# In the Know

## The Language of Medicine

Have you noticed that people in different jobs tend to speak in a language all their own?  For example, car mechanics talk about *catalytic converters*, *carburetors* and *universal joints*.   Lawyers talk about *habeas corpus*, *contributory negligence* and *fiduciary duty*.  Why?  Does it make mechanics feel important to use big names for little car parts?  Do lawyers feel special using long words that no one can spell?  Well...maybe! But, there's more to these special languages than that.  For example, see if you can figure out <u>who</u> would say the following and <u>what</u> it means:

*"I'm in the weeds.  Can somebody expo? Table 5 needs bussing.  And, we need to rush that club...dry, 86 the tomato."*

Did you guess that someone working in a restaurant would talk like that? Right!  But what do the words really mean?  Here's the translation:

*"I'm really busy and need help. Can somebody carry food from the kitchen to my tables? Table 5 needs to be cleared and cleaned for the next customer.  And, we need to hurry and prepare that club sandwich...without mayonnaise and with no tomatoes."*

So, what's the point of a waiter using "restaurant terminology"? Well...take a closer look.  If a waiter uses everyday language to talk to his coworkers, he'll need **44 words** to get his point across.  By using special "restaurant" language, it only takes **22 words** to deliver the same message!  This means the waiter can communicate with his coworkers quickly and have more time to take care of his customers.

It's no different in health care. Using medical terminology saves time and helps make sure that every health care worker understands the <u>same</u> message. But, like any new language, medical terminology takes time to learn and can be tricky.  So, get ready to practice the special language of health care!

# The Basic Rules of Medical Terminology

1.  **Every medical term has a <u>word root</u>.  If you understand the word root, you'll have a good idea of what <u>body part</u> is being discussed.  *For example*:**

    - **Tonsil** is the word root for both **tonsillitis** and **tonsillectomy**.
    - If you use these words, what body part are you talking about?      A: The tonsils!

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### *So, What Exactly Is a Word Root?*

A word root is the basic foundation of a word—the part that the rest of the word is built on.
For example, *port* is the word root for trans<u>port</u>, im<u>port</u>, ex<u>port</u> and sup<u>port</u>!

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2.  **The <u>last</u> part of a medical term is often the <u>first</u> part of the definition.  So, when you're trying to understand a medical word, look at the *end* of the word first.  *For example*:**

    - **Tonsillectomy** has two parts:  **tonsill** and **ectomy** *(which means the process of cutting out)*.  The <u>last</u> part of the word (*ectomy*) makes up the <u>first</u> part of the definition.  So, the definition of tonsillectomy is *the process of cutting out the tonsils*.

    - **Cystitis** also has two parts:  **cyst** *(which means bladder)* and **itis** *(which means inflammation* or *infection)*.  So, if you define **itis** first, cystitis means *inflammation of the bladder*.

3.  **To understand medical terminology, break down each word into <u>parts</u>.   *For example:***

    - Let's break down the word hypothermia:

    ---
    **hypo + therm + ia**
    ---

    - Now, look at what each part of the word means:

    ---
    **hypo** = *below normal*          **therm** = *temperature*          **ia** = *condition*
    ---

    - Next, remember to start the definition with the *last* part of the word...

    ---
    Hypothermia is a **<u>condition</u>** in which the **<u>temperature</u>** of the body is **<u>below normal</u>**.
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*Here's a sample sentence using this medical term:*
Mr. Smith is suffering from **hypothermia** because the
heat stopped working in his apartment.

