

DANYLO HALYTSKY LVIV NATIONAL MEDICAL UNIVERSITY  
DEPARTMENT OF LATIN AND FOREIGN LANGUAGES

**Ukraine NOW** 



## **Professional English: PHARMACOLOGICAL TERMS**

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*Professional English: Pharmacological Terms* is designed for the students, postgraduate students, and health care professionals with the aim of meeting the requirement for improving the knowledge of English pharmacological terms. The Guide primarily intends to fulfill the learning purposes of the students at Danylo Halytsky LNMU and can be incorporated within curriculum subjects in particular “English for professional purposes (Pharmacological Terms)”, “Pharmacology” or other relevant disciplines.

*Professional English: Pharmacological Terms* covers all basic vocabulary of Pharmacology and includes explanatory notes and tasks to facilitate learning and encourage memorizing professional terminology.

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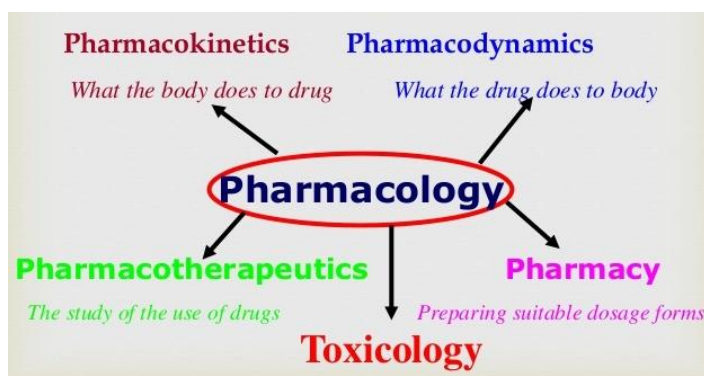
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## Pharmacology: Branches and basic terms

### Drug forms and classes

#### 1.1. Pharmacology and its branches

**Pharmacology** is related to the pharmacy but it is a separate discipline in the health sciences. **Pharmacy** is the science and art concerned with the preparation and standardization of drugs, while pharmacology is the study of how a drug affects a biological system and how the body responds to the drug. The discipline encompasses the sources, chemical properties, biological effects, and therapeutic uses of drugs. Pharmacologists are often interested in **therapeutics**, which focuses on the effects of drugs and other chemical agents that minimize disease. Both pharmacology and pharmacy also encompass **toxicology** (*the study of the effects of poisonings and drug overdoses as well as their detection and treatment*) and **posology** (*the study of drug dosages*).



Pharmacology has two major branches:

- **Pharmacokinetics**, which refers to the **absorption, distribution, metabolism, and excretion of drugs** (=what the body does to the drug); and
- **Pharmacodynamics**, which refers to the molecular, biochemical, and physiological effects of drugs, including drug mechanism of action (=what the drug does to the body)

The principal **difference between pharmacology and therapeutics** is that the first is based on the properties of drugs from which are deduced their clinical uses and contraindications, whereas the second is based on the patient and the disease to be treated and looks for the best means for reaching that point: *drugs and other means, surgery, psychotherapy, radiotherapy, functional rehabilitation, pacemaker, angioplasties*.

\*Adapted from: *Pharmacology Archives*. Available at: <https://explorehealthcareers.org/field/pharmacology/>;  
*Pharmacy*. Available at: <https://www.britannica.com/science/pharmacy>

#### 1.2. Pharmacology: basic terms

<b>Agonist</b>	A drug that attaches to a receptor and initiates an action; a drug that binds to a receptor and activates a physiologic response or drug action
<b>Antagonists</b>	A drug that attaches to a receptor, does not initiate an action, but blocks an agonist from producing an effect; a drug that binds to a receptor and interferes with other drugs or substances from producing a drug effect
<b>Affinity</b>	Drugs work by binding to specific receptors and activating them, causing a downstream effect. <b>Affinity</b> is how avidly a drug binds its receptor or how the chemical forces that cause a substance to bind its receptor. <b>Affinity</b> is like a drug's desire to connect to an open receptor.
<b>Potency</b>	Amount of a drug that is needed to produce a given effect
<b>Efficacy</b>	Maximum effect that a drug can produce regardless of dose

\*Adapted from: *Pharmacology: Basic Terminology*. Available at: <https://www.youtube.com/watch?v=F0GHaLExHEo>  
*Pharmacology Terms: Affinity, Efficacy & Potency*. Available at: <https://study.com/academy/lesson/pharmacology-terms-affinity-efficacy-potency.html>

### 1.3. Drug Forms

Some drugs are available **over-the-counter (OTC)**, sold without a doctor's **prescription**, which is an order for medication with the **dosages, directions, route, and timing of administration** included. Drugs usually come with instructions listing the potential **side effects (=adverse effects)**. Sometimes other drugs or even foods are **contraindicated** (=advised against) to be taken along with the medication being given.

<b>Therapeutic drugs</b> (= <i>medicines, medications</i> )	are used to cure, alleviate, diagnose, treat, or prevent illness.
<b>Addictive drugs</b> (= <i>habit-forming</i> )	are used in unregulated and excessive quantities to stimulate or depress someone's moods.
<b>Vitamins</b>	organic substances found in food, are also a form of drugs

Drugs can have several different names. First is a chemical name that describes the chemical formula of the drug. Second is a **generic** name that is the official name of the drug. The third is a **trade, brand, or proprietary name** that is given and copyrighted by the manufacturer for a specific drug. *E.g. Generic n. – Acetaminophen; Trade n. – Tylenol.*

Drugs appear as **liquids, semiliquids, solids, semisolids, and gases**.

All drugs come in many forms – **pills** (usually stored in a small bottle called a *vial*), **tablets, capsules** (*enteric-coated*), **emulsions, suspensions, suppositories, foams, lotions, creams, powders, transdermal patches, sprays, or gases** – depending on how the drug is to be administered to the patient.

<b>pill = tablet</b>	a small flat round piece of medicine that you swallow whole, without biting it
<b>capsule</b>	a small container that has a measured amount of medicine inside and that dissolves (= becomes part of a liquid) when you swallow it (= make it go down your throat into your stomach)
<b>suppository</b>	a small piece of solid medicine that is placed in the rectum or vagina and left to dissolve gradually
<b>foam</b>	a chemical substance that forms or produces a soft mass of very small bubbles, used for washing, shaving (= cutting hair from the skin), or putting out fires
<b>lotion</b>	a liquid used for cleaning, protecting or treating the skin
<b>cream</b>	a soft substance used on your skin to protect it or make it feel soft
<b>powder</b>	a dry mass of very small fine pieces
<b>transdermal patch</b>	a medicated adhesive patch that is placed on the skin to deliver a dose of medication through the skin and into the bloodstream
<b>spray</b>	a substance that is forced out of a container such as an aerosol, in very small drops
<b>emulsion</b>	any mixture of liquids that do not normally mix together, such as oil and water
<b>suspension</b>	a liquid with very small pieces of solid matter floating in it; the state of such a liquid
<b>elixir</b>	oral liquid dissolved in alcohol
<b>tincture</b>	topical liquid dissolved in alcohol
<b>solution</b>	the drug dissolved in liquid
<b>lozenge</b>	a drug in a candy-like base, dissolves slowly and coats the oropharynx
<b>syrup</b>	an oral liquid drug in a thick solution, coats the oral pharynx

## 1.4. Drug classes

Drugs are classified by their use in the body:

