



MOSBY'S DICTIONARY of Medicine, Nursing & Health Professions

ELSEVIER

9TH EDITION

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COMMON ABBREVIATIONS USED IN WRITING PRESCRIPTIONS

Abbreviation	Derivation	Meaning	Abbreviation	Derivation	Meaning
ā ā	ana	of each	o.n.	omni nocte	every night
a.c.	ante cibum	before meals	os	os	mouth
ad	ad	to, up to	oz	uncia	ounce
ad lib.	ad libitum	freely as desired (at pleasure)	p.c.	post cibum	after meals
agit. ante sum.	agita ante sumendum	shake before taking	per	per	through or by
alt. dieb.	alternis diebus	every other day	pil.	pilula	pill
alt. hor.	alternis horis	alternate hours	p.o.	per os	orally
alt. noct.	alternis noctibus	alternate nights	p.r.n.	pro re nata	as required
aq.	aqua	water	PR		per rectum
aq. dest.	aqua destillata	distilled water	PTA		prior to appointment
b.i.d.	bis in die	two times a day	ptd		prior to discharge
b.i.n.	bis in nocte	two times a night	q	quaque	every
c., c̄	cum	with	q.h.	quaque hora	every hour
Cap.	capiat	let him take	q. 2h.		every two hours
caps.	capsula	capsule	q. 3h.		every three hours
comp.	compositus	compound	q. 4h.		every four hours
Det.	detur	let it be given	q.i.d.	quater in die	four times a day
Dieb. tert.	diebus tertiis	every third day	q.l.	quantum libet	as much as desired
dil.	dilutus	dilute	q.n.	quaque nocte	every night
DS		double strength	q.p.	quantum placeat	as much as desired
D/W		distilled water	q.v.	quantum vis	as much as you please
EOD; eod		every other day	q.s.	quantum sufficit	as much as is required
elix.	elixir	elixir	R	recipe	take
ext.	extractum	extract	Rep.	repetatur	let it be repeated
fld.	fluidus	fluid	sine	sine	without
Ft.	fiat	make	seq. luce.	sequenti luce	the following day
g	gramme	gram	Sig. or S.	signa	write on label
gr	granum	grain	s.o.s.	si opus sit	if necessary
gt	gutta	a drop	sp.	spiritus	spirits
gtt	guttae	drops	ss	semis	a half
h.	hora	hour	stat.	statim	immediately
h.d.	hora decubitus	at bedtime	supp		suppository
h.s.	hora somni	hour of sleep (bedtime)	syr.	syrupus	syrup
M.	misce	mix	t.d.s.	ter die sumendum	to be taken three times daily
m.	minimum	a minim	t.i.d.	ter in die	three times a day
mist.	mistura	mixture	t.i.n.	ter in nocte	three times a night
non rep.	non repetatur	not to be repeated	tr. or tinct.	tinctura	tincture
noct.	nocte	in the night	ung.	unguentum	ointment
O	octarius	pint	ut. dict.	ut dictum	as directed
ol.	oleum	oil	vin.	vini	of wine
o.d.	omni die	every day	W/O		without
o.h.	omni hora	every hour			
o.m.	omni mane	every morning			

COMMONLY USED ABBREVIATIONS

NOTE: Abbreviations in common use can vary widely from place to place. Each institution's list of acceptable abbreviations is the best authority for its records.

ACLS	Advanced cardiac life support	CPAP	Continuous positive airway pressure	GB	Gallbladder
ADD	Attention deficit disorder	CPK	Creatine phosphokinase	GC	Gonococcus; gonorrhea
ADL	Activities of daily living	CPR	Cardiopulmonary resuscitation	GI	Gastrointestinal
AIDS	Acquired immunodeficiency syndrome	CSF	Cerebrospinal fluid	Grav I, II, etc.	Pregnancy one, two, three, etc. (Gravida)
ALS	Advanced life support; amyotrophic lateral sclerosis	CT	Computed tomography	GSW	Gunshot wound
AM	Morning	CVA	Cerebrovascular accident; costovertebral angle	gtt	Drops (guttae)
AMI	Acute myocardial infarction	CVP	Central venous pressure	GU	Genitourinary
ASD	Atrial septal defect	D & C	Dilation (dilatation) and curettage	Gyn	Gynecology
AST	Aspartate aminotransferase (formerly SGOT)	dc; DC; D/C	Discontinue	H & P	History and physical
A-V; AV; A/V	Arteriovenous; atrioventricular	DIC	Disseminated intravascular coagulation	HAV	Hepatitis A virus
BCLS	Basic cardiac life support	diff	Differential blood count	Hb	Hemoglobin
BE	Barium enema	DKA	Diabetic ketoacidosis	HBV	Hepatitis B virus
bid; b.i.d.	Twice a day (bis in die)	DM	Diabetes mellitus; diastolic murmur	HCG	Human chorionic gonadotropin
BM	Bowel movement	DNA	Deoxyribonucleic acid	HCT	Hematocrit
BMR	Basal metabolic rate	DNR	Do not resuscitate	HDL	High-density lipoprotein
BP	Blood pressure	DOA	Dead on arrival	HEENT	Head, eye, ear, nose, and throat
BPH	Benign prostatic hypertrophy	DOB	Date of birth	HIV	Human immunodeficiency virus
bpm	Beats per minute	DPT	Diphtheria-pertussis-tetanus	h/o	History of
BSA	Body surface area	DRG	Diagnosis-related group	H ₂ O ₂	Hydrogen peroxide
BSE	Breast self-examination	DRG	Diagnosis-related group	HR	Heart rate
BUN	Blood urea nitrogen	DSM-IV	<i>Diagnostic and Statistical Manual of Mental Disorders</i>	HSV	Herpes simplex virus
Bx	Biopsy	DT	Delirium tremens	HT; HTN	Hypertension
c̄	With	D ₅ W	Dextrose 5% in water	hx; Hx	History
CABG	Coronary artery bypass graft	Dx	Diagnosis	I & O	Intake and output
CAD	Coronary artery disease	EBV	Epstein-Barr virus	IBW	Ideal body weight
CAT	Computerized (axial) tomography scan	ECG	Electrocardiogram; electrocardiograph	ICP	Intracranial pressure
CBC; cbc	Complete blood count	ECHO	Echocardiography	ICU	Intensive care unit
CCU	Coronary care unit; critical care unit	ECT	Electroconvulsive therapy	Ig	Immunoglobulin
CF	Cystic fibrosis	ED	Emergency department	IM	Intramuscular
CHD	Congenital heart disease; coronary heart disease	EDD	Estimated date of delivery	IUD	Intrauterine device
CHF	Congestive heart failure	EEG	Electroencephalogram; electroencephalograph	IV	Intravenous
CK	Creatinine kinase	EENT	Eye, ear, nose, and throat	IVP	Intravenous pyelogram; intravenous push
CMV	Cytomegalovirus	ELISA	Enzyme-linked immunosorbent assay	KCl	Potassium chloride
CNS	Central nervous system	EMG	Electromyogram	KUB	Kidney, ureter, and bladder
c/o	Complaints of	EMS	Emergency medical service	L	Liter
CO	Carbon monoxide; cardiac output	EMT	Emergency medical technician	lab	Laboratory
CO ₂	Carbon dioxide	ENT	Ear, nose, and throat	L & D	Labor and delivery
COPD	Chronic obstructive pulmonary disease	ER	Emergency room (hospital)	LDL	Low-density lipoprotein
COX	Cyclooxygenase	ERV	Expiratory reserve volume	LE	Lower extremity; lupus erythematosus
CP	Cerebral palsy; cleft palate	ESR	Erythrocyte sedimentation rate	LMP	Last menstrual period
		ESRD	End-stage renal disease	LOC	Level/loss of consciousness
		FBS	Fasting blood sugar	LP	Lumbar puncture
		FEV	Forced expiratory volume	LR	Lactated Ringer's
		FH; Fhx	Family history	LVH	Left ventricular hypertrophy
		FHR	Fetal heart rate	MAP	Mean arterial pressure
		FTT	Failure to thrive	MD	Muscular dystrophy
		fx	Fracture	MDI	Medium dose inhalant; metered dose inhaler
				mEq	Milliequivalent
				MI	Myocardial infarction
				mm Hg	Millimeters of mercury