# Some <u>Basic</u> Medical Terms

| Medical Term | Here's An Example! |
|---|---|
| **dys** = *difficult* | **dys** + **pnea** (which means *breathing*) = **dyspnea**<br>Dyspnea means *difficult breathing*, such as shortness of breath. |
| **itis** = *inflammation* | **gastr** (which means *stomach*) + **itis** = **gastritis**<br>Gastritis is the medical name for an upset stomach! |
| **ia** = *condition* | **hemat** (which means *blood*) + **ur** (which means *urine*) + **ia** = **hematuria**<br>When clients have blood in their urine, they have hematuria. |
| **brady** = *too slow* | **brady** + **cardia** (which means *heart*) = **bradycardia**<br>Bradycardia means a heart rate that's too slow...less than 60 beats a minute. |
| **tachy** = *too fast* | **tachy** + **pnea** = **tachypnea**<br>Tachypnea means a <u>fast</u> rate of breathing, usually more than 24 breaths per minute. |
| **hyper** = *above normal* | **hyper** + **active** = **hyperactive**<br>Hyperactive means *too much* activity.<br>You might hear someone say that a client has *hyperactive* bowel sounds. |
| **hypo** = *below normal* | **hypo** + **dermic** (which means *skin*) = **hypodermic**<br>Hypodermic means *below the normal level of the skin*.<br>That's why a needle used to give someone a shot is called a *hypodermic* needle. |
| **ectomy** = *to cut out* | **tonsill** + **ectomy** = **tonsillectomy**<br>A tonsillectomy is an operation to cut out the tonsils. |
| **path** = *disease* | **psycho** (which means *mind*) + **path** = **psychopath**<br>A psychopath is someone who has a disease of the mind. |
| **ology** = *the study of...* | **gynec** (which means *woman*) + **ology** = **gynecology**<br>So...a doctor who learns gynecology has studied all about women! |
| **meter** = *a tool that measures* | **thermo** + **meter** = **thermometer**<br>A thermometer measures someone's temperature. |

# The Eyes, Ears & Nose

| Medical Term | An Example |
|---|---|
| **audio = *hearing*** | She tested Mr. Brown's hearing with an **audio**meter. |
| **opt = *vision*** | The **opt**ician made some new eyeglasses for Mrs. Johnson. |
| **rhino = *nose*** | Another name for a "nose job" is a **rhino**plasty.<br>*(Plasty* means *surgical repair.)* |
| **naso = *nose*** | The **naso**gastric tube went from Mrs. Green's nose down to her stomach.<br>*(Gastric* means *stomach.)* |
| **phas = *speech*** | After his stroke, Mr. Wilson was dys**phas**ic and had to go to speech therapy.<br>*(Remember…dys* means *difficult...so dysphasic* means *difficult speech.)* |
| **diplo = *double*** | Mary has **diplo**pia so when I hold up two fingers, she sees four!<br>*(Opia* means *an eye condition*.) |
| **otia = *an ear condition*** | It's common for kids to develop **oti**tis—also called an ear infection. |
| **rhinia = *a nose condition*** | Someone with a runny nose may have **rhini**tis. |

# Old-Fashioned Medical Terms

> **Did You Know…?**
>
> Most medical terms developed from ancient Roman and Greek words...and have been used by doctors for centuries.

Some medical terms are no longer used by modern health care workers—usually because there are more <u>scientific</u> names for these diseases.   Some old medical terms sound pretty funny, including:

- **Bad blood** (*syphilis*)
- **Bloody flux** (*blood in a bowel movement*)
- **Canine madness** (*rabies*)
- **Cramp colic** (*appendicitis*)
- **Corruption** (*infection*)
- **Diary fever** (*a fever that only lasts one day*)
- **Dropsy** (*edema*)
- **Dry bellyache** (*lead poisoning*)
- **Falling sickness** (*epilepsy*)
- **Gathering** (*a collection of pus*)
- **Quinsy** (*tonsillitis*)
- **Summer complaint** (*diarrhea*)
- **Winter fever** (*pneumonia*)

# The Heart, Lungs & Blood Vessels

| Medical Term | Here's An Example! |
|---|---|
| **cardi** = *heart* | Since his heart attack, Mr. Smith takes **cardi**ac medications. |
| **hem** or **hemat** = *blood* | A doctor who specializes in blood diseases is called a **hemat**ologist. |
| **angio** = *vessel* | An **angio**plasty is an operation to repair some blood vessels. |
| **arteri** = *artery* | An **arterio**gram is a test that shows pictures of a person's arteries. |
| **phleb** = *vein* | **Phleb**itis caused Mrs. Johnson's leg vein to become red and swollen. |
| **pneumo** = *lung* | **Pneumo**nia is caused by an infection in the lungs. |
| **cyan** = *blue* | If a patient has blue lips, he might be **cyan**otic. |
| **erythr** = *red* | A red blood cell is called an **erythr**ocyte. |
| **leuk** = *white* | **Leuk**emia is a disease of the white blood cells. |

# True or False?
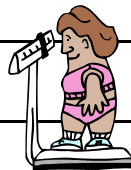
*See how much you've learned so far about medical terminology by answering the following questions as either TRUE or FALSE:*