<b>Drug Class</b>	<b>Purpose</b>
<b>analgesic</b>	relieves pain without causing loss of consciousness
<b>anesthetic</b>	produces a lack of feeling either locally or generally
<b>antacid</b>	neutralizes stomach acid
<b>antianemic</b>	replaces iron
<b>antianginal</b>	dilates coronary arteries to increase blood flow and reduce angina
<b>antianxiety</b>	relieves anxiety
<b>antiarrhythmic</b>	controls cardiac arrhythmias
<b>antibiotic, anti-infective, antibacterial</b>	destroys or inhibits the growth of harmful microorganisms
<b>anticholinergic</b>	blocks certain nerve impulses and muscular reactions, as in the movements of Parkinson's disease, or in cases of nausea
<b>anticoagulant</b>	prevents blood clotting
<b>anticonvulsant</b>	inhibits convulsions
<b>antidepressant</b>	prevents or relieves symptoms of depression
<b>antidiabetic</b>	lowers blood sugar or increases insulin sensitivity
<b>antidiarrheal</b>	prevents or slows diarrhea
<b>antiemetic</b>	prevents or relieves nausea and vomiting
<b>antifungal</b>	destroys or inhibits fungal growth
<b>antihistamine</b>	slows allergic reactions by counteracting histamines
<b>antihypertensive</b>	controls high blood pressure
<b>anti-inflammatory, nonsteroidal anti-inflammatory drug (NSAID)</b>	counteracts inflammations
<b>antineoplastic</b>	destroys malignant cells
<b>antiparkinsonian</b>	controls symptoms of Parkinson's disease
<b>antipsychotic</b>	controls symptoms of schizophrenia and some psychoses
<b>antipyretic</b>	reduces fever
<b>antitubercular</b>	decreases growth of microorganisms that cause tuberculosis
<b>antitussive, expectorant</b>	prevents or relieves coughing
<b>antiulcer</b>	relieves and heals ulcers
<b>antiviral</b>	controls the growth of viral microorganisms
<b>barbiturate</b>	controls epileptic seizures
<b>bronchodilator</b>	dilates bronchial passages
<b>decongestant</b>	reduces nasal congestion and/or swelling
<b>diuretic</b>	increases excretion of urine
<b>hemostatic</b>	controls or stops bleeding
<b>hypnotic, sedative</b>	produces sleep or a hypnotic state
<b>hypoglycemic</b>	lowers blood glucose levels
<b>laxative</b>	loosens stool and promotes normal bowel elimination
<b>vasodilator</b>	decreases blood pressure by relaxing blood vessels

*\*Adapted from: Medical terminology: language for healthcare/Nina Thierer . . . [et al.]. —3rd ed.*

## EXERCISES

### Task 1. Choose proper terms to the definitions:

1. The science and art concerned with the preparation and standardization of drugs.
  - toxicology
  - posology
  - pharmacokinetics
  - pharmacy
  - pharmacodynamics
2. The study of how a drug affects a biological system and how the body responds to the drug.
  - pharmacy
  - pharmacology
  - toxicology
  - posology
  - pharmacokinetics
3. The study of the effects of poisonings and drug overdoses as well as their detection and treatment.
  - pharmacokinetics
  - pharmacodynamics
  - toxicology
  - posology
  - pharmacology
4. The study of drug dosages
  - pharmacology
  - posology
  - toxicology
  - pharmacokinetics
  - pharmacodynamics
5. A branch of pharmacology which refers to the absorption, distribution, metabolism, and excretion of drugs (=what the body does to the drug)
  - pharmacokinetics
  - posology
  - pharmacodynamics
  - pharmacy
  - toxicology
6. A branch of pharmacology which refers to the molecular, biochemical, and physiological effects of drugs, including drug mechanism of action
  - pharmacy
  - toxicology
  - posology
  - pharmacodynamics
  - pharmacokinetics

7. A drug that attaches to a receptor and initiates an action; a drug that binds to a receptor and activates a physiologic response or drug action
- antagonists
  - affinity
  - agonist
  - potency
  - efficacy
8. A drug that attaches to a receptor, does not initiate an action, but blocks an agonist from producing an effect; a drug that binds to a receptor and interferes with other drugs or substances from producing a drug effect
- atom
  - potent
  - efficacy
  - agonist
  - antagonist
9. Drugs work by binding to specific receptors and activating them, causing a downstream effect. Affinity is how avidly a drug binds its receptor or how the chemical forces that cause a substance to bind its receptor. Affinity is like a drug's desire to connect to an open receptor.
- medicines
  - diuretics
  - efficacy
  - agonists
  - antagonists
10. Amount of a drug that is needed to produce a given effect
- potency
  - efficacy
  - affinity
  - agonist
  - antagonist
11. Maximum effect that a drug can produce regardless of dose
- efficacy
  - agony
  - strength
  - affinity
  - potency



**Task 2. Give the class (not the name) of a drug that does the following:**

1. Stops diarrhea antidiarrheal
2. Prevents/stops angina: \_\_\_\_\_
3. Increases excretion of urine: \_\_\_\_\_
4. Reduces blood pressure: \_\_\_\_\_
5. Corrects abnormal heart rhythms: \_\_\_\_\_
6. Relieves symptoms of depression: \_\_\_\_\_
7. Prevents blood clotting: \_\_\_\_\_
8. Promotes vomiting: \_\_\_\_\_
9. Relieves pain: \_\_\_\_\_
10. Neutralizes stomach acid: \_\_\_\_\_

**Task 2. Circle “T” for true or “F” for false:**

1. All medications require a prescription. T F
2. The trade name and brand name are the same. T F
3. A capsule is a small solid tablet. T F
4. A tablet used sublingually is inserted under the tongue. T F
5. A capsule is a small solid tablet. T F
6. A suppository can only be used rectally. T F
7. You should never swallow a suppository. T F

**Task 3. Choose the correct definition for the terms:**

**1. Analgesic**

- . relieves bouts of loose bowels
- . reduces fever
- . relieves pain
- . works on a mood disorder
- . relieves indigestion

**2. Antidiarrheal**

- . reduces fever
- . relieves bouts of loose bowels
- . relieves pain
- . relieves indigestion
- . works on a mood disorder

**3. Antipyretic**

- . relieves indigestion
- . reduces fever
- . relieves bouts of loose bowels
- . relieves pain
- . reduces fever

**4. Antidepressant**

- . normalizes heart rhythm
- . works on a mood disorder
- . reduces fever
- . relieves bouts of loose bowels
- . relieves pain

## **5. Antacid**

- . works on a mood disorder
- . reduces fever
- . relieves bouts of loose bowels
- . relieves indigestion
- . normalizes heart rhythm

## **6. Antiarrhythmic**

- . reduces fever
- . normalizes heart rhythm
- . relieves indigestion
- . works on a mood disorder
- . relieves bouts of loose bowels

## **7. Antianemic**

- . relieves bouts of loose bowels
- . replaces iron
- . relieves indigestion
- . works on a mood disorder
- . reduces fever

## **8. Antianginal**

- . relieves heart pain
- . replaces iron
- . relieves indigestion
- . works on a mood disorder
- . reduces fever

## **9. Antianxiety**

- . relieves heart pain
- . replaces iron
- . relieves indigestion
- . relieves nervousness
- . works on a mood disorder

## **10. Antitussive**

- . prevents or relieves coughing
- . lowers blood glucose
- . relieves heart pain
- . replaces iron
- . relieves indigestion

## **11. Diuretic**

- . prevents or relieves coughing
- . relieves nervousness and feelings of dread
- . increase excretion of urine
- . relieves heart pain
- . replaces iron

## **12. Hypoglycemic**

- . relieves heart pain
- . lowers blood glucose
- . increase excretion of urine
- . prevents or relieves coughing
- . relieves nervousness and feelings of dread

## **13. Laxative**

- . prevents or relieves coughing
- . loosens stool and promotes bowel elimination
- . lowers blood glucose
- . increase excretion of urine
- . relieves nervousness and feelings of dread