MMR	Maternal mortality rate; measles-mumps-rubella	PID	Pelvic inflammatory disease	SI	Système International
MRI	Magnetic resonance imaging	PKU	Phenylketonuria	SIDS	Sudden infant death syndrome
MVA	Motor vehicle accident	PM	Evening	SLE	Systemic lupus erythematosus
N/A	Not applicable	PMH	Past medical history	SOB	Shortness of breath
NaCl	Sodium chloride	PMI	Point of maximal impulse	s/s	Signs and symptoms
NANDA	North American Nursing Diagnosis Association	PMN	Polymorphonuclear neutrophil leukocytes (polys)	Staph	Staphylococcus
N & V; N/V	Nausea and vomiting	PMS	Premenstrual syndrome	stat	Immediately (statim)
NG; ng	Nasogastric	PO; p.o.	Orally (per os)	STD	Sexually transmitted disease
NICU	Neonatal intensive care unit	PRN; p.r.n.	As required (pro re nata)	Strep	Streptococcus
NKA	No known allergies	pro time	Prothrombin time	Sx	Symptoms
NPO; n.p.o.	Nothing by mouth (non peros)	pt	Pint	T	Temperature; thoracic
NSAID	Nonsteroidal antiinflammatory drug	PT	Prothrombin time; physical therapy	T & A	Tonsillectomy and adenoidectomy
NSR	Normal sinus rhythm	PTT	Partial thromboplastin time	TB	Tuberculosis
O ₂	Oxygen	PVC	Premature ventricular contraction	TENS	Transcutaneous electrical nerve stimulation
OB	Obstetrics	R	Respiration; right; Rickettsia; roentgen	TIA	Transient ischemic attack
OBS	Organic brain syndrome	RBC; rbc	Red blood cell; red blood count	TMJ	Temporomandibular joint
OR	Operating room	RDA	Recommended daily/dietary allowance	TPN	Total parenteral nutrition
OTC	Over-the-counter	RDS	Respiratory distress syndrome	TPR	Temperature, pulse, and respiration
PALS	Pediatric advanced life support	Rh	Symbol of rhesus factor	TSE	Testicular self-examination
PACU	Postanesthesia care unit	RNA	Ribonucleic acid	TSH	Thyroid-stimulating hormone
PCA	Patient-controlled analgesia	ROM	Range of motion	Tx	Treatment
PE	Physical examination	ROS	Review of systems	UA	Urinalysis
PEEP	Positive end-expiratory pressure	RR	Recovery room; respiratory rate	URI	Upper respiratory infection
PERRLA	Pupils equal, regular, react to light and accommodation	R/T	Related to	UTI	Urinary tract infection
PET	Positron emission tomography	̄	Without	VC	Vital capacity
PICC	Percutaneously inserted central catheter	SGOT	Serum glutamic oxaloacetic transaminase	vol	Volume
		SGPT	Serum glutamic pyruvic transaminase	VS; v.s.	Vital signs
				VSD	Ventricular septal defect
				WBC; wbc	White blood cell; white blood count

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EDITOR'S FOREWORD

Health care is complex, nuanced, and evolutionary in nature. The changes in health care can often be dramatic and rapid. Language is a tool of communication, and the language of health care is also complex, nuanced, and evolving. The overarching goal of this edition of *Mosby's Dictionary of Medicine, Nursing and Health Professions* is to assist the user to understand how words and phrases commonly encountered in the health care literature and clinical practice are used, have been used in the past, how they are spelled and pronounced, and in many instances, see examples of the words and phrases by utilizing full-color illustrations. Mastering the body of knowledge essential to professional practice requires access to definitions that enhance the understanding of the language of health care. All of the entries in this edition of *Mosby's Dictionary of Medicine, Nursing and Health Professions* have been developed and reviewed to provide a single source of authoritative, up-to-date definitions for a wide variety of health care professionals and individuals who wish to better understand health care information.

There are several important changes in this edition of *Mosby's Dictionary of Medicine, Nursing and Health Professions*. The foremost of these changes is the elimination of appendixes listing selected standardized languages. The second is the elimination in the body of the dictionary of definitions associated with nursing diagnosis. Standardized languages play a critical role in the documentation of care and allow activities to be described and recorded in databases. They are carefully researched and very specific in stipulating the exact wording and structure necessary to ensure consistency in their use. Some standardized language definitions are specific to one profession and create confusion for the reader from another profession. It is impossible to include all of the details of each of the standardized languages that are currently in use and adequately convey to the user an understanding of the words and concepts of that language. The standardized languages in health care are of great importance, and because of that importance, this new edition of *Mosby's Dictionary of Medicine, Nursing and Health Professions* presents the language of health care through definitions that are not associated with a specific language unless noted within the definition itself.

In addition to the many printed resources available in *Mosby's Dictionary of Medicine, Nursing and Health Professions*, we have provided a website on Evolve. This website provides audio pronunciations, a printable English-Spanish phrasebook, assessment guides, health promotion information, drug category interactions, interactive medical terminology review exercises, and more. Appendixes that are frequently updated to reflect new standards of care, such as immunization schedules, will also be included on the Evolve site in lieu of print.

