

# Medical Terminology

## National EMS Education Standard Competencies

### Medical Terminology

Uses foundational anatomical and medical terms and abbreviations in written and oral communication with colleagues and other health care professionals.

#### Medical Terminology

It is critical that you have a strong working knowledge of medical terminology. The language of medicine is primarily derived from Greek and Latin. Medical terminology is used in international language, and it is also necessary for communicating with other medical personnel. The wider your vocabulary base, the more competent you seem to the rest of the medical community and the better the patient care you will be able to provide. Understanding terminology involves breaking words down into their separate components of prefix, suffix, and root word and having a good working knowledge of those parts.

#### Prefixes

A prefix appears at the beginning of a word and generally describes location and intensity. Prefixes are frequently found in general language (ie, autopilot, submarine, tricycle), as well as in medical and scientific terminology. When a medical word (ventilation) contains a prefix (hyper), the meaning of the word is altered (hyperventilation). Not all medical terms have prefixes.

By learning to recognize a few of the more commonly used medical prefixes, you can figure out the meanings of terms that may not be immediately familiar to you. [Table A-1](#) lists common prefixes.

#### Suffixes

Suffixes are placed at the end of words to change the original meaning. In medical terminology, a suffix usually indicates a procedure, condition, disease, or part of speech.

A commonly used suffix is -itis, which means “inflammation.” When this suffix is paired with the prefix arthro-, meaning joint, the resulting word is arthritis, an inflammation of the joints. Sometimes it is necessary to change the last letter or letters of the root word or prefix when a suffix is added to make pronunciation easier. [Table A-2](#) lists common suffixes.

#### Root Words

The main part or stem of a word is called a root word. A root word conveys the essential meaning of the word and frequently indicates a body part. With a combining form, the root word and a combining vowel such as i, e, o, or a may be combined with another root word, a prefix, or a suffix to describe a particular structure or condition.

A frequently used term in EMS is CPR, which stands for cardiopulmonary resuscitation. When we break it down, cardio is a root word meaning “heart,” and pulmonary is a root word meaning “lungs.” By performing CPR we introduce air into the lungs and circulate blood by compressing the heart to resuscitate the patient. Some root words may also be used as prefixes or suffixes; those already appear in the earlier tables. [Table A-3](#) lists common root words.

#### Abbreviations

Abbreviations take the place of words to shorten notes or documentation. When you are using abbreviations in patient care reports, remember to use only standard, accepted abbreviations to avoid confusion and errors. [Table A-4](#) lists commonly used abbreviations. This list is intended to help you decipher documents written by other health care professionals. Before using any abbreviations in your own reports, you should be familiar with accepted use of abbreviations in your local jurisdiction or service area.

**Table A-1** Common Prefixes

Prefix	Meaning	Prefix	Meaning	Prefix	Meaning
a-	without, lack of	cyst(o)-	pertaining to the bladder or any fluid-containing sac	inter-	between
ab-	away from	cyt(o)-	pertaining to a cell	intra-	within
abdomi(n)-	abdomen	de-	down from	iso-	equal
acr(o)-	pertaining to an extremity	dermat(o)-	pertaining to the skin	latero-	side
ad-	to, toward	di-	twice, double	leuk(o)-	pertaining to anything white or to leukocytes (white blood cells)
aden(o)-	pertaining to a gland	dia-	through, completely	lith(o)-	pertaining to a stone
an-	without, lack of	dys-	difficult, painful, abnormal	macro-	large
ana-	up, back, again	ect(o)-	out from	mal-	bad or abnormal
angio-	vessel	electro-	pertaining to electricity	medi-	middle
ante-	before, forward	end(o)-	within	mega-	large
anti-	against, opposed to	enter(o)-	pertaining to the intestines	melan-	black
arteri(o)-	artery	epi-	upon, on	mening(o)-	pertaining to a membrane, particularly the meninges
arthro-	pertaining to a joint	erythr(o)-	pertaining to anything red or to erythrocytes (red blood cells)	micro-	small
auto-	self	eu-	easy, good, normal	mono-	one
bi-	two	ex(o)-	outside	myel(o)-	pertaining to the spinal cord, the bone marrow, or myelin
bi(o)-	pertaining to life	extra-	outside, in addition	my(o)-	pertaining to muscle
blast(o)-	germ or cell	gastr(o)-	pertaining to the stomach	nas(o)-	pertaining to the nose
blephar(o)-	pertaining to an eyelid	glyc(o)-	sugar	ne(o)-	new
brady-	slow	gynec(o)-	pertaining to females or the female reproductive organs	nephr(o)-	pertaining to the kidney
calc-	stone; also heel	hemat(o)-	pertaining to blood	neur(o)-	pertaining to a nerve or the nervous system
cardi(o)-	pertaining to the heart	hemi-	half	noct-	night
cephal(o)-	pertaining to the head	hem(o)-	pertaining to blood	olig(o)-	little, deficient
cerebr(o)-	pertaining to the cerebrum, a part of the brain	hepat(o)-	pertaining to the liver	oophor(o)-	pertaining to the ovary
cervic(o)-	pertaining to the neck or the uterine cervix	heter-	other, different	ophthalm(o)-	pertaining to the eye
chole-	pertaining to bile	hom-	same or like	orchid(o)-	pertaining to the testicles
chondr(o)-	pertaining to cartilage	hydr(o)-	water	orchi(o)-	pertaining to the testicles
circum-	around, about	hyper-	over, excessive	oro-	pertaining to the mouth
contra-	against, opposite	hypo-	under, deficient	ortho-	straight or normal
cost(o)-	pertaining to a rib	hyster(o)-	pertaining to the uterus	oste(o)-	pertaining to bone
cyan(o)-	blue	infra-	below	ot(o)-	pertaining to the ear