## **14. Generic**

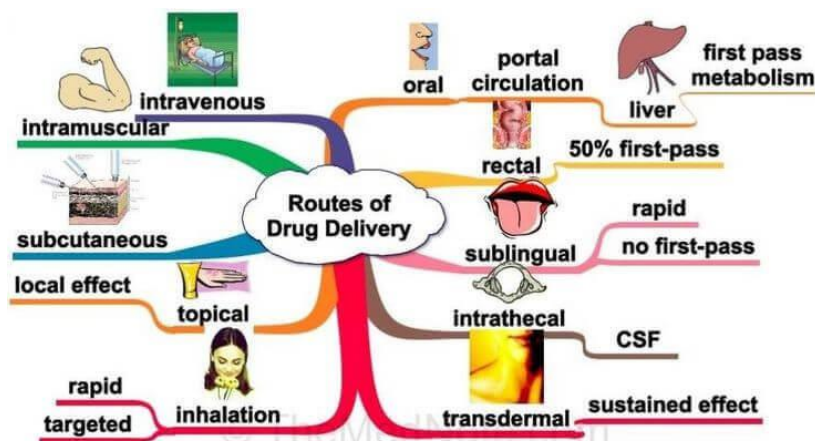
- . trade name
- . proprietary name
- . official drug name
- . nickname
- . surname

## **15. Brand Name**

- . official drug name
- . trade name
- . proprietary name
- . trade name
- . nickname

### 2.1. Pharmacology: Administration of drugs

**Oral administration** is the most common method for giving pills and some liquids. Liquids can be swallowed, sprayed, or injected. Tablets and some liquids can also be placed **sublingually**, under the tongue, or **buccally**, inside the cheek, where they are left to dissolve.



**Suppositories**, drugs mixed with a semisolid melting substance, are inserted into the vagina, rectum, or urethra are either topical or systemic drugs.

**Foams** are generally inserted into the vagina.

**Lotions** and creams are applied **topically** to the surface of the skin.

**Powders** may be inserted into a gelatin capsule or mixed with a liquid.

**Liquids** or gases can be administered in **inhalation** form in which tiny droplets are inhaled through an inhaler, nebulizer, or spray.

**Inhalants** are usually given in **metered doses**.

**Sprays** can be applied topically to the skin, into the nose (**intranasal**), or into the mouth.

**Suppositories**, drugs mixed with a semisolid melting substance, are inserted into the vagina, rectum, or urethra are either topical or systemic drugs.

**Injection** of a drug is called **parenteral administration**. Some parenteral administration is topical, for example:

**Intradermal** or **intracutaneous** administration is the injection of a needle or **syringe** just beneath the outer layer of the skin to check for local reactions.

**Subcutaneous** administration is the injection of the substance into the fatty layer of tissue below the outer portion of the skin.

**Intramuscular** administration is the injection of drugs deep into the muscles.

**Intravenous** administration is the injection of drugs through an **intravenous (IV)** tube.

There are other types of parenteral injections that can only be performed by a physician. These types of injection are: **intracardiac** (directly into heart muscle), **intra-arterial** (directly into an artery), **intraspinal** or **intrathecal** (directly into spinal spaces as in a case of severe pain or cancer), and **intraosseous** (directly into bone). For steroids and **anesthetics**, injections are done *intra-articularly*, or directly into a joint.

## 2.2. Pharmacology: Combining forms and abbreviations

The following *combining forms* and *abbreviations* relate specifically to pharmacology.

COMBINING FORM	MEANING	EXAMPLE
<b>chem(o)</b>	chemical	<i>chemotherapy</i> , treatment of a disease with chemical substances
<b>pyret(o)</b>	fever	<i>pyretogenous</i> , causing fever
<b>tox(o), toxi, toxico</b>	poison	<i>toxicogenic</i> , caused by a poison

ABBREVIATION	MEANING	ABBREVIATION	MEANING
<b>a.c.</b>	before meals (Latin <i>ante cibum</i> ), usually, one-half hour preceding a meal	<b>BID, b.i.d</b>	twice a day (Latin <i>bis in die</i> )
<b>a.u., AU</b>	each ear (Latin <i>auris uterque</i> )	<b>a.d., AD</b>	right ear (Latin <i>auris dexter</i> )
<b>ad</b>	up to	<b>c</b>	with
<b>ad lib</b>	freely (Latin <i>ad libitum</i> ), as often as desired	<b>cap., caps.</b>	capsule
<b>AM, a.m., A</b>	morning (Latin <i>ante meridiem</i> )	<b>cc., cc</b>	cubic centimeter
<b>a.s., AS</b>	left ear (Latin <i>auris sinister</i> )	<b>cx</b>	contraindicated
<b>DAW</b>	dispense as written	<b>ml</b>	milliliter
<b>dil.</b>	dilute	<b>n., noct.</b>	night (Latin <i>nocte</i> )
<b>disc, DC, dc</b>	discontinue	<b>non rep.</b>	do not repeat
<b>disp.</b>	dispense	<b>NPO</b>	nothing by mouth
<b>div.</b>	divide	<b>NPO p MN</b>	nothing by mouth after midnight
<b>DW</b>	distilled water	<b>N.S., NS</b>	normal saline
<b>D5W</b>	dextrose 5% in water	<b>dx, Dx</b>	diagnosis
<b>NSAID</b>	nonsteroidal anti-inflammatory drug	<b>N&amp;V</b>	nausea and vomiting
<b>elix.</b>	elixir	<b>o.d., OD</b>	right eye (Latin <i>oculus dexter</i> )
<b>e.m.p.</b>	as directed (Latin <i>ex modo praescripto</i> )	<b>oint., ung.</b>	ointment, unguent
<b>ex aq.</b>	in water	<b>o.l.</b>	left eye
<b>ext.</b>	extract	<b>o.s.</b>	left eye (Latin <i>oculus sinister</i> )

<b>FDA</b>	Food and Drug Administration	<b>OTC</b>	over the counter
<b>fld. ext.</b>	fluid extract	<b>o.u.</b>	each eye
<b>g, gm</b>	gram	<b>p</b>	post, after
<b>gr</b>	grain, gram	<b>p.c.</b>	after meals (Latin <i>post cibum</i> ), one-half hour after a meal
<b>gtt</b>	drop	<b>PDR</b>	<i>Physician's Desk Reference</i>
<b>H</b>	hypodermic	<b>PM, p.m., P</b>	afternoon (Latin <i>post meridiem</i> )
<b>h.</b>	every hour (Latin <i>hora</i> )	<b>p.o.</b>	by mouth (Latin <i>per os</i> )
<b>h.s.</b>	at bedtime (Latin <i>hora somni, an hour of sleep</i> )	<b>PRN, p.r.n.</b>	repeat as needed (Latin <i>pro re nata</i> )
<b>IM</b>	intramuscular	<b>pulv., powdr</b>	powder
<b>inj</b>	injection	<b>qam</b>	every morning
<b>IV</b>	intravenous	<b>q.d.</b>	once a day / every day (Latin <i>quaque die</i> )
<b>mcg</b>	microgram	<b>q.h.</b>	every hour
<b>mEq</b>	milliequivalent	<b>q.i.d.</b>	four times a day
<b>mg</b>	milligram	<b>QNS</b>	quantity not sufficient
<b>q.o.d.</b>	every other day	<b>susp.</b>	suspension
<b>q.s.</b>	sufficient quantity	<b>sym, Sym, Sx</b>	symptom
<b>R</b>	rectal	<b>syr.</b>	syrup
<b>Rx</b>	prescription	<b>tab.</b>	tablet
<b>s</b>	without	<b>tbsp.</b>	tablespoonful
<b>Sig.</b>	patient directions such as route and timing of medication (Latin <i>signa, inscription</i> )	<b>t.i.d.</b>	three times a day
<b>SL</b>	sublingual	<b>tinct., tr.</b>	tincture
<b>sol., soln.</b>	solution	<b>TPN</b>	total parenteral nutrition
<b>s.o.s.</b>	if there is need	<b>TPR</b>	temperature, pulse, respirations
<b>sp.</b>	spirit	<b>tsp.</b>	teaspoonful
<b>ss</b>	one-half	<b>U, u</b>	unit
<b>subc, subq, s.c.</b>	subcutaneously	<b>ung.</b>	ointment
<b>supp., suppos</b>	suppository	<b>U.S.P.</b>	<i>United States Pharmacopeia</i>
<b>stat</b>	immediately	<b>u.d.</b>	as directed