1. **Tachy** means *too slow*.
   - True    or    False

2. **Dermatology** is the study of skin.
   - True    or    False

3. **Dyspnea** means *soft breathing*.
   - True    or    False

4. **Ectomy** means *infection*.
   - True    or    False

5. A **rhinia** is a nose condition.
   - True    or    False

6. **Pathology** is the study of disease.
   - True    or    False

7. **Hypo** means *difficult*.
   - True    or    False

8. A **nasogastric** tube runs from the nose to the stomach.
   - True    or    False

# Skin, Muscles, Bones & More!

| Medical Term | An Example |
|---|---|
| **derma** = *skin* | The **derma**tologist helped Tom clear up his acne. |
| **myo** = *muscle* | **Myo**cardial medications work on the heart muscle. (Remember…*cardi* refers to the heart.) |
| **oste** = *bone* | His cancer was an **oste**oma of the thigh bone. |
| **stern** = *breast bone* | After heart surgery, John had a wound running down his **stern**um. |
| **arthr** = *joint* | Mrs. Simpson has **arthr**itis in her knees. (Remember…*itis* means *inflammation*.) |
| **carcin** = *cancer* | Cigarette smoke is **carcin**ogenic. (*Ogenic* means *able to cause*...so *carcinogenic* means *able to cause cancer*.) |
| **neuro** = *nerves* | A **neuro**logist specializes in diseases of the nerves. |
| **lipo** = *fat* | Susan wanted **lipo**suction to get rid of her chubby thighs. |
| **oma** = *tumor* | Melan**oma** is one kind of skin cancer. |

# What Do These Words Mean?

*Try to translate the following medical terms:*

1. **Bradypnea**
   - A condition of _____ _____.

2. **Audiology**
   - The _____ of _____.

3. **Angiogram**
   - A picture of _____.

4. **Leukocyte**
   - A _____ blood cell.

5. **Neuritis**
   - Inflammation of the _____.

6. **Lipoma**
   - A tumor of _____ cells.

7. **Dermatitis**
   - Inflammation of the _____.

ANSWERS: 1. Slow breathing  2. Study, Hearing  3. Vessels.  4. White  5. Nerves  6. Fat  7. Skin

# The Digestive System

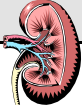| Medical Term | An Example |
|---|---|
| **colo = *colon*** | The doctor used a **colon**oscope to see inside Mr. Taylor's bowel.<br>(A *scope* is a tool that allows people to see things. For example, a *microscope* lets you see *tiny* things and a *telescope* lets you see things that are *far away*.) |
| **emesi = *vomit*** | Your client is throwing up and needs an **emesi**s basin. |
| **gastro = *stomach*** | Mr. Kelly's **gastr**itis is causing him to have diarrhea. |
| **hepato = *liver*** | People should wash their hands after using the bathroom to help keep **hepat**itis from spreading. |
| **recto = *rectum*** | **Rect**al thermometers usually have a red-colored glass tip. |
| **appendi = *appendix*** | Sam was rushed to the hospital for an **append**ectomy.<br>*(Remember, ectomy means to cut out.)* |
| **dent = *teeth*** | Mrs. Weber has a full set of **dent**ures. |
| **phag = *eat, swallow*** | Wilma is dys**phag**ic, so she has trouble swallowing solid foods.<br>*(Remember, dys means difficult,* so people who are *dysphagic* have difficulty chewing or swallowing.*)* |
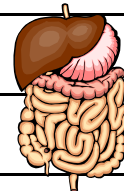
# What About Abbreviations?

- Abbreviations are shortened forms of words or phrases. They are used to save time and space in documentation.

- You might see abbreviations in your client's care plan and your client care orders. You might also be asked to use certain abbreviations when you complete your documentation.

- There are different kinds of abbreviations:

  1. Some use the first letter of each word. For example, **V**ital **S**igns is abbreviated as **VS**.

  2. Some abbreviations are made from the first and last letter of a word. For example, **h**eigh**t** is abbreviated as **ht**.

  3. Other words are abbreviated by using the first few letters. For example, **amb**ulate is abbreviated as **amb**.

  4. Another kind of abbreviation is a chemical symbol. For example, oxygen is abbreviated by using the chemical symbol $O_2$ and water is abbreviated with the symbol $H_2O$.