The characteristics that have made the previous eight editions of the *Mosby's Dictionary of Medicine, Nursing and Health Professions* an invaluable resource for the past 20 years have been retained. These include the use of a large easy-to-read typeface, encyclopedic definitions for commonly referenced key terms, comprehensive entries for many drugs and medications, and a commonsense, strictly alphabetical organization of definitions. The appendixes have been expanded to

include quick references to information that is best understood in a tabular format, such as conversion tables and clinical calculation formulas. A new Range of Motion appendix has been included to assist the reader to understand terms not unique to, but often used in, health care. To assist readers in recognizing alternative spellings, selected British spellings are included where appropriate. Students, educators, and practitioners have praised the comprehensive and reliable nature of previous editions, and great care has been taken to ensure that tradition is continued in this 9th edition.

One of the most distinct features of *Mosby's Dictionary of Medicine, Nursing and Health Professions* is the inclusion of high-quality, full-color illustrations and photographs throughout the book to enhance and clarify definitions of terms with a visual representation of many diseases, conditions, and equipment. *Mosby's Dictionary of Medicine, Nursing and Health Professions* was the first English-language medical, nursing or health professional's dictionary to use full-color images. In addition, a Color Atlas of Human Anatomy contains clearly labeled helpful illustrations and is placed in the front of the dictionary for easy access.

It is impossible to adequately thank and acknowledge all of the many individuals who have contributed to the 9th edition of *Mosby's Dictionary of Medicine, Nursing and Health Professions*. As the new editor, I have been informed by innumerable students over the years, as well as colleagues in many professions and at many institutions, and inspired by the many patients that my students and colleagues have cared for and about. An interdisciplinary Editorial Board and numerous consultants and experts reviewed every entry in *Mosby's Dictionary of Medicine, Nursing and Health Professions*. I am deeply indebted to all of them for the care and wisdom they shared in providing suggestions for revision and for additional entries.

Nancy O'Brien and Jennifer Shropshire provided expert guidance and were instrumental in gaining access to the considerable resources of Elsevier-Mosby, Saunders, Churchill-Livingstone, and Butterworth-Heinemann.

In addition, my colleagues at Nazareth College in Rochester, New York, and the School of Nursing at the University of Medicine and Dentistry of New Jersey patiently reviewed materials, answered questions, and always provided just the right suggestion to assist me in making each and every definition maximally useful. I appreciate their contributions and trust they will all be proud to be associated with the 9th edition of *Mosby's Dictionary of Medicine, Nursing and Health Professions*.

Health care is changing and the information that can be easily accessed on the Internet has changed the way individuals use printed resources. I am delighted that Elsevier does provide information in both printed and web-based formats to reach the largest group of health care students and providers possible. Information translates into knowledge, and there are many ways individuals access information.

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GUIDE TO THE DICTIONARY

A. ALPHABETIC ORDER

The entries are alphabetized in dictionary style, that is, letter by letter, disregarding spaces or hyphens between words:

analgesic	artificial lung
anal membrane	artificially acquired immunity
analog	artificial menopause

(Alphabetized in telephone-book style, that is, word by word, the order would be different: **anal membrane** / **analgesic** / **analog**; **artificial lung** / **artificial menopause** / **artificially acquired immunity**.)

The alphabetization is alphanumeric; that is, words and numbers form a single list, numbers being positioned as though they were spelled-out numerals: **Nilstat/90-90 traction/ninth nerve**. (An example of the few exceptions to this rule is the sequence **17-hydroxycorticosteroid** / **11-hydroxy-etiocolanone** / **5-hydroxyindoleacetic acid**, which can be found between the entries **hydroxychloroquine sulfate** and **hydroxyl**, not, as may be expected, **17-**... in letter "S," **11-**... in letter "E," and **5-**... in letter "F.")

Small subscript and superscript numbers are disregarded in alphabetizing: **No** / **N₂O** / **nobelium**

For the alphabetization of prefixes and suffixes, see F.

B. COMPOUND HEADWORDS

Compound headwords are given in their natural word order: **abdominal surgery**, not **surgery, abdominal**; **achondroplastic dwarf**, not **dwarf, achondroplastic**.

When appropriate, a reference is made elsewhere to the nonalphabetized element; the entry **dwarf**, for example, shows this indirect cross-reference: "... Kinds of dwarfs include **achondroplastic dwarf**, ..." (followed by additional terms ending in "dwarf").

(NOTE: In this guide, the term "headword" is used to refer to any alphabetized and nonindented definiendum, be it a single-word term or a compound term.)

C. MULTIPLE DEFINITIONS

If a headword has more than one meaning, the meanings are numbered and are often accompanied by an indication of the field in which a sense applies: "**fractionation**, **1**. (in neurology) ... **2**. (in chemistry) ... **3**. (in bacteriology) ... **4**. (in histology) ... **5**. (in radiology) ..."

Smaller differences in meaning are occasionally separated by semicolons: "**enervation**, **1**. the reduction or lack of nervous energy; weakness; lassitude, languor. **2**. removal of a complete nerve or of a section of nerve."

Words that are spelled alike but have entirely different meanings and origins are usually given as separate entries, with superscript numbers: "**aural**¹, pertaining to the ear or hearing ... followed by "**aural**², pertaining to an aura."

For reference entries that appear in the form of numbered senses, see the example of **balsam** at E.

D. THE ELEMENTS OF AN ENTRY

The entry headword has a large boldface type. For the most part, boldface terms indicate a corresponding headword or entry. The following elements may occur in boldface or italics in this order.

■ **HEADWORD ABBREVIATIONS**: **central nervous system (CNS)**

A corresponding abbreviation entry is listed: "**CNS**, abbreviation for **central nervous system**." (For abbreviation entries, see F.)

Occasionally the order is reversed: "**DDT (dichlorodiphenyltrichloroethane)**," with a corresponding reference entry: "**dichlorodiphenyltrichloroethane**. See **DDT**." (For reference entries, see E below.)

■ **PLURAL OR SINGULAR FORMS** that are not obvious. The first form shown is the more common except when plurals are of more or less equal frequency: "**carcinoma**, *pl. carcinomas, carcinomata*"; "**cortex**, *pl. cortices*"; "**data**, *sing. datum*"

A reference entry is listed only when the terms are alphabetically separated; for example, there are several entries between **data** and "**datum**. See **data**."

■ **HIDDEN ENTRIES**, that is, terms that can best be defined in the context of a more general entry. For example, the definition of the entry **equine encephalitis** continues as follows: "... **Eastern equine encephalitis (EEE)** is a severe form of the infection ... **western equine encephalitis (WEE)**, which occurs ... **Venezuelan equine encephalitis (VEE)**, which is common in ..."

The corresponding reference entries are "**eastern equine encephalitis**. See **equine encephalitis**."; "**western equine encephalitis**. See **equine** . . ."; and so forth. For further reference, from the abbreviations **EEE**, **WEE**, and **VEE**, see F.

■ **INDIRECT CROSS-REFERENCES** to other defined entries, shown as part of the definition and usually introduced by "Kinds of": "**dwarf**, . . . Kinds of dwarfs include **achondroplastic dwarf**, **asexual dwarf**, . . . and **thanatophoric dwarf**."

The entry referred to may or may not show a reciprocal reference, depending on the information value.

