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A mini review on Oral dosage forms

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Review Article

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ABSTRACT

Dosage forms are the vehicles for administering drug in to the body. Oral dosage forms can be solid, liquid, and gaseous; some may be inhalers, pellets, and granules. Route of administration can be oral, topical, rectal, vaginal, and ophthalmic and also suppositories. These dosage forms differ for infant's children and adults. Based on the amount of drug it is prescribed differently for each individual. There is different mechanism of action for different dosage forms.

INTRODUCTION

Oral Solid indefinite quantity forms (Tablets and Capsules) are a number of the foremost fashionable and convenient ways of drug delivery. They will be made in exceedingly non-sterile surroundings and also the method, instrumentality and technology is well outlined and acknowledged, when quite a hundred years of development. With the high volume of merchandise made in these indefinite quantity forms, it's necessary that the unit operations for his or her production be totally understood, developed and enforced. This course focuses on the basics of every distinct process step (unit operation) with intensive discussions on these technologies needed for the producing and packaging of tablets and capsules.



Figure 1. Different dosage forms

Dosage forms are classified into solid, liquid and semi-solid forms. Solid dosage forms are of two types- Internal and external. Tablet is a dosage form which contains drug in it and also additives, preservatives, binders, diluents. In case of Buccal tablet, tablets are placed between the cheek and the gum [1-10]. Capsule is cylindrical in shape. It has

two parts: cap and body. Drug is filled in between the cap and body. They are of two types' hard gelatin and soft gelatin capsules. External can be Tooth powders and dusting powders. Tooth powders can be of different type's detergents. Preservatives and colors etc. Liquid dosage forms can be classified as monophasic and biphasic phase means direction.



Figure 2. Capsules

Monophasic dosage forms include syrup, Elixir, and Oral drops. This syrup contains preservatives, additives, binding agent's etc. These syrups contain drug inside in liquid it shows effect easily. Proper dose should be maintained. Biphasic dosage forms can be suspension or emulsion. Suspension contains drug in suspended form, where in emulsion contains drug in the form two immiscible liquids. Emulsions are usually water in oil or oil in water type. Semisolid dosage forms are external and internal. They usually applied topically on skin. They include ointments, lotions, liniments. Internal include pessaries and suppositories rectal or vaginal devices [11-20].



Figure 3. Syrup: A liquid form

There is another route of administration of drug which includes parenterals. These are sterile preparations which contains drug in the form of ampoules or vials. These injections can be intravenous (to vein) intramuscular (to muscle) or subcutaneous (to skin). Inhaler is also used for asthma patients. Nebulizer is used for reducing blockage in the nostrils for small children [21-40].



Figure 4. Injections

Advantages of solid dosage forms include:

- Safe, less expensive, immediate relief
- Accurate dose, releases drug over a long period
- Can be used for all age groups, convenient, cheap
- Absorption is fast, pain less
- Less space for storage
- Less spoilage and less microbial contamination
- Action is more rapid in liquid dosage form

Disadvantages of solid dosage forms include:

- Bitter in taste, Difficulty in swallowing
- Irritation to gastro intestinal tract–nausea and vomiting
- Unable to use for unconscious patients
- For liquid dosage form storing is problematic
- Types of release drug in the human body
- Controlled release: It delivers drug at a predetermined place
- Sustained release: It releases drug as two portions once at a place and after some time in some other place
- Release rate is not constant [41-60]

Defects of tablets:

- Capping; breaking of tablet horizontally
- Sticking; sticking to the die walls [61-88]
- Motling; it is due to improper mixing of color
- Picking; it is due to improper drying and lubrication of granules
- Cracking; cracking occurs due to improper granulation



Figure 5. Defects of tablets

CONCLUSION

Oral dosage forms can be a tablet, a capsule or drops. This route of administration is safe and results are good. These are cheaper and everyone will be aware of some tablets. The only problem of tablets is acidity. This will be balanced by taking anti-ulcer agents.

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