\*Adapted from: *Medical terminology: language for healthcare/Nina Thierer . . . [et al.]. —3rd ed.*

## EXERCISES

### Task 1. Name the route of drug administration from its description:

1. Drug is administered via a semisolid into the rectum: \_\_\_\_\_
  - inhalation
  - sublingually
  - topically
  - rectally
  - parenteral
  - vaginally
2. Drug is administered via vapor or gas into the nose or mouth: \_\_\_\_\_
  - rectally
  - sublingually
  - topically
  - inhalation
  - parenteral
  - ocular route
3. Drug is administered under the tongue: \_\_\_\_\_
  - parenteral
  - sublingually
  - inhalation
  - rectally
  - topically
  - ocular route
4. Drug is applied locally on skin or mucous membrane: \_\_\_\_\_
  - parenteral
  - topically
  - sublingually
  - inhalation
  - rectally
5. The drug is injected through a syringe under the skin, into a vein, into a muscle, or into a body cavity: \_\_\_\_\_
  - oral administration
  - parenteral
  - topically
  - sublingually
  - inhalation
  - rectally
6. The drug is given by mouth and absorbed through the stomach or intestinal wall: \_\_\_\_\_
  - rectally
  - oral administration
  - parenteral
  - topically
  - sublingually
  - inhalation

## Task 2. Fill in proper words from the lists:

1. \_\_\_\_\_ are drugs mixed with a semisolid melting substance, are inserted into the vagina, rectum, or urethra are either topical or systemic drugs.
  - lotions
  - powders
  - suppositories
  - inhalants
2. \_\_\_\_\_ are generally inserted into the vagina.
  - sprays
  - foams
  - lotions
  - inhalants
3. \_\_\_\_\_ and creams are applied topically to the surface of the skin.
  - inhalants
  - lotions
  - sprays
  - suppositories
4. \_\_\_\_\_ may be inserted into a gelatin capsule or mixed with a liquid.
  - sprays
  - inhalants
  - powders
  - suppositories
5. \_\_\_\_\_ or gases can be administered in inhalation form in which tiny droplets are inhaled through an inhaler, nebulizer, or spray.
  - suppositories
  - lotions
  - liquids
  - powders
7. \_\_\_\_\_ can be applied topically to the skin, into the nose (*intranasal*), or into the mouth.
  - lotions
  - sprays
  - liquids
  - suppositories
8. \_\_\_\_\_ administration is the injection of a needle or syringe just beneath the outer layer of skin to check for local reactions.
  - subcutaneous
  - intramuscular
  - intradermal
  - intravenous

9. \_\_\_\_\_ administration is the injection of the substance into the fatty layer of tissue below the outer portion of the skin.

- intradermal
- intramuscular
- subcutaneous
- intravenous

10. \_\_\_\_\_ administration is the injection of drugs deep into the muscles.

- intravenous
- intramuscular
- intradermal
- subcutaneous

11. \_\_\_\_\_ administration is the injection of drugs through an intravenous (IV) tube.

- intradermal
- subcutaneous
- intravenous
- intramuscular

**Task 3. Circle “T” for true or “F” for false:**

- |  |   |   |
|--|---|---|
| 1. IM medications go into an IV.                               | T | F |
| 2. IM medications go into an IV.                               | T | F |
| 3. The most common method of drug administration is oral.      | T | F |
| 4. A parenteral administration is the injection of medication. | T | F |

**Task 4. Add the combining form to complete the word:**

1. Resistance to the effects of chemicals:  
\_\_\_\_\_ resistance

- toxo-
- chemo-
- toxico-
- nitro-
- vaso-

3. The scientific discipline involved with elements and compounds composed of atoms, molecules, and ions: \_\_\_\_\_ istry

- toxo-
- toxico-
- chem-
- nitro-
- vaso-

2. Treatment of fever: \_\_\_\_\_  
therapy

- chemo-
- toxo-
- pyreto-
- vaso-
- bio-

3. Study of poisons: \_\_\_\_\_ logy

- veno-
- toxico-
- toxo-
- chemo-
- bio-



**Task 5. Give abbreviations for the following:**

1. Three times a day \_\_\_\_\_
  - c.
  - b.i.d.
  - t.i.d.
  - p.c.
  - q.h.
2. Before meals \_\_\_\_\_
  - b.i.d.
  - p.c.
  - c.
  - q.h.
  - h.s.
3. Intramuscular \_\_\_\_\_
  - IV
  - NPO
  - IM
  - N&V
  - AD
4. Two times a day \_\_\_\_\_
  - c.
  - p.c.
  - b.i.d.
  - q.h.
  - q.i.d.
5. Intravenous \_\_\_\_\_
  - IM
  - NPO
  - IV
  - N&V
  - AD
6. Nothing by mouth \_\_\_\_\_
  - IM
  - IV
  - NPO
  - N&V
7. After meals \_\_\_\_\_
  - c.
  - b.i.d.
  - p.c.
  - p.c.
  - q.h.
8. Every hour \_\_\_\_\_
  - c.
  - b.i.d.
  - q.h.
  - p.c.
  - h.s.
9. Every morning \_\_\_\_\_
  - c.
  - b.i.d.
  - Qam
  - p.c.
  - q.h.
10. At bedtime \_\_\_\_\_
  - c.
  - b.i.d.
  - h.s.
  - p.c.
  - q.h.
11. Four times a day \_\_\_\_\_
  - c.
  - b.i.d.
  - q.i.d.
  - p.c.
  - q.h.
12. When requested \_\_\_\_\_
  - q.i.d.
  - c.
  - ad lib
  - b.i.d.
  - p.c.
13. Every day \_\_\_\_\_
  - q.i.d.
  - c.
  - q.d.
  - b.i.d.
  - p.c.
14. Drops \_\_\_\_\_
  - q.i.d.
  - c.
  - gtt
  - b.i.d.
  - p.c.

15. Sufficient quantity \_\_\_\_\_

- s.q.
- q.q.
- s.s.
- q.s.
- q.

16. Prescription \_\_\_\_\_

- X
- Rx
- P
- P.r.
- P.c.

17. Afternoon (Latin *post meridiem*) \_\_\_\_\_

- a.m.
- M
- p.m.
- A.f.
- AFT

18. Morning (Latin *ante meridiem*) \_\_\_\_\_

- p.m.
- a.
- a.m.
- m.
- mor.

19. Sublingual \_\_\_\_\_

- S.b.
- L.g.
- SL
- Lin.
- Ling.

20. Teaspoonful \_\_\_\_\_

- tbsp.
- Sp.
- Spf.
- tsp.
- Ts.

21. Tablespoonful \_\_\_\_\_

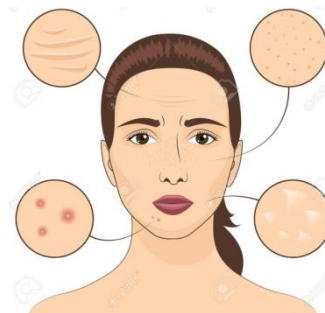
- tbsp.
- tsp.
- Sp.
- Spf.
- T.s.