■ **SYNONYMOUS TERMS**, preceded by "Also called," "Also spelled," or, for verbs and adjectives, "Also": "**abducens nerve**, . . . Also called **sixth cranial nerve**."

A corresponding reference entry is usually given: "**sixth cranial nerve**. See **abducens nerve**."

Occasionally the synonymous term is accompanied by a usage label: "**abdomen**, . . . Also called (*informal*) **belly**."

If a synonymous term applies to only one numbered sense, it precedes rather than follows the definition, to avoid ambiguity: "**algology**, **1**. the branch of medicine that is concerned with the study of pain. **2**. also called **phycology**, the branch of science that is concerned with algae." (Whenever a synonymous term *follows* the last numbered sense, it applies to all senses of the entry.)

■ **(DIRECT) CROSS-REFERENCES**, preceded by "See also" or "Compare," referring to another defined entry for additional information: "**abdominal aorta**, . . . See also **descending aorta**."

The cross-reference may or may not be reciprocal.

Cross-references are also made to illustrations, tables, the color atlas, and the appendixes.

For cross-references from an abbreviation entry (with "See"), see F.

■ **PARTS OF SPEECH** related to the entry headword, shown as run-on entries that do not require a separate definition: "**abalienation**, . . . —**abalienate**, *v.*, **abalienated**, *adj.*"

E. REFERENCE ENTRIES

Reference entries are undefined entries referring to a defined entry. There, they usually correspond to the boldface terms for which reference entries are mentioned at D above.

However, many of the less frequently used synonymous terms are listed as a reference only; at the entry referred

to, the reader's attention is not drawn to them with "Also called."

Some reference entries appear in the form of a numbered sense of a defined entry: "**balsam, 1.** any of a variety of resinous saps, generally from evergreens, usually containing benzoic or cinnamic acid. Balsam is sometimes used in rectal suppositories and dermatological agents as a counterirritant. **2.** See **balm.**"

If two or more alphabetically adjacent terms refer to the same entry or entries, they are styled as one reference entry: "**coxa adducta, coxa flexa.** See **coxa vara.**"

A reference entry that would be derived from a boldface term in an immediately adjacent entry is not listed again as a headword; it becomes a "hidden reference entry": "**acardius amorphus,** . . . Also called *acardius anceps.*" But *acardius anceps* is not listed again as a reference entry because it would immediately follow the entry, the next entry being **acariasis.** Likewise: "**acoustic neuroma,** . . . Also called **acoustic neu- rilemmoma, acoustic neurinoma, acoustic neurofibroma.**" But the three synonymous terms are not listed again as reference entries because they would immediately precede the entry, the entry ahead being **acoustic nerve.** Therefore:

If a term is not listed at the expected place, the reader might find it among the boldface or italicized terms of the immediately preceding or the immediately following entry.

Selected British spellings are included where appropriate. These are included as reference entries which refer the reader to the American spelling containing the definition. After the definition, the British spelling is given as an alternate spelling. For example: "**haematology.** See **hematology.**" The end of the definition for **hematology** says "Also spelled **haematology.**" As with other reference entries, when the reference entry would immediately precede or follow the main entry, it is not included as a separate entry, such as "**hyperkalemia** . . . Also spelled *hyperkalaemia.*"

F. OTHER KINDS OF ENTRIES

■ **ABBREVIATION ENTRIES:** Most abbreviation entries, including symbol entries, show the full form of the term in boldface: "**ABC,** abbreviation for **aspiration biopsy cytology.**" "**H,** symbol for the element **hydrogen.**" Implied reference is made to the entries **aspiration biopsy cytology** and **hydrogen** respectively.

Abbreviation entries for which there is no corresponding entry show the full form in italics: "**CBF,** abbreviation for *cerebral blood flow.*" "**f,** symbol for *respiratory frequency.*"

A combination of abbreviation entry and reference entry occurs when the abbreviation is that of a boldface or lightface term appearing under another headword. For example, the hidden entries at D (in addition to the reference entries shown there) are also referred to in the following manner: "**EEE,** abbreviation for **eastern equine encephalitis.** See **equine encephalitis.**" An example with a lightface term: "**HLA-A,** abbreviation for *human leukocyte antigen A.* See **human leukocyte antigen.**" The latter entry says ". . . They are HLA-A, HLA-B, HLA-C . . ."

■ **PREFIXES AND SUFFIXES:** The large amount and the nature of prefix and suffix entries are an important feature of this dictionary. Through these entries the reader has additional access to the meanings of headwords and the words used in defining them. But such entries also give access to thousands of terms that are not included in this dictionary (and, to a large extent, are not found

in any other reference work). For example, the entries **xylo-** and **-phage** (plus **-phagia, phago-**, and **-phagy**) may lead to the meaning of "xylophagous," namely, "wood-eating."

Prefix and suffix headwords consisting of variants are alphabetized by the first variant only. For example, "**epi-, ep-**, a prefix meaning 'on, upon' . . ." is followed by **epiblast** (notwithstanding "**ep-**"). The other variant or variants are listed in their own alphabetical place as reference entries referring to the first variant: "**ep-**. See **epi-**."

■ **ENTRIES WITH SPECIAL PARAGRAPHS:** Among the entries on diseases, drugs, and procedures, at least 1100 feature special paragraphs, with headings such as:

observations, interventions, and nursing considerations (for disease entries),

indications, contraindications, and adverse effects (for drug entries),

method, nursing interventions, and outcome criteria (for procedure entries).

G. FURTHER COMMENTS

■ **EPONYMOUS TERMS THAT END IN "SYNDROME" OR "DISEASE"** are given with an apostrophe (and "s" where appropriate) if they are based on the name of one person: **Adie's syndrome; Symmers' disease.** If they are based on the names of several people, they are without apostrophe: **Bernard-Soulier syndrome; Brill-Symmers disease.**

■ **ABBREVIATIONS AND LABELS IN ITALIC TYPE:** The abbreviations are *pl.* (plural), *npl.* (noun plural), *sing.* (singular); *n.* (noun), *adj.* (adjective), *v.* (verb). The recurring labels are *slang, informal, nontechnical, obsolete, archaic; chiefly British, Canada, U.S.*

■ **DICTIONARY OF FIRST REFERENCE** for general spelling preferences is *Webster's New Collegiate Dictionary*; thereafter: *Webster's Third New International Dictionary.*

H. PRONUNCIATION

■ **SYSTEM:** See the Pronunciation Key on p. xiii. The pronunciation system of this dictionary is basically a system that most readers know from their use of popular English dictionaries, especially the major college or desk dictionaries. All symbols for English sounds are ordinary letters of the alphabet with few adaptations, and with the exception of the schwa, / <reve> / (the neutral vowel).

