Pharmacy Vocabulary and Abbreviations

"Rx" IS AN ABBREVIATION for the Latin word "recipe," but today it means "prescription." Years ago, many pharmacy terms and abbreviations came from Latin because the first medical texts were written in that language. While the use of Latin is no longer common, it is important for pharmacists to be familiar with any Latin abbreviations that doctors may use in prescriptions. In addition, pharmacists must be familiar with terms from math, chemistry, and biology. In this unit, you will learn about some of the terms and abbreviations used by pharmacists.

Objective:

Identify pharmacy terms and abbreviations.

Key Terms:

adverse reaction
anatomy
biochemistry
dosage
drug interaction
metabolism
neurotoxin
toxicology

Pharmacy Terms

It is essential for pharmacists to be accurate in their work. In fact, patients' lives may depend on it. For pharmacists to ensure they are filling prescriptions exactly according to doctors' directions, they must understand the vocabulary and abbreviations used in the profession.

TOXICOLOGY TERMS

Toxicology is the study of the negative effects of chemicals on the body. Pharmacists must be aware of possible adverse reactions and drug interactions.

Adverse Reaction

An **adverse reaction** is an unwanted side effect of a medication. It may be up to the pharmacist to warn patients about the symptoms of a possible adverse reaction.

Drug Interaction

Pharmacists should be aware of any possible or potential **drug interaction**—a negative effect produced when certain drugs are combined. The pharmacists often provide such information to people picking up their prescriptions.

Dosage

Medications may improve a person's health when taken correctly, but most drugs are harmful in excess. A **dosage** is the prescribed amount of a drug to be administered. A doctor may write additional instructions, often abbreviations from Latin words, about when a patient should take a medication. The pharmacist must translate the doctor's abbreviations to words that the patient can easily understand and follow. Examples are:

- ac (from Latin ante cibum)—before meals
- hs (hora somni)—at bedtime
- pc (post cibum)—after meals
- bid (bis in die)—twice daily
- tid (ter in die)—3 times a day
- qid (quarter in die)—4 times a day
- qd (quaque die)—every day
- prn (pro re nata)—as needed

ANATOMY TERMS

Pharmacists need to understand the doctor's directions for taking prescription medication, which may include terms for **anatomy**—parts of the human body. Again, these abbreviations may be from Latin words.

- Directions for eye medication may include "od," an abbreviation for "oculus dexter," which means right eye.
- The abbreviation "os" is from "oculus sinister" and means left eye.
- Directions may call for medication to be applied to the ears. The abbreviation "ad" from "aurio dextra" means right ear.
- Left ear is abbreviated "as" from "aurio sinister."
- Directions may say "au" from "aures utrae," which means each ear.

- The abbreviation "po" from "per os" means by mouth.
- Conversely, "npo" is an abbreviation for "nil per os," which means nothing by mouth.

BIOCHEMISTRY TERMS

Pharmacy vocabulary includes terms from the field of **biochemistry**—the study of chemical processes in the body.

- **Metabolism** is the chemical process in which substances are built up or broken down in the body. A person's metabolism affects his or her reaction to a drug.
- A **neurotoxin** is a poison that affects nerve function in a negative way.

MEASUREMENTS

Pharmacists must be precise in their measurements to ensure patients are receiving the proper amount of medication. They may need to convert measurements from one system to another.