# The Urinary System

| Medical Term | An Example |
|---|---|
| cyst = *bladder* | Mr. Hall needs more medication for his **cyst**itis. |
| nephro = *kidney* | When Mike developed kidney problems, he went to a **nephro**logist. |
| noct = *nighttime* | Sally put a night light by Mr. Weber's bed because of his **noct**uria. |
| hydro = *water* | My client didn't drink enough water and became de**hydr**ated. |
| ren = *kidney* | Mr. Thomas needed dialysis because of **ren**al failure. |
| uro = *urinary* | The medical student was learning about **uro**logy. |
| uria = *related to urination* | The nurse says Mrs. Hunt moans when she voids because of **dys**uria. |
| poly = *too much* | Because of **poly**uria, Sarah had to make frequent trips to the toilet. |
| a *or* an = *not enough* | My dialysis client had **an**uria because of kidney disease. (Remember, *ia* means *condition*, so *anuria* means *the condition of not having enough urine*.) |

# Name That Body Part!
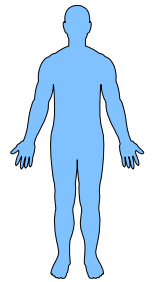
*Can you tell which body part needs fixing for the following people?*

1. **Mr. Kelly has <u>gastritis</u> with frequent <u>emesis</u>.**

- **Body Part:** _____

2. **Mrs. Williams failed her <u>audiogram</u>.**

- **Body Part:** _____

3. **Sam sees a <u>cardiologist</u> twice a month.**

- **Body Part:** _____

4. **Mark has been diagnosed with <u>leukemia</u>.**

- **Body Part:** _____

5. **Mr. Peters had surgery to remove a <u>neuroma</u>.**

- **Body Part:** _____

6. **Mrs. Tucker might need to have a <u>colonoscopy</u>.**

- **Body Part:** _____

ANSWERS: 1. Stomach 2. Ears 3. Heart 4. Blood 5. Nerves 6. Colon

# The Reproductive System

| Medical Term | An Example |
|---|---|
| **mammo** = *breast tissue* | Lisa had a **mammo**gram to check for breast cancer. |
| **mast** = *breast* | Mrs. Lee had a **mast**ectomy on her left side. |
| **gynec** = *woman* | Only women go to see **gynec**ologists. |
| **hyster** = *uterus* | After her **hyster**ectomy, Martha was unable to have children. |
| **nat** = *birth* | During her pregnancy, Sue went to her doctor for pre**nat**al care. |
| **orchid** = *testicle* | John had testicular cancer and had to have an **orchid**ectomy. (Remember…*ectomy* means *to surgically remove*.) |

# Match the Terms!

*Try matching the following medical terms with their meanings. (Draw a line between each term and its meaning.)*

1. **Cyan**
2. **Leuko**
3. **Mal**
4. **Brady**
5. **Tachy**
6. **Hypo**
7. **Hyper**
8. **Dys**
9. **Erythro**
10. **Poly**

A. **Red**
B. **Too fast**
C. **Bad**
D. **Too much**
E. **White**
F. **Difficult**
G. **Below normal**
H. **Blue**
I. **Too slow**
J. **Above normal**

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**Time to Laugh!**

Guess what the word *hysteria* means in medical terminology?

**hyster** means **uterus**
**ia** means **condition**

So, *hysteria* means *the condition of having a uterus*. Does this mean that only <u>women</u> can become hysterical? Most men would probably agree…

*ANSWERS:*
*1. Blue (H)  2. White (E)  3. Bad (C)  4. Too slow (I)*
*5. Too fast (B)  6. Below normal (G)  7. Above normal (J)*
*8. Difficult (F)  9. Red (A)  10. Too much (D)*

# Medical Specialties

| Medical Term | An Example |
|---|---|
| Pediatrics | Pediatrics is the study of childhood health problems. |
| Geriatrics | Doctors who specialize in caring for the elderly study geriatrics. |
| Dermatology | Dermatology is the study of skin problems and diseases. |
| Hematology | If you have a blood disease, you'd probably go see a hematologist. |
| Urology | People with urinary problems are cared for by urologists. |
| Oncology | Oncology is the study of cancer. |
| Cardiology | Cardiologists are doctors who specialize in heart problems and diseases. |
| Gynecology | Gynecology is the study of women's health problems. |
| Psychology | The study of the mind is called psychology. |

