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# Solid dosage forms



- Drugs are prepared in various forms for administration.**
- The solid type of preparation is most common.**
- The advantages of solid drug forms are convenience of administration; accuracy and reproducibility of a dosing; increased of a drug stability and easy of mass production.**

# Solid drug forms

tablets

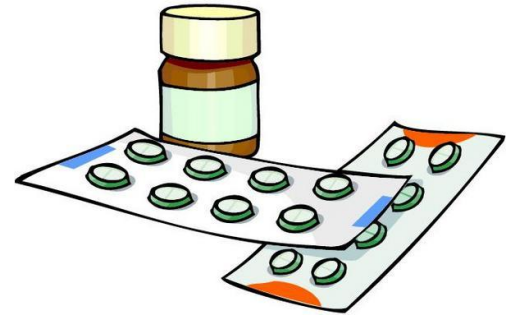
capsules

sugar-coated tablets (dragee)

powders

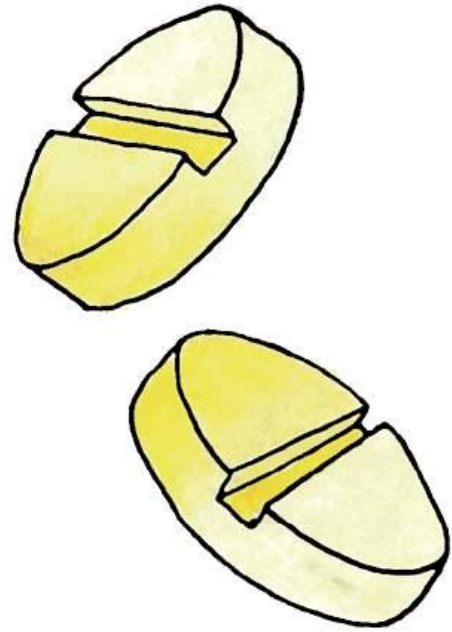
granules

sachets



# Tablets (tabuletta,-ae)

- ❑ A tablet is a solid dosage form that is prepared by compressing or molding of the drug into various sizes and shapes.
- ❑ Dissolution is the rate-limiting step in the delivery of drug from a tablet to the systemic circulation.



# **Types of tablets:**

**□ Tablets for oral administration**

**□ Tablets for vaginal administration**

**□ Tablets for implantation (pellets)**

# **Tablets for oral administration**

- Film coated tablets**
- Enteric coated tablets**
- Effervescent tablets**
- Sublingual tablets**
- Buccal tablets**
- Troches (lozenges)**
- Chewable tablets**
- Controlled release tablets - slow release tablets (SR) and modified release tablets (MR)**

# **Film coated tablets**

*latin - Film tabulettae (film tab.)*

**□ The tablet is coated with a membrane of polymeric substances that improves physicochemical stability of the drug and delays the rate of drug absorption.**

**□ e.g. Augmentin**

# **Enteric coated tablets**

*latin - Tabulettae enterosolventes*  
*(tab. enterosolv.)*

**□ The tablet is coated with an acid-resistant substance that will dissolve only in the less acidic portions of the intestines**

**□ e.g. Voltaren, Ospen**



# **Effervescent tablets**

*latin – tabulettae effervescentes*

*(tab. efferv.)*

- The tablet contain sodium bicarbonate in addition to the drug substance.**
- Before use they are dissolve in water.**
- e.g. Acetylsalicylic acid**

# **Sublingual tablets**

*latin – linguetta (ling.)*

- The tablet is placed under the tongue**
- Sublingual tablets are absorbed quickly into the bloodstream**
- e.g. Nitroglycerin, Uprima**

# **Buccal tablets**

*latin – tabulettae buccales (tab. bucc.)*

- Buccal tablets are placed in the pouch between the cheek and gum**
- They are usually small, flat and oval in shape**
- e.g. Sandopart**

# Troches (lozenges or pastilles)

*latin – pastillae*

□ The tablets contain a drug substance in flavored base.

□ Lozenges are allowed to dissolve in the mouth. They are commonly used for cold and sore throat.

□ e.g. Chlorhexidine



# **Chewable tablets**

**□ The tablets are placed in the mouth, chewed and swallowed.**

**□ e.g. Talcid, Aspirin Direct**

# **Slow release tablets (SR)**

*latin - depot-tablettaa (depot-tab.)*

- The tablets are treated with special coatings so that various portions of the drug will dissolve at different rates.**
- They are designed to produce drug effects over an extended time.**
- SR tablets are administered less frequently (usually once daily).**
- e.g. Isoptin SR, Ravel SR**

# **Modified release tablets (MR)**

**□ Modified release tablets are a more advanced version in which release of the active ingredient is related to time.**

**□ e.g. Preductal MR**

## **Implants (pellets)**

- A small tablet that is prepared for insertion under the skin by giving a small surgical cut into the skin which is stitched after the insertion of tablets. The tablet must be sterile one.**
- Contraceptive tablets are formulated as implant.**



**Tablets for vaginal administration**  
*latin – tabulettae vaginales (tab. vag.)*

**□ The tablets are intended for insertion into the vagina.**

**□ e.g. Metronidazole, Tinidazole,  
Dinprostone**

# **Sugar coated tablets** *latin – dragee (drag.)*

- The tablet that contains active ingredient(s) of unpleasant taste may be covered with sugar to make it more palatable.**
- This type of tablet should be administered in whole form.**
- Example: Vitaferro, Quinine.**

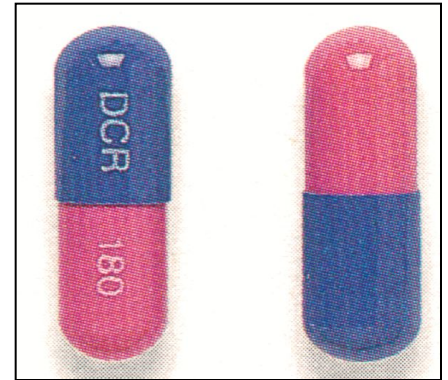


# Capsules

latin – capsulae (caps.)

