

Prescription writing



Pharmaceutical
substance



Dosage form



Drug/ Medical
drug

Sources and manufacture of medicines

Medicinal plant raw materials



Chemical compounds, substances



Medicines forms

Solid



- Tablets
- Powder
- Dragee
- Capsule

Liquid



- Solution
- Tincture
- Drops
- Syrup

Soft



- Ointment
- Gel
- Cream
- Suppositories

Gasiform



- Aerosol

Dose and unit of dose

Dose – is a amount of medicine administrating/entering in the body.

Unit of medicine's dose are:

1. Grams and milligrams (solid and soft forms)



10,0	Ten grams	10 000 mg
1,0	One gram	1000 mg
0,1	One decigram	100 mg
0,01	One centigram	10 mg
0,001	One milligram	1 mg

2. Milliliters and drops (liquid forms)



1 liter	One liter	1000 ml
0,1 liter	One deciliter	100 ml
0,01 liter	One centiliter	10 ml
<u>0,001 liter</u>	<u>One milliliter</u>	<u>1 ml</u>

Type of spoon	Volume (ml)
Tablespoon	15 ml
Dessert spoon	10 ml
Tea spoon	5 ml



What is a prescription?

Prescription – is a doctor's written request to the pharmacy.

What is the difference between next word-combination?

1. ***Pharmaceutical substance*** – it is a substance for production of medicines/drug
2. ***Dosage form*** – the state of the medicinal preparation corresponding to the methods of its administration and application and ensuring the achievement of the necessary therapeutic effect
3. ***Medical drug/Drug*** – substance in the medicinal forms, used for the prevention, diagnosis, treatment of the disease, rehabilitation, for the preservation, prevention or termination of pregnancy

Basic rules of prescription writing

1. From one to three medicines can be written on the blank №107/y-88.
2. All medicines should be written by INN (International non-proprietary name), except Homeopathic medicines, alkaloids and medicines (substances) of plant origin.
3. Only allowed abbreviations can be used in the prescriptions.
4. Corrections in the prescription are forbidden.
5. The instruction for patient is given in his/her native language.
6. All solid medicines prescription are written only in milligram, except powder for external use (prescription in gram, word «gram» is not writing).
7. Liquid medicines for injection prescription are written in mg/ml, for internal use – milliliter (ml).

Solid forms

Prescription writing of the solid forms

Classification



Powder



Tablets



Capsules



Dragee

Powder

1. On the way of application

1.1. internal

- ✓ for application per os
- ✓ as powder for soluble for injection

1.2. external

- ✓ for application as dusting powder

2. On the dosing method

2.1 undivided

2.2 divided

What type of powder you can see in the prescription writing?

Rp.: Magnesium hydrosilicatis 10,0

Da. Signa. Apply the powder to the affected area of the skin twice a day.

It is a undivided powder.



- Rp.: Ascorbici acidi 0,05
- Sacchari 0,3
- M.f.pulv.
- Da tales doses numero 10.
- Signa. Use the powder to the oral twice a day.

It is a divided powder.



Rp.: Silicii dioxydi colloidi 50,0

D.S. Take one tablespoon three times a day,
beforehand dissolve in $\frac{1}{2}$ glass of water.



Rp.: Silicii dioxydi colloidi 3,0

D.t.d. №10.

S. Take powder three times a day, beforehand
dissolve in $\frac{1}{2}$ glass of water.



Powder for soluble for injection



Rp.: Benzylpenicillini natrii 500 000 UE

D.t.d. №20

S. 500 000 UE i/m each 4 hour (previously)
pre-dissolved in 5 ml water for injection

Tablets

Tablets – are the solid dosage drugs form, intended for oral use.
Tablets are produced by compressing of substances.



Prescription writing of the tablets

Detailed form

Rp.: Tabulettam Paracetamoli 500 mg.

Da tales doses numero 10.

Signa. Take/Use one tablet oral tree times a day.

Short form

Rp.: Tabl. Paracetamoli 500 mg.

D.t.d. №10.

S. Take/Use one tablet oral tree times a day.

Prescription writing of the tablets

The first case

Rp.: **Tabulettas Paracetamoli 500 mg №10.**

D.S. Take one tablet oral tree times a day.

The second case

Rp.: **Tabulettas «Cyston» №10.**

D.S. Take one tablet oral tree times a day.

Capsules

- - a solid dosage form in which the drug is enclosed in a hard or soft soluble container (shell)
- Capsules are taken orally.
- Capsules are usually gelatin.



Prescription writing of the capsules

The first case. Medicine is one medical active substance.

Rp.: Tetracyclini hydrochloridi 250 mg.

Da tales doses numero 20 in capsulis gelatinosis.

Signa. Take one capsule orally three time a day.

The second case. Medicines consist of several medical substances.

Rp.: Capsules «Fenules» №20.

Da. Signa. Take one capsule orally three time a day

Benefits and limitations of solid forms

Benefits

- Solid forms are rather convenient in usage.
- Solid forms can be stored for a long period of time.
- Solid forms mask an unpleasant taste and odor.
- Solid forms are transported easily.

Limitations

- Solid forms begin to act during hour.
- Solid form can not be used as medicines for ambulance.