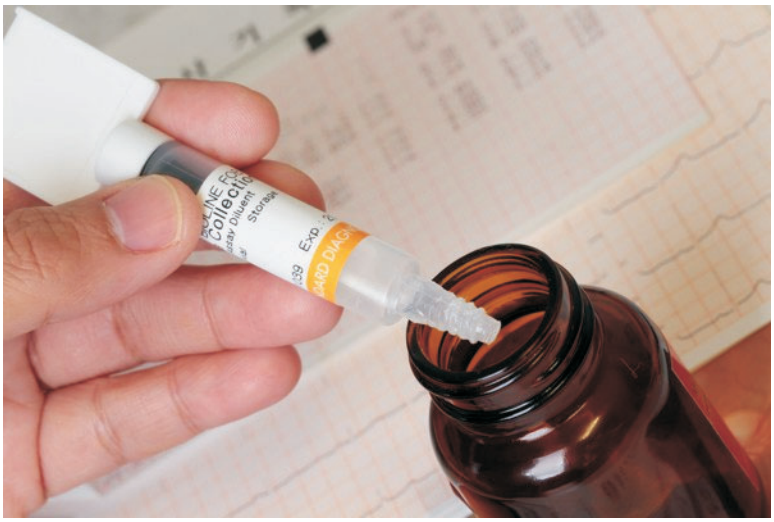

FIGURE 1. Pharmacists must understand measurements and abbreviations to ensure they are dispensing the proper amount of medication.

The metric system is used in pharmacy, even though it is not routinely used for other purposes in the United States. The metric measurements for volume (used to measure liquids) are milliliter (mL), liter (L), and cubic centimeter (cc). The metric measurements for weight are microgram (mcg), milligram (mg), gram (g), and kilogram (kg).

TABLE 1. Metric Unit Measurements and Their Corresponding Conversions

Metric Unit	Conversions
1 liter	1,000 milliliters
1 cubic centimeter	1 milliliter
1 milligram	1,000 micrograms
1 gram	1,000 milligrams
1 kilogram	1,000 grams

FURTHER EXPLORATION...

ONLINE CONNECTION: Measurement Conversions

Pharmacists must be accurate with their measurements. A patient's life could be jeopardized if a pharmacist fails to move a decimal point to the correct position. Metric measurements are not difficult to convert because they are based on units of 1,000. The conversion factors are the same for grams to milligrams and from meters to millimeters.

Medications usually are available only in certain dosages. Pharmacists are responsible for explaining to patients when they must break a pill in half or take multiple pills to receive the proper amount of the medication. Strong math skills are essential for figuring out the proper dosage for patients.

Visit the following websites to practice your conversion abilities. Take both quizzes, and record your score. Compare scores with your classmates, and ask your teacher to explain any questions that you answer incorrectly.

http://www.testandcalc.com/quiz/testmet.htm

http://www.testandcalc.com/quiz/testtab.htm

Common household measurements are not as exact, but they are easier for patients to understand and measure. The units for measuring volume include teaspoon (tsp), tablespoon (tbsp), cup (c), and fluid ounces (fl oz).

TABLE 2. Household Unit Measurements and Their Corresponding Conversions

Household Unit	Conversions
1 teaspoon	5 milliliters
1 tablespoon = 3 teaspoons	15 milliliters
1 cup = 8 fluid ounces	240 milliliters

The apothecary system is the oldest system of drug measurement, but it is not used often anymore. However, a few medications are measured in grains (gr), so it is important for pharmacists to be able to convert the measurement. One grain is equal to 60 milligrams.

Summary:

For pharmacists to fill prescriptions accurately, they must understand the vocabulary and abbreviations used in the profession. For instance, doctors may use Latin abbreviations on prescriptions to indicate parts of the body or directions for taking the medication. Also, toxicology is the study of the negative effects of chemicals on

the body. Pharmacists must be aware of potential adverse reactions and drug interactions that may be toxic. Pharmacists need to use precise measurements and must be able to convert measurements from one system to another.

Checking Your Knowledge:

1. What is toxicology?
2. What Latin abbreviations indicate when medications should be taken?
3. What Latin abbreviations indicate parts of the body?
4. What are neurotoxins?
5. What measurement systems are used in pharmacy?

Expanding Your Knowledge:

Create flashcards to study the Latin terms and abbreviations from this unit. Write the abbreviation on one side on the index card. Write the full Latin word and the meaning on the opposite side. Use the flashcards to quiz yourself or to study with friends in preparation for the test.

Web Links:

Measurement Systems
http://pharmlabs.unc.edu/labs/measurements/measure.htm

Pharmacology and Toxicology
http://www.envtox.ucdavis.edu/ptx/

Measurements
http://www.scribd.com/doc/27277098/Conversions-and-Calculations-Used-by-Pharmacy-Technicians

Conversion Flashcards
http://www.flashcardexchange.com/tag/conversions