❑ The drug is contained in a gelatin shell that breaks open after the capsule has been swallowed, releasing the drug.

❑ The hard-shell gelatin capsules contain solid drugs



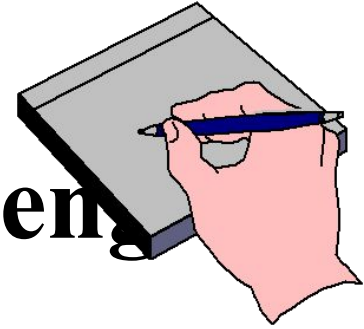
❑ The soft-shell gelatin capsules contain oils



**□ Slow-release capsules contain pellets that dissolve in the gastrointestinal tract, releasing the drug slowly.**

**□ Gastro-resistant capsules contain pellets that dissolve in the intestine.**

# Writing prescription order for tablets, sugar coated tablets, and capsules



- The name of the drug and the strength in metric units are given in praescriptio.
- The total number of the single doses (or the number of blisters) and the drug form are given in subscriptio.
- The directions to the patient are filled in signatura.

**4a)** Prescribe nitroglycerin in sublingual tablets of 0,5 mg.

*Rp/ Nitroglycerini 0,5 mg*

*D. scat. №1 in ling.*

*S. Place 1 tablet under the tongue.*

**4b) Prescribe metronidazole in vaginal tablets of 500 mg.**

*Rp/ Metronidazoli 500 mg*

*D.scat. №1 in tab. vag.*

*S. Insert 1 tablet in vagina every evening for 7 days.*

**5a)** Prescribe ofloxacin in film coated tablets of 400 mg.

*Rp/ Ofloxacini 400 mg*

*D. scat. №1 in film tab.*

*S. Take 1 tablet every 12 hours for 5 days.*



**5b) Prescribe acetylsalicylic acid  
in effervescent tablets of 324 mg.**

***Rp/ Acidi acetylsalicylici 324 mg***

***D. scat. №1 in tab.efferv.***

***S. Take 1 tablet 3 times daily.***

**6a) Prescribe isoptin in  
slow-release tablets of 240 mg.**

***Rp/ Isoptin SR 240 mg***

***D. scat. №1 in tab.***

***S. Take 1 tablet daily.***

**6b) Prescribe preductal in modified-release tablets of 35 mg**

*Rp/ Preductal MR 35 mg*

*D. scat. №1 in tab.*

*S. Take 1 tablets 2 times daily.*

**7a)** Prescribe allergosan in dragee of 25 mg.

*Rp/ Allergosani 25 mg*

*D. scat. №1 in drag.*

*S. Take 1 dragee 2 times daily.*

**7b) Prescribe amoxicillin in capsules of 500 mg.**

*Rp/ Amoxicillini 500 mg*

*D. scat. №1 in caps.*

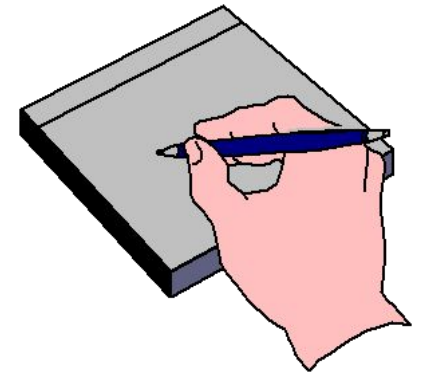
*S. take 2 capsules every 8 hours for 5 days .*

# Powder

*latin - pulvis (pulv.)*

- Powders are drugs or drug extracts that are dried and ground and micronized into fine particles.**
- According to the division into prescribed doses powders are pulveres indivisi (all doses are given inseparably) and pulveres divisi (they are divided into the prescribed number of doses).**
- According to the composition are simplex powders (consist one active ingredient) and complex powders (a mixture of more than one active ingredient).**

# **Writing prescription order for bulk powders (pulveres indivisi)**



- The name and the total bulk of the drug are filled in praescriptio**
- The size of the single dose and the number of doses per day written in signatura**

**8a)** Prescribe as powder 50 g  
sodium bicarbonate.

*Rp/ Natrii hydrocarbonatis 50 g*

*D. S. Take one teaspoon 1 hour  
after meals and at bedtime.*



**8b)** Prescribe 20 powders  
contain 50 mg Caffeine and 500  
mg Analgin each.

*Rp/ Coffeini Natrii benzoatis 50 mg*  
*Analgini 500 mg*

*M. D. t. d. №20*

*S. Take 1 powder 3 times daily.*

**9a)** Prescribe 20 powders  
contain 10 mg Codeine each.

*Rp/ Codeini phosphatis 10 mg*  
*Sacchari lactatis q.s.*

*M. D.t.d. №20*

*S. take 1 powder 3 times daily.*

*q.s. – quantum satis*

**9b)** Prescribe as officinal powder Topocin powder 5 g for external application.

*Rp/ Pulv. adsp. Topocini 5 g*

*D. scat. №1*

*S. For external application.*