 continues

**Table A-1** Common Prefixes, continued

Prefix	Meaning	Prefix	Meaning	Prefix	Meaning
para-	by the side of	pseud(o)-	false	semi-	half or partial
path(o)-	pertaining to disease	psych(o)-	pertaining to the mind	sub-	under, moderately
per-	through	pulm(o)-	pertaining to the lung	super-	above, excessive, or more than normal
peri-	around	pur-	pertaining to pus	supra-	above
phag(o)-	pertaining to eating, ingesting, or engulfing	pyel(o)-	pertaining to the kidney or pelvis	tachy-	fast
pharyng(o)-	pertaining to the throat, or pharynx	py(o)-	pertaining to pus	therm-	pertaining to temperature
phleb(o)-	pertaining to a vein	quadr(i)-	four	thorac(o)-	pertaining to the chest
pneum(o)-	pertaining to respiration, the lungs, or air	quar-	four	trans-	across
poly-	many	quat-	four	tri-	three
post-	after, behind	retr(o)-	backward or behind	uni-	one
pre-	before	rhin(o)-	pertaining to the nose	vas(o)-	vessel
pro-	before, in front of	salping(o)-	pertaining to a tube		
proct(o)-	pertaining to the rectum	scler(o)-	hard; also means pertaining to the sclera		

**Table A-2** Common Suffixes

Suffix	Meaning	Suffix	Meaning	Suffix	Meaning
-algia	pertaining to pain	-emia	pertaining to the presence of a substance in the blood	-ology	science of
-asthen(o)	weakness	-genic	causing	-oma	tumor
-blast	immature cell	-gram	record	-osis	pertaining to a disease process (see also -sis)
-cele	pertaining to a tumor or swelling	-graph	a record or the instrument used to create the record	-ostomy	surgical creation of an opening, or hole
-centesis	pertaining to a procedure in which an organ or body cavity is punctured, often to drain excess fluid or obtain a sample for analysis	-itis	inflammation	-otomy	surgical incision
-cyte	cell	-lysis	decline, disintegration, or destruction	-pathy	disease or a system for treating disease
-ectomy	surgical removal of	-megaly	enlargement of	-phagia	pertaining to eating or swallowing

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**Table A-2** Common Suffixes, continued

Suffix	Meaning	Suffix	Meaning	Suffix	Meaning
-phasia	pertaining to speech	-rrhage	abnormal or excessive flow or discharge	-sis	a process, action, or condition
-phobia	pertaining to an irrational fear	-rrhagia	abnormal or excessive flow or discharge	-taxis	order, arrangement of
-plasty	plastic surgery	-rrhaphy	suture of; repair of	-trophic	pertaining to nutrition
-plegia	paralysis	-rrhea	flow or discharge	-uria	pertaining to a substance in the urine or the condition so indicated
-pnea	pertaining to breathing	-scope	instrument for examination		
-ptosis	drooping	-scopy	examination with an instrument		