■ **ACCENTS:** Pronunciation, given between slants, is shown with primary and secondary accents, and a raised dot shows that two vowels or, occasionally, two consonants, between the slants are pronounced separately:

anoopsia /an'ō-op'sē-ə /

cecoileostomy /il'ē-os't ə mē /

methemoglobin /met'hēm ə glō'bin, met'hē' m ə glōbin /

Without the raised dot, the second /th/ in the last example would be pronounced as in "thin." (The pronunciation key lists the following paired consonant symbols as representing a single sound: /ch/, /ng/, /sh/, /th/, /th/, /zh/, and the foreign sounds /kh/ and /kh/—if no raised dot intervenes.)

■ **TRUNCATION:** Pronunciation may be given in truncated form, especially for alternative or derived words:

defibrillate /difibrilāt, difib'- /

bacteriophage /baktir'ē- ə f ā j', . . . —**bacteriophagy** /-of ə jē/, *n.*

In the last example, the reader is asked to make the commonsense assumption that the primary accent of the headword becomes a secondary accent in the run-on term: /baktir'ē-of ə jē/.

■ LOCATION: Pronunciation may be given for any boldface term and may occur anywhere in an entry:

- aura** /ôr'e /, **1. pl. aurae** /ôr'ē/, a sensation . . .
2. pl. auras, an emanation of light . . .
micrometer, **1.** /mīkrom'ə t ə r/, an instrument used for. . .
2. /mī'krōmē't ə r/, a unit of measurement . . .

Occasionally it is given for a lightface term:

- b.i.d.**, (in prescriptions) abbreviation for *bis in die* /dē'ā/, a Latin phrase meaning . . .
boutonneuse fever. . ., an infectious disease . . . a tache noire /tāshnô'är/ or black spot . . .

■ LETTERWORD VERSUS ACRONYM: Letterwords are abbreviations that are pronounced by sounding the names of each letter, whereas acronyms are pronounced as words. If the pronunciation of an abbreviation is not given, the abbreviation is usually a letterword:

ABO blood groups [read / ā 'b ē 'ō/, not / ā 'bō/]

If the pronunciation is an acronym, this is indicated by pronunciation:

AWOL / ā 'wōl/

Some abbreviations are used as both:

JAMA /jā'mā, jam' ə, j ā ' ā 'em' ā ' /

■ FOREIGN SOUNDS: Non-English sounds do not occur often in this dictionary. They are represented by the following symbols:

- /œ/ as in (French) **feu** /fœ/, **Europe** /œrôp'/; (German) **schön** /shœn/, **Goethe** /gœ't ə /
 /Y/ as in (French) **tu** /tY/, **déjà vu** /d ā zhävY'/; (German) **grün** /grYn/, **Walküre** /vulkY'r ə /
 /kh/ as in (Scottish) **loch** /lokh/; (German) **Rorschach** /rôr'-shokh/, **Bach** /bokh, bākh/
 /kh/ as in (German) **ich** /ikh/, **Reich** /rīkh/ (or, approximated, as in English **fish**: /ish/, /rīsh/)
 /N/ This symbol does not represent a sound but indicates that the preceding vowel is a nasal, as in French **bon** /bôN/, **en face** /änfäs'/, or **international** /änternäsyônäl'/
 /nyə/ Occurring at the end of French words, this symbol is not truly a separate syllable but an /n/ with a slight /y/ (similar to the sound in "onion") plus a near-silent / ə /, as in **Bois de Boulogne** / bōō lō'nyə /, **Malgaigne** /mālg ā 'nyə /.

Because this work is a subject dictionary rather than a language dictionary, certain foreign words and proper names are rendered by English approximations. Examples are **Müller** /mil' ə r/ (which is closer to German than /mY'l ə r/), **Niemann** /nē'mon/ (which is closer than /nē'män/), **Friedreich** /frēd'rīsh/ (which is close enough for anyone not used to pronouncing /kh/), or **jamais vu**, for which three acceptable pronunciations are given: /zhām ā vY'/ (near-French) and the approximations /zhām ā vē' and /zhām ā v oō' (/vē' being much closer to French than /vōō'/). Depending on usage, a foreign word or name may be given with near-native pronunciation, with entirely assimilated English pronunciation (as **de Quervain's fracture** /de k ə rv ā nz'/), or with both

(as **Dupuytren's contracture** /dYpYitraNs', dēpē-itranz'/ or **Klippel-Feil syndrome** /klipel'f ə l', klip' ə lfīl'/).

At any rate, the English speaker should not hesitate to follow whatever is usage in his or her working or social environment.

Many of the numerous *Latin* terms in this dictionary are not given with pronunciation, mainly because there are different ways (all of them understood) in which Latin is pronounced by the English speaker and may be pronounced by speakers elsewhere. However, guidance is given in many cases, often to reflect common usage.

LATIN AND GREEK PLURALS: The spelling of Latin and Greek plurals is shown in most instances. However, when the plural formation is regular according to Latin and Greek rules, the pronunciation is usually not included. Therefore, the following list shows the suggested pronunciation of selected plural endings that are frequently encountered in the field of medicine:

PLURAL ENDINGS	EXAMPLES
-a/-ə/	inoculum , <i>pl.</i> inocula /inok'yōōlə/
-ae/-ē/	vertebra , <i>pl.</i> vertebrae /vur'tabrē/
-ces/-sēz/	thorax , <i>pl.</i> thoraces /thôr'əsēz/
-era/-əɹə/	apex , <i>pl.</i> apices /ā'pīsēz/
-ges/-jēz/	genus , <i>pl.</i> genera /jen'ərə/
-i/-ī/	meninx , <i>pl.</i> meninges /minin'jēz/
	calculus , <i>pl.</i> calculi /kal'kyəl'sī /
	coccus , <i>pl.</i> cocci /kok'sī/
	criterion , <i>pl.</i> criteria /krītir'ē:ə/
-ia/-ē:ə /	epulis , <i>pl.</i> epulides /ipyoō'idēz/
-ides/-idēz/	foramen , <i>pl.</i> foramina /f ə ram'ənə/
-ina/-ənə/	lentigo , <i>pl.</i> lentigines /lentij'ənēz/
-ines/-ənēz/	hematoma , <i>pl.</i> hematomata /hē'mə tō'mətə/
-omata /-ō'm ətə/	comedo , <i>pl.</i> comedones /kom'ə dō'nēz/
-ones/-ō 'nēz/	corpus , <i>pl.</i> corpora /kôr'pərə/
-ora/-əɹə/	femur , <i>pl.</i> femora /fem'ərə/
-ses/-sēz/	analysis , <i>pl.</i> analyses /ənəl'əsēz/
-udes/-ōō 'dēz/	incus , <i>pl.</i> incudes /inkōō'dēz/
-us/-ōōs/	ductus (/duk'təs/), <i>pl.</i> ductus /duk't oōs/

NOTE: Notwithstanding the listing of Latin and Greek plurals in this dictionary, and notwithstanding the foregoing examples, in most instances it is acceptable or even preferable to pluralize Latin and Greek words according to the rules of English words. (For certain kinds of entries, both the English and the foreign plurals are given in this dictionary, usually showing the English form first, as, for example, in nearly all **-oma** nouns: **hematoma**, *pl.* **hematomas**, **hematomata**.)