### 3.1. Pharmacological terms in dermatology



Treatment of skin disorders involves the use of various medications. A wide variety of **topical preparations** can relieve symptoms and even kill agents that cause disease. Other treatments involve **heat, light, and radiation**.

The sun is beneficial in healing certain skin problems. Some lesions are treated with **ultraviolet light**, which imitates some of the sun's rays. On the other hand, sunlight may also be the cause of many skin problems, such as certain **carcinomas**. Cancer of the skin is sometimes successfully treated by chemotherapy (*uses chemicals to treat the malignant cells systematically*) and/or **radiation therapy** (*uses high-energy radiation to bombard malignant cells in order to destroy them*), most of the time successfully.



**Antihistamines** are medications used to control allergic skin reactions. They do so by blocking the effects of histamines, chemicals present in tissues that heighten allergic reactions. Other skin conditions are controlled by different medications. For example, **antibiotics, antibacterials, parasiticides, anti-inflammatory, corticosteroids, and antipruritics**.

<b>Antibiotics</b>	kill or slow the growth of microorganisms on the skin
<b>Antiseptics</b>	kill or slow the growth of microorganisms on the skin
<b>Antibacterials</b>	kill or slow the growth of bacteria
<b>Antifungals</b>	kill or slow the growth of fungal infections
<b>Parasiticides</b>	destroy insect parasites, such as lice and mites, that cause some skin conditions
<b>Anti-inflammatory drugs</b> (particularly <b>corticosteroids</b> )	reduce inflammation
<b>Antipruritics</b>	control itching

Some skin conditions are painful because of nerve conduction near the skin surface. An **anesthetic** (especially, in the case of surface pain, a **topical anesthetic**) can relieve some of the pain associated with such conditions.

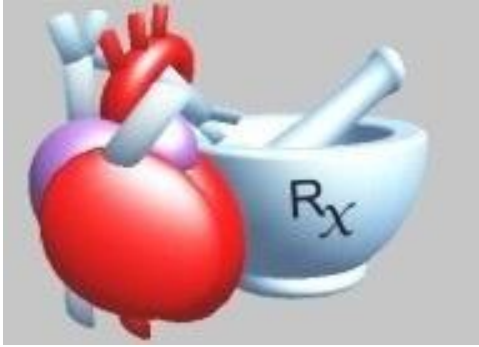
Some skin conditions result in either **oversecretion of oils** or **extreme dryness**:

- **Emollients** are agents that soothe or soften skin by moistening it or adding oils to it.
- **Astringents** temporarily lessen the formation of oily material on the surface of the skin.

Vitamin-based products to control **skin aging** (often containing Vitamins A and C) are often available over the counter.

- **Keratolytics** remove warts and corns from the skin surface.
- **Alpha hydroxy acids** are fruit acids added to cosmetics to improve the skin's appearance.

### 3.2. Cardiovascular pharmacology



Drug therapy for the cardiovascular system generally treats the following conditions: angina, heart attack, high blood pressure, high cholesterol, congestive heart failure, rhythm disorders, and vascular problems. Many of the pharmacological agents treat several problems at once. The tables below present some of the medications commonly used to treat the cardiovascular system. These are just a sample of the many cardiovascular medications available.

**Antianginals** relieve the pain and prevent attacks of angina. Three categories of drugs – **nitrates**, **beta-blockers**, and **calcium channel blockers** – are used as antianginals.

**Thrombolytics** are used to dissolve blood clots in heart-attack victims.

**Tissue-type plasminogen activator (tPA or TPA)** is an agent used to prevent the formation of a thrombus.

**Nitrates** and **beta-blockers** are used to treat myocardial infarctions.

High blood pressure may require treatment with one drug or a combination of drugs. Such drugs are called **antihypertensives**.

- **Beta-blockers** and **calcium channel blockers** are used along with a number of agents that affect the control centers in the brain that regulate blood pressure.
- **Vasodilators** relax the walls of the blood vessels.

Other treatments for high blood pressure include:

- **diuretics**, to relieve edema (swelling) and increase kidney function;
- **angiotensin-converting enzyme (ACE) inhibitors**, which dilate arteries thus making it easier for blood to flow out of the heart;
- agents that affect the nerves of the body.

Congestive heart failure is treated with **ACE inhibitors**, **diuretics**, and **cardiotonics**, which increase myocardial contractions.

In certain situations, **vasoconstrictors** may be needed to narrow blood vessels.

Rhythm disorders are treated with a number of medications (some are called **antiarrhythmics**) that normalize heart rate by affecting the nervous system that controls the heart rate. **Beta-blockers** and **calcium channel blockers** may also be used for rhythm disorders.

Cholesterol is a substance the body needs in certain quantities. Excesses of certain kinds of cholesterol such as LDL can cause fatty deposits or plaque to form on blood vessels.

- **Lipid-lowering** drugs work to help the body excrete unwanted cholesterol. The most common type of lipid-lowering drugs is **statins**.
- **Anticoagulants**, anticlotting and *antiplatelet* medications (such as **heparin**) inhibit the ability of the blood to clot.

Other medications used for vascular problems may include drugs that decrease the thickness of the blood, or drugs that increase the amount of blood the heart is able to pump.

\*Adapted from: *Medical terminology: language for healthcare/Nina Thierer . . . [et al.]. —3rd ed.*

### 3.3. Pharmacological terms in hematology

Medications that directly affect the work of the blood system are **anticoagulants** (*to prevent blood clotting*); **thrombolytics** (*to dissolve blood clots*); **coagulants** or clotting agents (*to aid in blood clotting*); and **hemostatics** (*to stop bleeding, such as vitamin K*). Anticoagulants are administered before most types of surgeries to prevent emboli. Blood flow is affected by vasoconstrictors and vasodilators, two medications for cardiovascular problems.

Chemotherapy, a therapy that uses drugs, is used to cause a **remission** (*disappearance of the disease*) in leukemia. Sometimes more treatment is needed when a **relapse** (*recurrence of the disease*) occurs.

### 3.4. Pharmacological terms in neurology

The nervous system can be the site of severe pain. **Analgesics** relieve pain. Other problems of the nervous system may be associated with diseases such as epilepsy.

**Anticonvulsants** are often used to treat epilepsy and other disorders to lessen or prevent convulsions. **Narcotics** relieve pain by inducing a stuporous or euphoric state. **Sedatives** and **hypnotics** relax the nerves and sometimes induce sleep. **Anesthetics** block feelings or sensation and are used in surgery. Anesthetics can be given *locally* (to numb sensation to one section of the body) or *generally* (to numb sensation to the entire body).

### 3.5. Pharmacological terms in ophthalmology and otology

Eyes and ears can both be treated with the *instillation* of drops:

- **the antibiotic ophthalmic solution** is an antibacterial agent used to treat eye infections, such as conjunctivitis.
- a **mydriatic** solution dilates the pupil during an eye examination.
- a **miotic** solution causes the pupil to contract.

The eye and the ear can both be *irrigated*, flushed with water, or solution to remove foreign objects. Antibiotics, antihistamines, anti-inflammatories, and decongestants are used to relieve ear infections, allergies, inflammations, and congestion.

**Ear irrigation** (*lavage*) is the irrigation of the ear canal to remove excessive cerumen buildup.

### 3.6. Pharmacological terms in otorhinolaryngology and pulmonology

**Antibiotics**, **antihistamines**, and **anticoagulants** are used for respiratory system disorders just as with other system disorders. Specific to respiratory problems are:

<b>bronchodilators</b>	dilate the walls of the bronchi (as during an asthmatic attack)
<b>expectorants</b>	promote coughing and the expulsion of mucus
<b>antitussives</b>	relieve coughing
<b>decongestants</b>	help congestion of the upper respiratory tract

Two **mechanical devices** aid in respiration:

- mechanical **ventilators** actually serve as a breathing substitute for patients who cannot breathe on their own.
- **nebulizers** deliver medication through the nose or mouth to ease breathing problems. Some nebulizers are MDI (metered dose inhalers) that deliver a specific amount of spray with each puff of the inhaler.