**Table A-3** Common Root Words

Root Word	Meaning	Root Word	Meaning	Root Word	Meaning
acou-	hear	carotid	great arteries of the neck	gest-	carry, produce, congestion
adip-	fat	carpus	wrist	gno-	know
alb-	white	cent-	a fraction in the metric system; one hundredth or 100	-gram	something written or recorded
alges-	pain	cente-	to puncture (a body cavity)	graph-	write, record
andr-	male	cili-	eyelid	humerus	the bone in the upper arm
aorta	large artery exiting from the left ventricle of the heart	cleid(o)-	clavicle	idi-	separate, distinct
aqua-	water	cubitus	elbow	iod(o)-	iodine
asphyxia	lack of oxygen or excess of carbon dioxide in the body that results in unconsciousness	cycl-	circle or cycle	lact-	milk
asthen-	weak	digit	finger or toe	lingu-	tongue
audi-	to hear	ede-	swelling	men-	month
bronch-	windpipe	-esthesi(o)-	pertaining to sensation or perception	ocul-	eye
bucc-	cheek	febr-	fever	ov-	egg
bursa	pouch or sac	flex	bend	palpate	to examine by touch
callus	hard, thick skin; also a meshwork of connective tissue that forms during the healing process after a fracture	foramen	opening	ped-	child or foot
carcin-	cancer	fract-	break	percuss	to examine by striking

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**Table A-3 Common Root Words, continued**

Root Word	Meaning	Root Word	Meaning	Root Word	Meaning
phot-	light	sepsis	the presence of microorganisms or their toxins in the blood; also the toxic condition caused by such presence	tom-	cut
pleur-	rib, side	sept-	wall, divider; also seven	toxic	poisonous
pod-	foot	serum	the clear portion of body fluids, including blood	trich-	hair
pto-	fall	sinus	cavity, channel, or hollow space	ur-	urine
ptyal-	saliva	som(a)-	body	varic-	varicose vein
pyr-	fire	spir-	coil	vertigo	a disordered sensation in which one's own body or the surroundings are perceived as moving
radius	the forearm bone on the thumb side; also a line from the center of a circle or sphere to the edge	stasis	slowing or stopping of the normal flow of a fluid, such as blood	viscer-	internal organs
ren-	kidney	stature	height	viscous	sticky
retina	inner nerve-containing layer of the eye	stern(o)-	sternum (breastbone)	xen-	foreign (material)
sangui(n)-	blood	stoma	any small opening on the surface of the body, such as a pore; also, the opening created in the abdominal wall for the passage of urine or feces	xer-	dry
sebum	a fatty secretion of the sebaceous glands	tact-	touch		
sect-	cut	tetra-	four		

**Table A-4 Common Abbreviations\***

\*Sometimes abbreviations are written with periods (for example, *abd.* and *a.c.*), and sometimes different capitalization might be used and might convey a different meaning. Not all possible meanings for the abbreviations in this table are given here. Unless you are certain about the meaning, ask the person who used the abbreviation.

Abbreviation	Meaning	Abbreviation	Meaning	Abbreviation	Meaning
A&P	anatomy and physiology	ACLS	advanced cardiac life support	AK	above the knee
ā	before	ad lib	as much as desired	AKA	above the knee amputation
āā	of each (used in writing prescriptions)	ADL	activity of daily living	A-line	arterial line
abd	abdomen	AED	automated external defibrillator	AMA	against medical advice
ABG	arterial blood gas	AF	atrial fibrillation	amb	ambulatory
ac	before meals	AIDS	acquired immunodeficiency syndrome	AMI	acute myocardial infarction

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**Table A-4 Common Abbreviations, continued**