W.D.G.

I. ETYMOLOGIES AND EPONYMS

The word roots, or etymologies, of the headwords in this dictionary are shown in square brackets following the pronunciations of the headwords. Meanings are given in roman typeface and represent the original connotation of the word from which the medical term is derived. In compound medical terms formed from two or more elements, a plus sign (+) is used to indicate an element has been translated in a previous headword, as in [L *acidus* + Gk *philein* to love]. A semicolon (;) is used to separate word elements having more than one origin, as in [L *abdomen*; Gk *skopein* to view]. Word fragments

representing etymologic elements, such as prefixes, are separated from the rest of the word root by a comma (,), as in [Gk *a, basis* not step]. A comma is also used to separate the abbreviation for the language of origin and its translation when the English-language equivalent for the word is the same, as in the term **ala** [L, wing].

The following abbreviations are used to identify language sources:

Afr	African	Jpn	Japanese
Ar	Arabic	L	Latin
AS	Anglo-Saxon	ME	Middle English
Dan	Danish	OFr	Old French
D	Dutch	ONorse	Old Norse
Fr	French	Port	Portuguese
Ger	German	Scand	Scandinavian
Gk	Greek	Sp	Spanish
Heb	Hebrew	Swe	Swedish
It	Italian	Turk	Turkish

Some other languages sources, such as Singhalese or Welsh, may be indicated without abbreviations.

Eponymous entries, in which the surname of an individual is incorporated in the headword, are also treated in square brackets with brief biographic details, as in **Alcock's canal** [Benjamin Alcock, Irish anatomist, b. 1801]. When an eponym contains two or more surnames, a semicolon (;) is used to separate the identities of the individuals. Medical terms derived from other proper nouns, such as geographic sites, are presented in a similar manner, as **Calabar swelling** [Calabar, a Nigerian seaport], or **ytterbium (Yb)** [Ytterby, Sweden].

K.N.A.

PRONUNCIATION KEY

Vowels		Consonants	
SYMBOLS	KEY WORDS	SYMBOLS	KEY WORDS
/a/	hat	/b/	book
/ä/	father	/ch/	chew
/ā/	fate	/d/	day
/e/	flesh	/f/	fast
/ē/	she	/g/	good
/er/	air, ferry	/h/	happy
/i/	sit	/j/	gem
/ī/	eye	/k/	keep
/ir/	ear	/l/	late
/o/	proper	/m/	make
/ō/	nose	/n/	no
/ô/	saw	/ng/	sing, drink
/oi/	boy	/ng·g/	finger
/oo /	move	/p/	pair
/oo/	Book	/r/	ring
/ou/	out	/s/	set
/u/	cup, love	/sh/	shoe, lotion
/ur/	fur, first	/t/	tone
/ə /	(the neutral vowel, always unstressed, as in ago, focus	/th/	thin
	teacher, doctor	/th/	than
		/v/	very
		/w/	work
		/y/	yes
		/z/	zeal
		/zh/	azure, vision

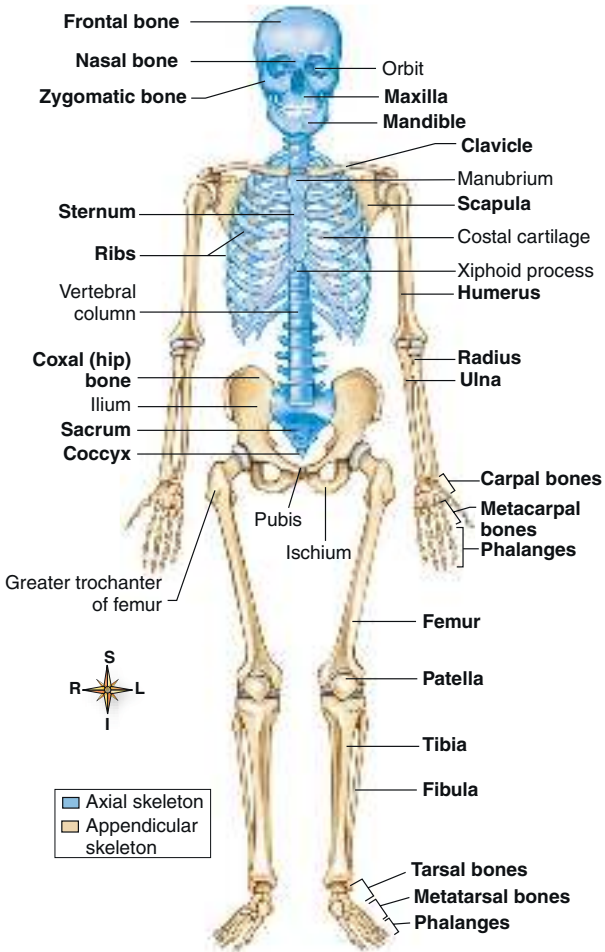
For /œ/, /Y/, /kh/, /kh/, /N/, and /nyə/, see FOREIGN SOUNDS, p. xii.

COLOR ATLAS OF HUMAN ANATOMY

Skeletal System	A-2
Muscular System	A-8
Circulatory System	A-12
Endocrine System	A-18
Lymphatic System	A-20
Nervous System	A-23
Respiratory System	A-28
Digestive System	A-32
Reproductive System	A-35
Urinary System	A-39
Special Senses	A-42

