes, barks,leaves etc.

**Example**

| Plants parts | Drugs |
|---|---|
| Rhizomes | Valerian, Ginger |
| Flower | Rose, Clove, Saffron |
| Seed | Almond, Mustard |
| Hair & Fiber | Cotton, Jute silk |
| Fruit | Papaya |

**Unorganised Drugs :** These Drugs are prepared from plants through Intermediate physical process like incision , drying or Solvent extraction.

These drugs cannot contain cellular plant tissue.

**Example**

| Category | Drugs |
|---|---|
| waxes | Beeswax |
| Dried latex | Opium |
| Dried juice | Aloe |
| Dried extract | Agar, Geletin |

**Merits**

- ❖ Identification and detection of adulteration using this drug system is not difficult
- ❖ Pratical study by this classification is more

**Demerits**

1. The chemical constituents have no correlation with the therapeutics action
2. Repetition of drugs or plants may appear.

## ➢ Taxonomical / Biological Classification

- In taxonomical or biological classification system the crude drugs are classified by their Kingdom, sunkingdom, Division, Class, Order, Family , Genus and species
- **Examples:**

| Class | Order | Family | Drugs |
|---|---|---|---|
| Monocotyledonae | Poles | Grammae | Maize, Wheat etc |
| Dicotyledonae | Rutales | Rutaceae | Lemon, peel etc |

**Merits**

- Evolutinary development are understood under taxonomical classification

**Demerits**

- It fails to recognized organized & unorganized form of crude drugs
- Chemical nature % therapectic significance of crude drugs is also not included

## ➢ Chemical Classification

- In this classification Crude Drugs are put together which are contain the similar chemical constituents
- It is very important except in the classification system because chemicals are responsible for the pharmacological action
- **Example :**

| | |
|---|---|
| Hormones & Vitamins | Yeast , Oxytonic |
| Protein & Enzymes | Gelatin , Trypsin |
| Lipids | Caster oil , Beewax |

**Merits**

- Phytochemical studies are well performed through this system

**Demerits**

- Confusion occurs when a drug contain many compounds belonging to different groups

## ➢ Pharmacological Classification

- In this classification drugs are placed together which show the similar Pharmacological / Therapeutical effect
- **Example :**

| Categories | Drugs |
|---|---|
| Central nervous system | Opium , Tea , Nux-vomica |
| Cardiovascular system | Rauwolfia |

**Merits**

- The classification system aids in recommending substituents of an unavailable drugs

**Demerits**

- Drugs with different action on the body get classified into many groups thus create confusion.

## ➢ Chemotaxonomical Classification

- Chemotaxonomy relates the positin of plants and uses chemical knowledge to biological evolution and relationships
- Plants can also classified using their chemical charecteristics
- Applying chemistry to taxonomy is known as chemotaxonomy
- At the present time chemotaxonmy is also described as chemical plant taxonomy, chemosystematics , and plant chemistry
- This classification can be done on the basis of the distribution of chemical like carbohydrates, lipids, and primary and secondary metabolism eg : Alkaloids , Glycosides

**Merits**

- This classification system is recent and provide better understanding of the relation ship between chemical constituents , their biosynthesis , and action

**Demerits**

- It is complex to recognize the chemical in plants Hence it is also a time consuming process