Abbreviation	Meaning	Abbreviation	Meaning	Abbreviation	Meaning
AMS	altered mental status	CABG	coronary artery bypass graft	CVP	central venous pressure
ant	anterior	CAD	coronary artery disease	CXR	chest x-ray
AO × 4	alert and oriented to person, place, time, and self	CBC	complete blood count	D&C	dilation and curettage
AP	anteroposterior, front-to-back, action potential, angina pectoris, anterior pituitary, arterial pressure	cc	cubic centimeter	D/C	discontinue
APC	atrial premature complex, activated protein C, aspirin-phenacetin-caffeine	CC or C/C	chief complaint	diff	differential
Aq	water	CCU	coronary care unit	dig	digoxin
ARDS	adult respiratory distress syndrome	CHF	congestive heart failure	DM	diabetes mellitus
ASA	aspirin (acetylsalicylic acid)	Cl <sup>-</sup>	chloride	DOA	dead on arrival
ASAP	as soon as possible	cm	centimeter	DOE	dyspnea on exertion
ASHD	arteriosclerotic or atherosclerotic heart disease	cm <sup>3</sup>	cubic centimeter	DON	director of nursing
AV, A-V	atrioventricular, arteriovenous	CNS	central nervous system	DOS	dead on scene
BBB	bundle branch block	c/o	complaining of	DPT	diphtheria, pertussis, and tetanus toxoids vaccine
bid	twice daily	CO	cardiac output, carbon monoxide	DSD	dry sterile dressing
BKA	below the knee amputation	CO <sub>2</sub>	carbon dioxide	DtaP	diphtheria, tetanus toxoids, and acellular pertussis vaccine
BM	bowel movement	COLD	chronic obstructive lung disease	DTP	diphtheria, tetanus toxoids, and pertussis vaccine
BP	blood pressure	COPD	chronic obstructive pulmonary disease	DTs	delirium tremens
BS	blood sugar, breath sounds, bowel sounds, bachelor of science (degree)	CP	chest pain, chemically pure, cerebral palsy	DVT	deep venous thrombosis
BSA	body surface area	CPR	cardiopulmonary resuscitation	D <sub>5</sub> W	dextrose 5% in water
bx	biopsy	CRNA	certified registered nurse anesthetist	Dx	diagnosis
Ā	with	CRT	capillary refill time, cathode-ray tube	ECG	electrocardiogram
°C	degrees Celsius (centigrade)	CSF	cerebrospinal fluid	ED	emergency department
Ca	calcium	CSM	carotid sinus massage, cerebrospinal meningitis	EDC	estimated date of confinement
CA	cancer, cardiac arrest, chronologic age, coronary artery, cold agglutinin	CVA	cerebrovascular accident	EEG	electroencephalogram

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**Table A-4 Common Abbreviations, continued**

Abbreviation	Meaning	Abbreviation	Meaning	Abbreviation	Meaning
eg	for example	h	hour	JVD	jugular venous distention
EKG	electrocardiogram	(H)	hypodermic	K <sup>+</sup>	potassium
ENT	ears, nose, and throat	H	hypodermic	KCl	potassium chloride
ER	emergency room	H&H	hemoglobin and hematocrit	kg	kilogram
ET	endotracheal tube, endotracheal	H&P	history and physical	KUB	kidneys, ureters, and bladder
ETA	estimated time of arrival	H/A	headache	KVO	keep vein open
ETOH	ethyl alcohol	Hb	hemoglobin	L	liter
ETT	endotracheal tube	Hct	hematocrit	LAC	laceration, laparoscopic-assisted colectomy
°F	degrees Fahrenheit	Hg	mercury	lb	pound
F <sub>IO<sub>2</sub></sub>	fraction of inspired oxygen	Hgb	hemoglobin	LE	lower extremity, left eye, lupus erythematosus
FBS	fasting blood sugar	HH	hiatal hernia	LLL	left lower lobe of the lung
Fe	iron	HIV	human immunodeficiency virus	LLQ	left lower quadrant of the abdomen
FHR	fetal heart rate	H <sub>2</sub> O	water	L/M	liters per minute
FHT	fetal heart tones	H <sub>2</sub> O <sub>2</sub>	hydrogen peroxide	LMP	last menstrual period
FHx	family history	HPI	history of present illness	LOC	level of consciousness, loss of consciousness
fL	femtoliter	hr	hour	LPM	liters per minute
fl	fluid	hs	at bedtime	LPN	licensed practical nurse
fld	fluid	HTN	hypertension	LR	lactated Ringer's
FSH	follicle-stimulating hormone	Hx	history	LSD	lysergic acid diethylamide
fx	fracture	Hz	hertz	LUL	left upper lobe of the lung
g	gram	I&O	intake and output	LUQ	left upper quadrant of the abdomen
GB	gallbladder	IC	intracardiac, inspiratory capacity, irritable colon	LVN	licensed vocational nurse
GI	gastrointestinal	ICP	intracranial pressure	m	meter
gm	gram	ICU	intensive care unit	MAE	moves all extremities
gr	grain	IDDM	insulin-dependent diabetes mellitus	MAEW	moves all extremities well
GSW	gunshot wound	IM	intramuscular	MAP	mean arterial pressure
gtt	drop(s)	IO	intraosseous	mcg	microgram
GTT	glucose tolerance test	IPPB	intermittent positive pressure breathing	MCL	midclavicular line, modified chest lead
GU	genitourinary	IUD	intrauterine (contraceptive) device	mEq	milliequivalent
gyn	gynecology	IV	intravenous	mg	milligram (mgm is a former symbol)

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**Table A-4 Common Abbreviations, continued**