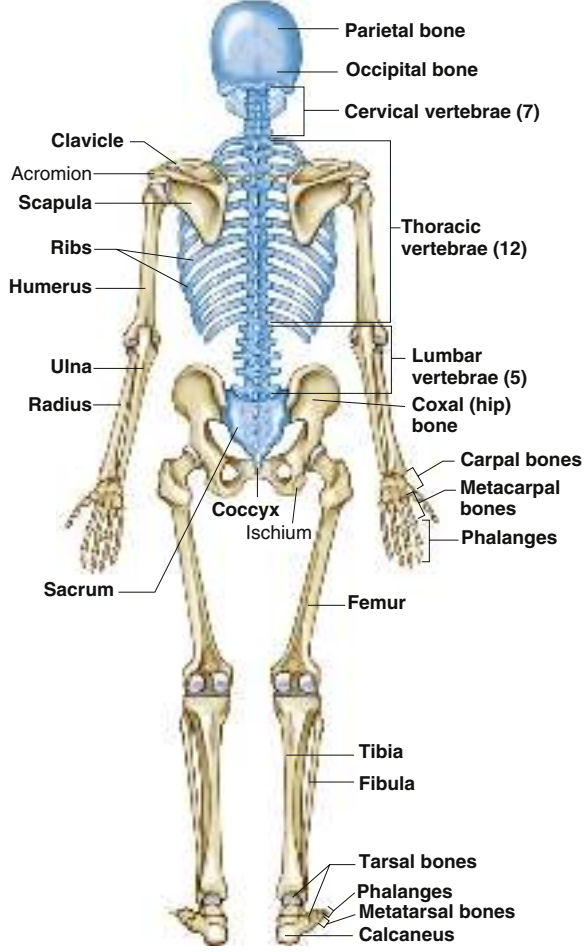
SKELETAL SYSTEM

ANTERIOR VIEW OF SKELETON

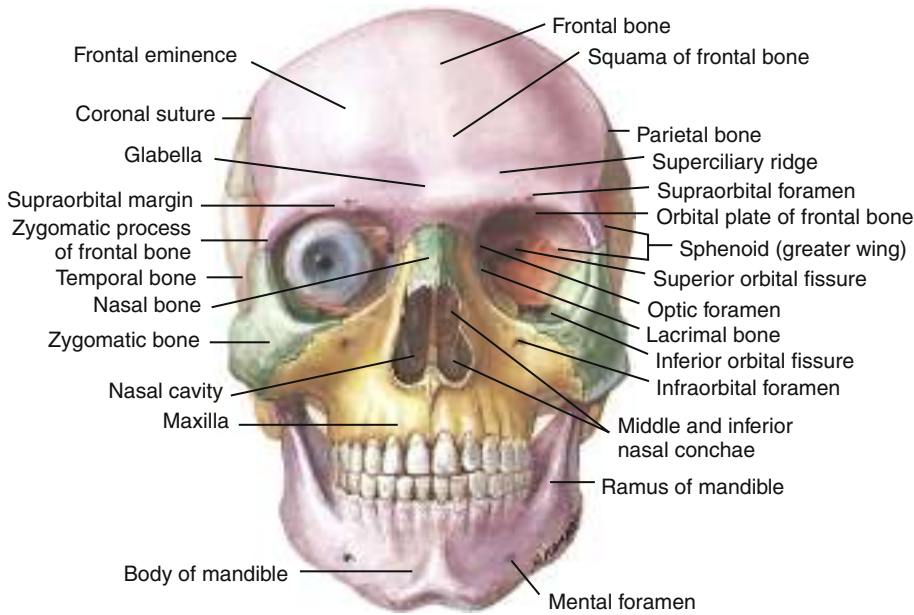


■ Axial skeleton
■ Appendicular skeleton

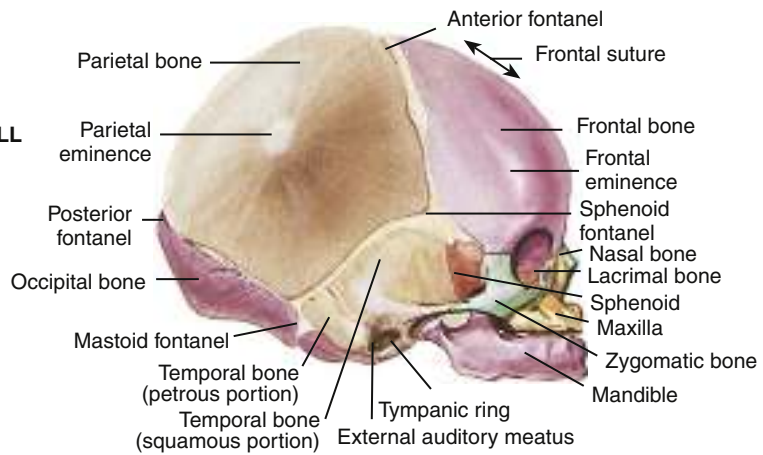
POSTERIOR VIEW OF SKELETON



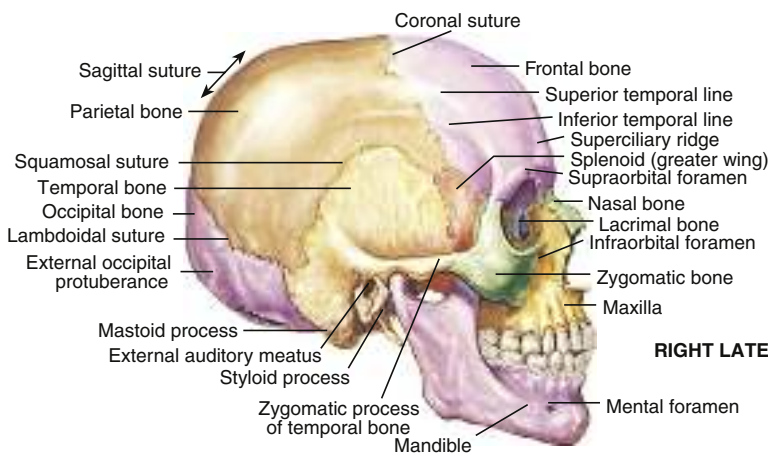
ANTERIOR VIEW OF SKULL



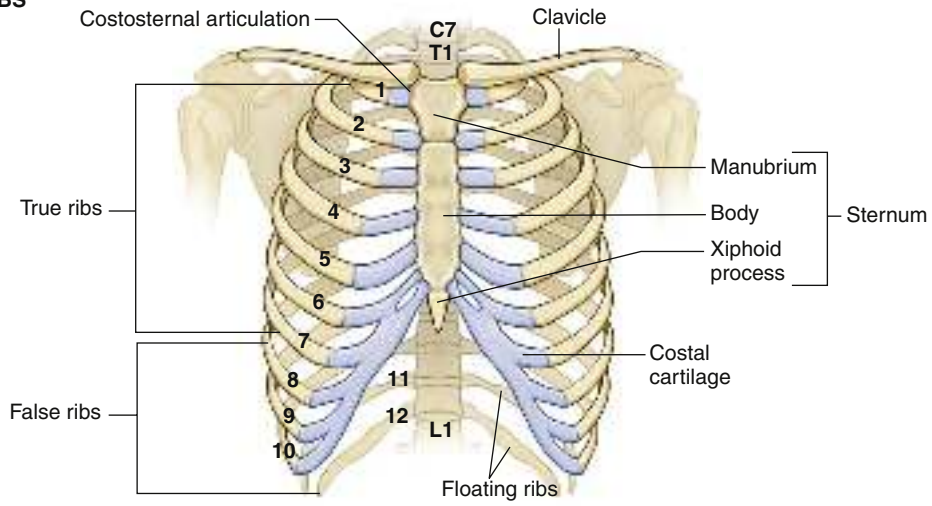
FETAL SKULL



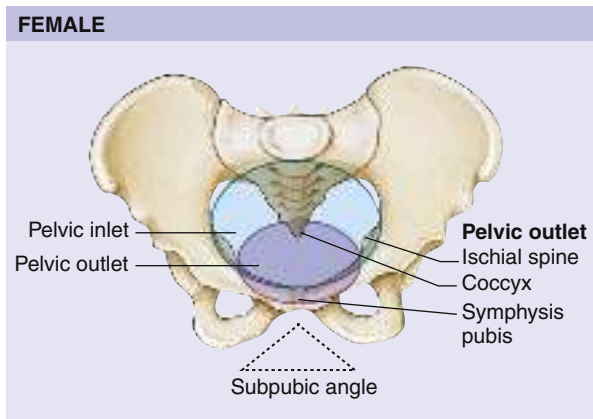
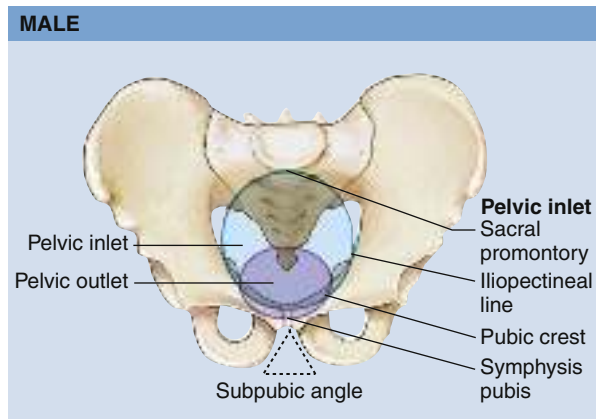