*\*Adapted from: Medical terminology: language for healthcare/Nina Thierer . . . [et al.]. —3rd ed.*

## EXERCISES

### Task 1. Choose proper terms to the definitions:

1. Medications used to control allergic skin reactions by blocking the effects of histamines.
  - antiseptics
  - antifungals
  - parasiticides
  - antihistamines
  - corticosteroids
2. Medications used to kill or slow the growth of microorganisms on the skin.
  - antihistamines
  - antifungals
  - parasiticides
  - corticosteroids
  - antibiotics
3. Medications used to kill or slow the growth of microorganisms on the skin.
  - corticosteroids
  - antiseptics
  - antihistamines
  - antifungals
  - parasiticides
4. Medications used to kill or slow the growth of fungal infections.
  - parasiticides
  - corticosteroids
  - antipruritics
  - antiseptics
  - antifungals
5. Medications used to destroy insect parasites, such as lice and mites that cause some skin conditions.
  - antiseptics
  - antihistamines
  - parasiticides
  - corticosteroids
  - antipruritics
6. Medications used to reduce inflammation
  - antiseptics
  - antihistamines
  - corticosteroids
  - parasiticides
  - antipruritics
7. Medications used to control itching
  - antiseptics
  - antihistamines
  - analgesics
  - antipruritics
  - sedatives

## Task 2. Define the following terms:

### 1. Antiseptic:

- medications used to control itching
- medications used to kill or slow the growth of microorganisms on the skin
- medications used to reduce inflammation
- medications used to kill or slow the growth of fungal infections
- medications used to control allergic skin reactions by blocking the effects of histamines

### 2. Antipruritics

- medications used to reduce inflammation
- medications used to kill or slow the growth of fungal infections
- medications used to kill or slow the growth of microorganisms on the skin
- medications used to control itching
- medications used to control allergic skin reactions by blocking the effects of histamines

### 3. Chemotherapy:

- use of chemicals to treat fungal infections
- use of chemicals to treat the malignant cells systematically
- use of radiation to treat the malignant cells systematically
- use of chemicals to treat the benign cells systematically
- use of chemicals to treat skin conditions

### 4. Fungicide:

- killing bacteria
- killing lice
- killing fungi
- killing viruses
- killing microorganisms

### 5. Mycocide:

- killing bacteria
- killing germs
- killing fungi
- killing viruses
- killing mites

### 6. Keratolysis:

- softening of horny tissue
- hardening of horny tissue
- incision in horny tissue
- destruction of horny tissue
- removal of horny tissue

## Task 3. Are the following statements True or False?

- |  |      |       |
|--|------|-------|
| 1. Chemotherapy is the use of radiation to treat cancer. | True | False |
| 2. Antibiotics are used to treat acne.                   | True | False |
| 3. Histamines are always present in the body.            | True | False |
| 4. Astringents control pruritus.                         | True | False |
| 5. Emollients can contain oils.                          | True | False |

**Task 4. Choose a proper cardiovascular pharmacological classification for its correct definition:**

1. Increase urine production, relieve edema
  - ACE inhibitors
  - calcium channel blockers
  - vasodilators
  - diuretics
  - beta blockers
2. Ease heart pumping, lower blood pressure
  - diuretics
  - ACE inhibitors
  - calcium channel blockers
  - vasodilators
  - beta blockers
3. Reduce heart rate, lower squeezing strength of heart contraction, lower blood pressure by inhibiting calcium from entering heart muscle
  - diuretics
  - ACE inhibitors
  - vasodilators
  - calcium channel blockers
  - beta blockers
4. Dilate veins and arteries, used to treat angina
  - diuretics
  - vasodilators
  - ACE inhibitors
  - calcium channel blockers
  - beta blockers
5. Reduce contraction of heart, slow heartbeat
  - hemorheologic agents
  - beta blockers
  - antiplatelet medication
  - anticoagulants
  - antiarrhythmics
6. Reduce ability of blood platelets to clot
  - beta blockers
  - anticoagulants
  - antiplatelet medication
  - hemorheologic agents
  - antiarrhythmics
7. Reduce blood clotting
  - beta blockers
  - antiplatelet medication
  - hemorheologic agents
  - anticoagulants
  - antiarrhythmics



**8. Decrease viscosity of blood**

- beta blockers
- hemorheologic agents
- antiplatelet medication
- anticoagulants
- antiarrhythmics

**9. Alter electrical flow through the heart**

- beta blockers
- antiplatelet medication
- anticoagulants
- antiarrhythmics
- hemorheologic agents

**10. Dissolve blood clots**

- beta blockers
- anticoagulants
- hemorheologic agents
- thrombolytics
- antiarrhythmics