Abbreviation	Meaning	Abbreviation	Meaning	Abbreviation	Meaning
MI	myocardial infarction	NKDA	no known drug allergies	PE	pulmonary embolism, physical examination
MICU	mobile intensive care unit; medical intensive care unit	NPA	nasopharyngeal airway	PEA	pulseless electrical activity
min	minute	NPO	nil per os (nothing by mouth)	PEARL	pupils equal and reactive to light
mL	milliliter	NS	normal saline	ped(s)	pediatric
mm	millimeter	NSR	normal sinus rhythm	PEEP	positive end-expiratory pressure
mm Hg	millimeters of mercury	NTG	nitroglycerin	PERL	pupils equal and reactive to light
MRI	magnetic resonance imaging	N/V	nausea and vomiting	PERRL	pupils equal, round, and reactive to light
MS	morphine sulfate, multiple sclerosis	N/V/D	nausea, vomiting, and diarrhea	pH	hydrogen ion concentration
MSO <sub>4</sub>	morphine sulfate	NVD	neck vein distention	PID	pelvic inflammatory disease
MVA	motor vehicle accident	O <sub>2</sub>	oxygen	PND	paroxysmal nocturnal dyspnea
MVC	motor vehicle crash	OB	obstetrics	po	per os (by mouth)
MVP	mitral valve prolapse	OBS	organic brain syndrome	PO	postoperative, "post op"
N	normal	OD	overdose, right eye, optical density, outside diameter, doctor of optometry	Po <sub>2</sub>	partial pressure of oxygen
Na	sodium	OP	outpatient	PRN	pro re nata (as needed)
NA, N/A	not applicable	OPA	oropharyngeal airway	psi	pounds per square inch
NaCl	sodium chloride	OR	operating room	PSVT	paroxysmal supraventricular tachycardia
NAD	no apparent distress, no appreciable disease	OS	left eye	pt	patient
NaHCO <sub>3</sub>	sodium bicarbonate	OU	both eyes	PT	physical therapy
NC	nasal cannula	oz	ounce	PTA	prior to admission, plasma thromboplastin antecedent
NG	nasogastric	̄p	after	PTT	partial thromboplastin time
NICU	neonatal intensive care unit	pc	after meals	PVC	premature ventricular complex, polyvinyl chloride
NIDDM	non-insulin-dependent diabetes mellitus	Pco <sub>2</sub>	partial pressure of carbon dioxide	PVD	peripheral vascular disease
NKA	no known allergies	PDR	<i>Physicians' Desk Reference</i>	q	every

 continues

**Table A-4 Common Abbreviations, continued**

Abbreviation	Meaning	Abbreviation	Meaning	Abbreviation	Meaning
qd	every day	stat	immediately	WBC	white blood cell
qh	every hour	STD	sexually transmitted disease	WNL	within normal limits
qid	four times a day	Sub Q	subcutaneous	w/o	without
qod	every other day	SVT	supraventricular tachycardia	wt	weight
RA	rheumatoid arthritis, right atrium	Sx	symptoms	yo	year old
RAD	reactive airway disease, right axis deviation	sym	symptoms	̄	except
RBC	red blood cell	tab	tablet	1°	first, first degree, primary
Rh	Rhesus blood factor, rhodium	TB	tuberculosis	2°	secondary, second degree
RHD	rheumatic heart disease	TBA	to be admitted, to be announced	↑	increase(d)
RL	Ringer's lactate	tbsp	tablespoon	↓	decrease(d)
RLL	right lower lobe of the lung	tech	technician, technologist	∅	no, not, none
RLQ	right lower quadrant of the abdomen	TIA	transient ischemic attack	®	right
RN	registered nurse	tid	three times a day	⊙	left
R/O	rule out	TKO	to keep open	μ	micro
ROM	range of motion, rupture of membranes	TPR	temperature, pulse, respiration	α	alpha
RUL	right upper lobe of the lung	tsp	teaspoon	β	beta
RUQ	right upper quadrant of the abdomen	Tx	treatment	~	approximately
Rx	prescription	U	unit	×2	times two
̄	without	UA	urinalysis	/	per
SC	subcutaneous, secretory component	UE	upper extremity	≠	not equal
SICU	surgical intensive care unit	URI	upper respiratory infection	>	greater than
SIDS	sudden infant death syndrome	USP	United States Pharmacopeia	<	less than
SL	sublingual	UTI	urinary tract infection	?	questionable, possible
SOB	shortness of breath	VD	venereal disease	Δ	change
SQ	subcutaneous	vol	volume	–	negative
ss	half	VS	vital signs	♀	female
S/S	signs and symptoms	w/	with	♂	male