# And, Just For Fun…

**The following "medical" definitions might give you a laugh!**

**Benign** = What you are after you are eight.

**Artery** = The study of paintings.

**Barium** = What doctors do when patients die.

**Bowels** = Letters like A, E, I, O and U.

**Cardiology** = The study of playing poker.

**CAT Scan** = Searching for a lost kitty.

**Colic** = A sheep dog.

**Enema** = Not a friend.

**ICU** = peek-a-boo.

**Labor Pain** = Getting hurt at work.

**Outpatient** = A person who has fainted.

**Rectum** = What happened to the Corvette.

**Seizures** = A Roman emperor.

**Tablet** = A small table.

**Terminal illness** = Getting sick at the airport.

**Tumor** = An extra pair.

**Urine** = The opposite of "you're out".

# Common Medical Abbreviations

| Medical Abbreviation | What It Means: |
|---|---|
| VS | Vital Signs |
| T | Temperature |
| P | Pulse |
| R | Respirations |
| BP | Blood Pressure |
| I & O | Intake & Output |
| N & V | Nausea & Vomiting |
| q | Every |
| c̄ | With |
| s̄ | Without |
| ā | Before |
| p̄ | After |
| PO | By Mouth (Orally) |
| NPO | Nothing By Mouth |
| RN | Registered Nurse |
| MSW | Medical Social Worker |
| PT | Physical Therapy |
| OT | Occupational Therapy |
| ST | Speech Therapy |

| Medical Abbreviation | What It Means: |
|---|---|
| OTC | Over the Counter |
| ROM | Range of Motion |
| SOB | Shortness of Breath |
| OOB | Out of Bed |
| Tx | Treatment |
| Rx | Prescription |
| Dx | Diagnosis |
| HOB | Head of Bed |
| HOH | Hard of Hearing |
| BRP | Bathroom Privileges |
| bid | Twice a Day |
| tid | Three Times a Day |
| qid | Four Times a Day |
| qd | Every Day |
| qod | Every Other Day |
| q 2 hr | Every Two Hours |
| HS | Hour of Sleep (or bedtime) |
| DNR | Do Not Resuscitate |
| c/o | Complains Of... |

# Some Final Hints about Medical Terminology

- Some medical terms are named after people. For example, Alzheimer's disease is named after the German doctor that discovered the illness. His name was Alois Alzheimer.

- Another type of medical term is called an **acronym**. An acronym is a word made from the first letter of several words. For example, **ASAP** is an acronym for "**a**s **s**oon **a**s **p**ossible". And, **AIDS** is an acronym for **A**cquired **I**mmune **D**eficiency **S**yndrome.

- Remember...if you can figure out the <u>root</u> of a word, you'll probably be able to understand its basic meaning. Keep in mind that the word root is usually a body part. For example, let's take the word **hysterectomy**. What body part is this word describing? Well, you've learned that **hyster** is the word root for *uterus*. And, you remember that **ectomy** means *to remove or to cut out*. So, hysterectomy means *to cut out the uterus*. Most medical terms can be broken down in this way.

- Some medical terms have more than one definition. You'll need to decide which one makes sense in each situation. For example, **ped** can mean *child* or *foot*. When you see the word <u>ped</u>iatrics, you'll remember that it means the *study of children's health*. But, if you see the word <u>ped</u>icure, you'll have to remember that it's a treatment for *feet*—not for kids!

- Keep in mind that the medical terms presented in this inservice are only part of the words and phrases used by health care professionals. Keep your eye out for additional medical terms, and ask your supervisor if you run across one that you can't figure out.

- Whether you use medical terms or just "plain" English in your documentation, be sure to write legibly in ink. Remember that each client's chart is a legal document!

- Keep in mind that some abbreviations are standard in all health care settings. For example, all health care workers across the United States use **q** to mean *every* or **PO** to mean *by mouth*.

- There may be other abbreviations that are only used in <u>your</u> workplace, along with some that are not allowed. Your supervisor probably has a list of approved abbreviations. (The list may also be in your workplace policy manual.) Be sure that any abbreviation you use is on that list. (If you're not sure whether an abbreviation is allowed, then don't use it! Write out the full word instead.)

- Remember that medical terminology is a tool to help you and your <u>coworkers</u> communicate. Please try to *avoid* using medical terms when speaking with clients or their families. The language of health care may seem like a foreign language to them!