**Ointment.
Characteristic.**

Ointment – is a soft viscously consistency medicinal form, which are used for external topical application.

Ointments are prepared by mixing various medicines with **ointment bases**.

Ointment bases are form-building substance. They are carriers of medicines substance in ointment.

Ointment bases are divided into **three groups**:

1. Hydrophobic – vaseline, wax, vegetable oils.
2. Hydrophilic – collagen, agar, polymer high molecular weight compounds polyvinylpyrrolidone
3. Hydrophobic-hydrophilic (mix vaseline with lanoline)

Ointment

Classification on consistency:

- ✓ Ointment themselves
- ✓ Cream
- ✓ Paste
- ✓ Gel
- ✓ Liniment

Classification on use:

- ✓ Dermatological
- ✓ Ophthalmological
- ✓ Others ...

Ointment themselves

Ointment are usually undosed form, therefore they prescribed in total volume.

- Prescribing 20 g officinal ointment containing 0,5 % Prednisolon.

Rp.: Unguenti Prednisoloni 0,5% - 20,0.

Da. Signa. Apply on derma 3 time a day.

- Prescribing 20 g officinal ointment «Levomecol».

Rp.: Unguenti «Levomecol» 40,0.

Da. Signa. Apply on derma 3 time a day.

Varieties of ointment

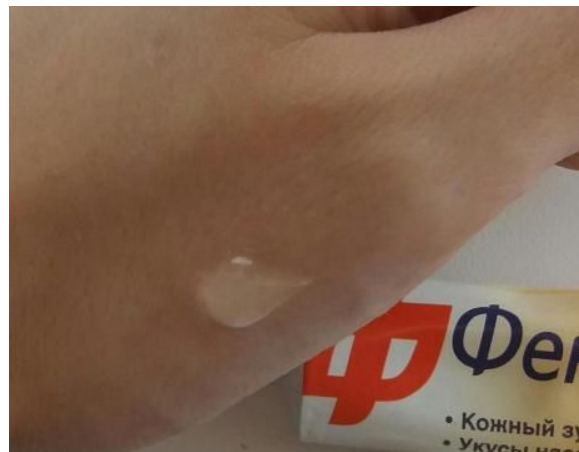
- Cream – less viscous than ointment.



Rp. : Cremoris Hydrocortisoni 1% - 10,0

Da. Signa. Apply on damaged skin three times a day.

- Gel – less viscous and include gelatin as ointment base.



Rp.: Gelumi Diclofenaci 1% - 30,0

Da. Signa. Apply on damaged skin three times a day.

Varieties of ointment



- Paste – is a kind of ointment, containing no less 25% but no more 65% solid substances (powder)

Rp.: Pastae Zinci 25% - 25,0

- *Da. Signa. Apply on a moist area of the skin three time a day.*

Suppositories





Suppositories – are dosage soft medical form

1. It is **solid** at room temperature
It is **softened** at body temperature
2. Cacao Oil is basically used for prepared of suppositories.
3. There can be distinguished rectal suppositories – ***Suppositoria rectalia and*** vaginal suppositories - ***Suppositoria vaginalia.***

Rectal suppositories

- Usually dome-shaped
- Suppositories mass ranged from 1,1 to 4,0
- If the mass of suppositories is not indicated in the prescription they usually weigh 3,0.



Vaginal suppositories

- Usually spherical or egg-shaped
- Suppositories mass ranged from 1,5 to 6,0
- If the mass of suppositories is not indicated in the prescription they usually weigh 4,0.

Rp.: Suppositorium cum

Paracetamolo 250 mg

Da tales doses numero 10.

Signa. Insert one suppository rectally twice a day when fever

Rp.: Suppositorium cum Synthomycino 250 mg

Da tales doses numero 10.

Signa. Insert one suppository vaginally twice a day

Relatively rarely suppositories are prepared at the chemist.

In this case prescription should be detailed and include all used substances.

- Prescribe 10 suppositories containing 0,02 grams of Promedol each. Insert rectally at the pain.

Rp.: Promedoli 0,02

Olei Cacao 3,0

Misce ut fiat suppositorium rectale.

Da tales doses numero 10.

Signa. Insert rectally at the pain.



Aerosols



Aerosols – aerodisperse systems, consisting of

1. Dispersion medium - containing air, gas or mixture of gas.
2. Dispersion phase containing solid medicines (powder), liquid medicines (solution) or gaseous substances.

Two variants of prescription

- *Rp.: Aerosolum Salmeteroli 25mkg/1 dosim – 125 doses.*

D.S. Inhale three time a day.

- *Rp.: Aerosolum Fenoteroli 0,1 mg/1dosim – 10 ml*

D.S. Inhale one dose at the asthma attack.

Other cases of prescription writing of aerosol

When aerosol contains **several medicines** and has a **brand-name** the prescription has to be written out on brand-name.

The name is taken in quotation marks.

*Rp.: Aerosolum «**Inhalypt**» - **30 ml.***

D.S. Inhale three time a day.

When aerosol is **not dosed** the prescription has to be written out with indicated the name and the volume (weight) of aerosol.

*Rp.: Aerosolum «**Dexpanthenol**» - **150 ml.***

*D.S. Apply three time a day at the affected **skin.***