**Task 5. Choose the suffix (used in cardiovascular terms) belonging to the following definitions.**

**1. pertaining to \_\_\_\_\_**

- -sclerosis
- -pheresis
- -ac
- -penia
- -itis

**5. pain \_\_\_\_\_**

- -ac
- -sclerosis
- -pheresis
- -algia
- -penia

**2. hardening \_\_\_\_\_**

- -pheresis
- -penia
- -sclerosis
- -pathy
- -cyte

**6. disease \_\_\_\_\_**

- -ac
- -sclerosis
- -pheresis
- -pathy
- -penia

**3. removal \_\_\_\_\_**

- -lysis
- -osis
- -phonia
- -pheresis
- -cytosis

**7. cell \_\_\_\_\_**

- -lysis
- -osis
- -phonia
- -cyte
- -cytosis

**4. abnormal decrease \_\_\_\_\_**

- -ac
- -sclerosis
- -pheresis
- -penia
- -itis

**8. destroying \_\_\_\_\_**

- -pathy
- -ac
- -sclerosis
- -lysis
- -pheresis

9. condition, state of \_\_\_\_\_

- -pathy
- -ac
- -sclerosis
- -osis
- -pheresis

10. sound \_\_\_\_\_

- -cytosis
- -cardia
- -itis
- -phonia
- -lexia

11. condition of cells \_\_\_\_\_

- -phonia
- -emic
- -itis
- -cytosis
- -megaly

12. relating to blood \_\_\_\_\_

- -osis
- -ac
- -itis
- -emic
- -ic

13. inflammation \_\_\_\_\_

- -osis
- -ac
- -itis
- -ic
- -ac

14. enlargement \_\_\_\_\_

- -sclerosis
- -pheresis
- -megaly
- -pathy
- -lysis

**Task 6. Choose the prefix (used in cardiovascular terms) belonging to the following definitions.**

1. blood clot \_\_\_\_\_

- echo-
- thrombo-
- brady-
- peri-
- tachy-

4. slow \_\_\_\_\_

- peri-
- tachy-
- brady-
- endo-
- hypo-

2. half \_\_\_\_\_

- brady-
- peri-
- semi-
- echo-
- tachy-

5. surround \_\_\_\_\_

- tachy-
- endo-
- peri-
- hypo-
- myo-

3. reflected sound \_\_\_\_\_

- brady-
- peri-
- tachy-
- echo-
- endo-

6. rapid, fast \_\_\_\_\_

- semi-
- echo-
- tachy-
- brady-
- peri-

7. inner \_\_\_\_\_

- endo-
- echo-
- brady-
- semi-
- peri-

8. below normal \_\_\_\_\_

- hyper-
- echo-
- brady-
- hypo-
- peri-

9. muscle \_\_\_\_\_

- cyto-
- histo-
- neuro-
- myo-
- osteo-

10. small \_\_\_\_\_

- peri-
- micro-
- macro-
- mega-
- poly-

11. before \_\_\_\_\_

- post-
- echo-
- brady-
- pre-
- peri-

12. against \_\_\_\_\_

- peri-
- anti-
- intra-
- bi-
- tri-

13. two \_\_\_\_\_

- multi-
- bi-
- poly-
- macro-
- intra-

14. above normal \_\_\_\_\_

- multi-
- post-
- hyper-
- macro-
- hypo-

15. many \_\_\_\_\_

- bi-
- multi-
- post-
- macro-
- intra-

16. after \_\_\_\_\_

- poly-
- post-
- pre-
- intra-
- extra-

17. large \_\_\_\_\_

- micro-
- macro-
- mini-
- extra-
- intra-

18. within \_\_\_\_\_

- exo-
- intra-
- post-
- macro-
- extra-

19. three \_\_\_\_\_

- multi-
- bi-
- tri-
- poly-
- intra-

20. more than one \_\_\_\_\_

- tri-
- poly-
- multi-
- bi-
- intra-

**Task 7. Complete the sentences by filling in the blanks:**

1. Coughing can be controlled with \_\_\_\_\_.
  - bronchodilators
  - expectorants
  - nebulizer
  - antitussives
  - ventilator
  
2. Insufficiently dilated bronchi can be treated with \_\_\_\_\_.
  - antitussives
  - expectorants
  - bronchodilators
  - nebulizer
  - ventilator
  
3. Productive coughing is helped with \_\_\_\_\_.
  - antitussives
  - bronchodilators
  - expectorants
  - nebulizer
  - ventilator
  
4. Medication is delivered in a fine spray by means of a \_\_\_\_\_.
  - antitussives
  - bronchodilators
  - expectorants
  - nebulizer
  - ventilator
  
5. A person who cannot breathe on his or her own may be kept alive on a \_\_\_\_\_.
  - hypnotic
  - anesthetic
  - anticonvulsant
  - ventilator
  - analgesic
  
6. An agent that induces sleep is called a(n) \_\_\_\_\_.
  - ventilator
  - anesthetic
  - anticonvulsant
  - hypnotic
  - analgesic

7. An agent that causes loss of feeling is called a(n) \_\_\_\_\_.
- hypnotic
  - anticonvulsant
  - analgesic
  - anesthetic
  - sedative
8. An agent that relieves nervousness is called a(n) \_\_\_\_\_.
- hypnotic
  - anesthetic
  - anticonvulsant
  - sedative
  - analgesic
9. A drug prescribed for epilepsy is probably a(n) \_\_\_\_\_.
- hypnotic
  - sedative
  - anesthetic
  - anticonvulsant
  - analgesic
10. Pain is relieved with a(n) \_\_\_\_\_ .
- antibiotic
  - hypnotic
  - sedative
  - analgesic
  - anesthetic
11. A pain reliever that induces a euphoric state is a(n) \_\_\_\_\_ .
- analgesic
  - antibiotic
  - narcotic
  - hypnotic
  - sedative
12. Hemophiliacs require \_\_\_\_\_ and \_\_\_\_\_ to control bleeding.
- nitrates; beta blockers
  - coagulants; hemostatics
  - antianginals; beta blockers
  - coagulants; antianginals
  - hemostatics; antianginals

13. A prescription for someone with coronary artery disease might include a(n) \_\_\_\_\_.
- antianginals
  - beta-blockers
  - nitrates
  - anticoagulant
  - vasoconstrictors
14. If medication is not taken regularly, a(n) \_\_\_\_\_ of a disease might occur.
- remission
  - onset
  - recovery
  - relapse
  - treatment
15. Sometimes the temporary disappearance of a disease, called a(n) \_\_\_\_\_, is unexplained.
- relapse
  - onset
  - remission
  - recovery
  - treatment

### Task 8. What medication might be prescribed for the following conditions?

1. Bursitis \_\_\_\_\_

- antihistamines
- parasiticides
- anti-inflammatory
- sedatives
- antiseptics

2. Myalgia \_\_\_\_\_

- antibiotic
- sedatives
- antiseptics
- analgesic
- antihistamines

3. Otitis media \_\_\_\_\_

- decongestant
- antibiotic
- antibiotic ophthalmic solution
- ear irrigation
- lavage

4. Arthritis \_\_\_\_\_

- anti-inflammatory
- diuretics
- vasodilators
- anticoagulants
- antiarrhythmics

5. Arthralgia \_\_\_\_\_

- vasodilators
- diuretics
- anticoagulants
- analgesic
- antiarrhythmics

6. Conjunctivitis \_\_\_\_\_

- antibiotic ophthalmic solution
- mydriatic solution
- chamomile extract
- miotic solution
- teabag

**Pharmacological terms: Orthopedics. Gastroenterology  
Gynecology. Urology  
Immunology. Endocrinology**

#### 4.1. Pharmacological terms in orthopedics

Most medications for the treatment of the musculoskeletal system treat symptoms, not causes. Pain medications, such as **analgesics**, **narcotics**, **anti-inflammatories (corticosteroids)**, **muscle relaxants**, and **nonsteroidal anti-inflammatory drugs (NSAIDs)**, all relieve or relax the area of pain either by numbing the area or by reducing the inflammation.

#### 4.2. Pharmacological terms in gastroenterology

Aside from treatments for cancer, medications for the digestive tract counteract situations that occur in various parts of the GI tract:

<b>Antacids*</b>	neutralize stomach acid. *Many antacids are taken before meals to prevent the building up of excess stomach acids. Others are taken after symptoms appear.
<b>Antiemetics</b>	prevent vomiting.
<b>Antispasmodics</b>	relieve spasms in the gastrointestinal tract.
<b>A laxative</b>	stimulates the movement of bowels.
<b>A cathartic</b>	induces vomiting.
<b>An antidiarrheal</b>	helps to control loose, watery stools.

#### 4.3. Pharmacological terms in gynecology

Various forms of birth control are pharmacological agents. **Spermicides** destroy sperm in the vagina; **birth control pills** (or oral contraceptives, OCPs), hormonal patches, vaginal rings, and **implants** control the flow of hormones to block ovulation; and **abortifacients** or **morning-after pills** (or emergency contraception) prevent implantation of an ovum.

**Hormone replacement therapy (HRT)** is used during and after menopause to alleviate symptoms, such as hot flashes. **Oxytocin**, another hormone, is used to induce labor. A **tocolytic agent** stops labor contractions.

#### 4.4. Pharmacological terms in urology

Medications for the urinary tract can relieve pain (**analgesics**), relieve spasms (**antispasmodics**), or inhibit the growth of microorganisms (antibiotics). They may also increase (**diuretics**) or decrease (**antidiuretics**) the secretion of urine.

Males are sometimes treated with hormone replacement therapy (usually, testosterone). Such treatment can help with sexual problems and with some of the signs of aging. **Medications for impotence** may help some men restore sexual function. It may also be treated **surgically** or with **mechanical devices**. Some erectile dysfunction is a vascular problem and may be treated with **transient vasoconstrictors** – *medications that cause temporary constriction of the blood vessels in the penis.*

\*Adapted from: *Medical terminology: language for healthcare/Nina Thierer . . . [et al.]. —3rd ed.*

#### 4.5. Immunopharmacology

Diseases of the lymph and immune systems are often treated with relatively high doses of **chemotherapy** and/or **radiation**. Advances in AIDS research have made it possible to manage this disease (i.e., to prolong a patient’s life) once thought fatal. A “cocktail” of **anti-HIV drugs (antivirals, antimicrobial agents, antihistamines)**, a **potential HIV/AIDS vaccine**, and other newer drug compounds are bringing hope for long-term vitality to people with AIDS. Other drug compounds have been developed to fight opportunistic infections.

Genetic research is focusing on all the major chronic diseases. While diseases of the lymphatic and immune systems do not currently have specific **genetic therapies**, many researchers believe that advances in genetic therapies will bring relief for many of these diseases.

#### 4.6. Pharmacological terms in endocrinology

Hormonal deficiencies are sometimes treated by **hormone replacement therapy (HRT)**. However, the experts say that **HRT** is not a panacea for disease prevention, even in situations where it was found to be helpful, such as the reduction in hip fractures. Moreover, if hormone replacement therapy must be used to control menopause symptoms, the lowest possible dose for the shortest possible duration is recommended.

Common types of hormone therapy include **synthetic thyroid, estrogen, and testosterone**. Other medications include those that **regulate levels of substances in the body**, such as glucose levels in diabetics. An **antihypoglycemic** raises blood sugar. An **antihyperglycemic** or **hypoglycemic** lowers blood sugar. Instead of or in addition to using drugs to regulate blood sugar, many diabetics are now treated with medications that increase sensitivity to their own insulin.

<b>Human growth hormone (somatotropin)</b>	a synthetic version of HGH is given to promote growth
<b>Steroids</b>	are used in controlling various symptoms and treating many diseases within and outside the endocrine system. Steroids can also be abused for muscle growth.

#### Endocrine therapy drugs

<b>Tamoxifen (orally estrogen)</b>	is used in the treatment of <i>breast cancer</i>
<b>Anastrozole</b>	is indicated in the treatment of <i>breast cancer</i> in post-menopausal women. It has proven effective in reducing <i>estradiol</i> in men
<b>Anastrozole</b>	is used to reduce and prevent symptoms of <i>excess estrogens</i>
<b>Carbimazole</b>	is used to treat <i>hyperthyroidism</i> by reducing the production of the thyroid hormones T3 and T4 (thyroxine)
<b>Letrozole</b>	is approved for the treatment of <i>local or metastatic breast cancer</i> that is hormone receptor-positive or has an unknown receptor status in postmenopausal women
<b>Levothyroxine (thyroid hormone)</b>	is used to treat hypothyroidism, congenital hypothyroidism ( <i>cretinism</i> ) and goiter ( <i>enlarged thyroid gland</i> ).

\*Adapted from: *Medical terminology: language for healthcare/Nina Thierer . . . [et al.]. —3rd ed.*



## EXERCISES

### Task 1. Fill in the blanks:

1. To help relieve edema, a(n) \_\_\_\_\_ may be prescribed.
  - analgesic
  - antibiotic
  - antispasmodic
  - diuretic
  - laxative
2. For dysuria, a(n) \_\_\_\_\_ may be prescribed.
  - diuretic
  - analgesic
  - antibiotic
  - antispasmodic
  - laxative
3. For cystitis a(n) \_\_\_\_\_ may be prescribed.
  - diuretic
  - analgesic
  - antispasmodic
  - antibiotic
  - laxative
4. Sudden contractions may lead to urinary incontinence and, therefore, a(n) \_\_\_\_\_ may be prescribed.
  - diuretic
  - analgesic
  - antispasmodic
  - antibiotic
  - laxative
5. Male hormone replacement therapy usually involves the hormone \_\_\_\_\_ .
  - estrogen
  - antidiuretic hormone
  - thyroxin
  - testosterone
  - gonadotropin
6. Inability to maintain an erection can be treated with \_\_\_\_\_ .
  - medications for impotence
  - estrogen
  - antibiotic
  - testosterone
  - analgesic
7. Weight trainers and sports figures sometimes illegally use \_\_\_\_\_ .
  - anabolic steroids
  - anastrozole
  - anastrozole
  - tamoxifen
  - carbimazole

8. AIDS patients often have to take many medications, including some to avoid \_\_\_\_\_ infections.

- common
- opportunistic
- skin
- respiratory
- eye

9. Lymphomas are generally treatable with \_\_\_\_\_ and \_\_\_\_\_.

- antibiotics, analgesics
- radiation, chemotherapy
- antiemetics, antispasmodics
- antacids, cathartics
- interferon, immunotherapy

10. One body substance manufactured and given in high doses in immune disorders is \_\_\_\_\_.

- blood
- interferon
- semen
- cerebrospinal fluid
- pleural fluid,

### Task 2. True or False?

- |  |      |       |
|--|------|-------|
| 1. An abortifacient is a birth control medication.                 | True | False |
| 2. Hormone replacement therapy is generally used around menopause. | True | False |
| 3. It is never appropriate to induce labor.                        | True | False |
| 4. Birth control pills are used to control hormones.               | True | False |
| 5. Tocolytic agents stop labor.                                    | True | False |

### Task 3. Match the pharmacological agents with their uses:

#### 1. Antacid

- relieves burning sensation
- causes vomiting
- controls loose, watery stools
- prevents regurgitation
- calms spasms

#### 2. Antidiarrheal

- prevents vomiting
- controls loose, watery stools
- prevents regurgitation
- prevents nausea
- controls loose, watery stools

#### 3. Antiemetic

- prevents nausea
- prevents regurgitation
- controls loose, watery stools
- calms spasms
- causes vomiting

#### 4. Antispasmodic

- prevents regurgitation
- calms spasms
- prevents nausea
- controls loose, watery stools
- relieves constipation

#### 5. Cathartic

- causes vomiting
- prevents nausea
- calms spasms
- prevents regurgitation
- controls loose, watery stools

#### 6. Laxative

- prevents diarrhea
- relieves constipation
- calms spasms
- prevents regurgitation
- controls loose, watery stool

**Task 4. Choose the names of the glands from which a hormone is needed to relieve symptoms of the diseases:**

**1. Addison's disease:** \_\_\_\_\_

- pancreas
- pituitary
- thyroid
- adrenal
- gonads

**4. Myxedema:** \_\_\_\_\_

- gonads
- thyroid
- adrenal
- pancreas
- pituitary

**2. Hyperglycemia:** \_\_\_\_\_

- adrenal
- pituitary
- thyroid
- pancreas
- gonads

**5. Panhypopituitarism:** \_\_\_\_\_

- gonads
- pituitary
- adrenal
- pancreas
- thyroid

**3. Diabetes insipidus:** \_\_\_\_\_

- thyroid
- pituitary
- adrenal
- pancreas
- gonads

**6. Goiter**

- pancreas
- thyroid
- pituitary
- adrenal
- gonads

**Task 5. Define the terms:**

**1. Lymphangiogram:** \_\_\_\_\_

- disease of the lymph glands
- imaging of lymph vessels
- softening of the spleen
- imaging of blood vessels

**5. Splenorrhagia:** \_\_\_\_\_

- hardening of the spleen
- bursting forth of the spleen
- softening of the spleen
- disease of the spleen

**2. Thymopathy:** \_\_\_\_\_

- disease of the pituitary gland
- disease of the thymus gland
- imaging of the thymus gland
- removal of the thymus gland

**6. Lymphadenectomy:** \_\_\_\_\_

- incision into a lymph node
- removal of a lymph node
- removal of the thymus gland
- removal of a thyroid

**3. Lymphadenopathy:** \_\_\_\_\_

- disease of the thymus gland
- disease of the lymph glands
- disease of the pituitary gland
- Inflammation of the lymph glands

**7. Lymphadenotomy:** \_\_\_\_\_

- removal of a lymph node
- removal of the thymus gland
- incision into a lymph node
- incision into a thyroid

**4. Splenomalacia:** \_\_\_\_\_

- softening of the thyroid
- softening of the spleen
- hardening of the spleen
- disease of the spleen

**8. Thymectomy:** \_\_\_\_\_

- removal of a lymph node
- incision into a lymph node
- removal of the thymus gland
- incision into a thymus gland

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