RIGHT LATERAL VIEW OF SKULL



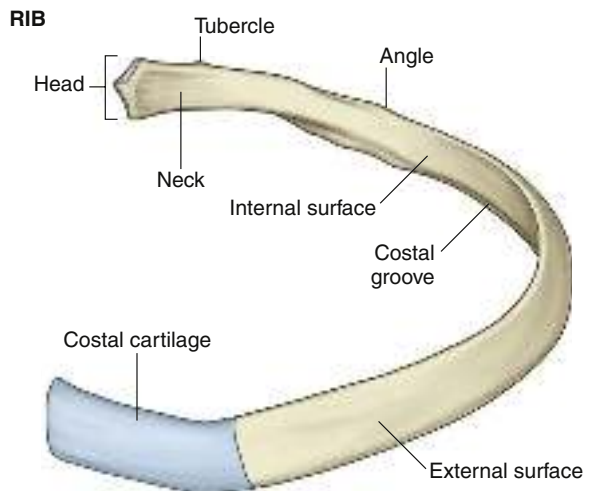
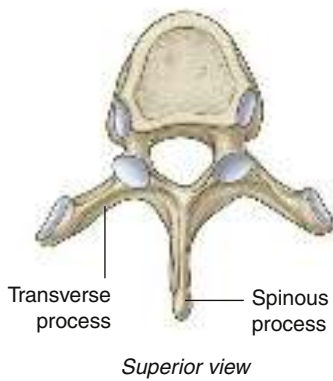
THORAX AND RIBS



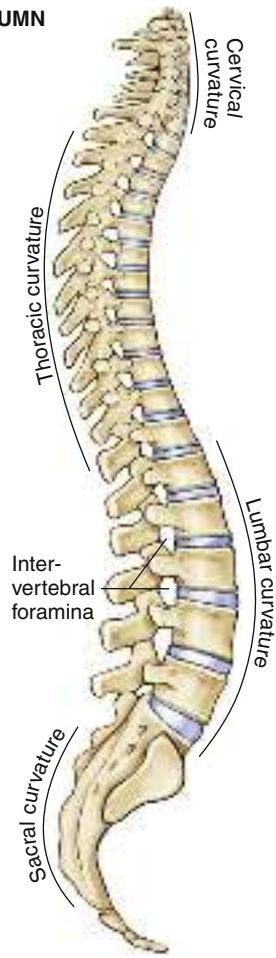
PELVIS



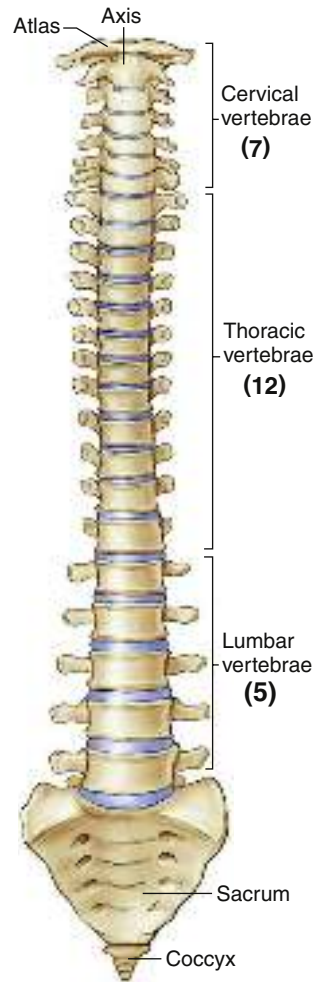
INDIVIDUAL VERTEBRA



VERTEBRAL COLUMN

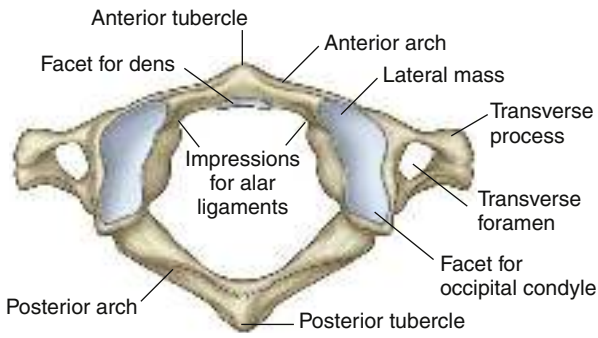


Right lateral view

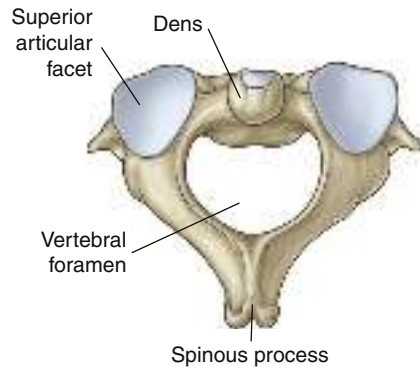


Anterior view

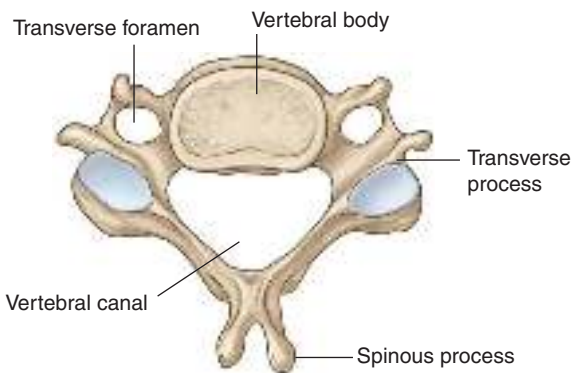
FIRST CERVICAL VERTEBRA (ATLAS)



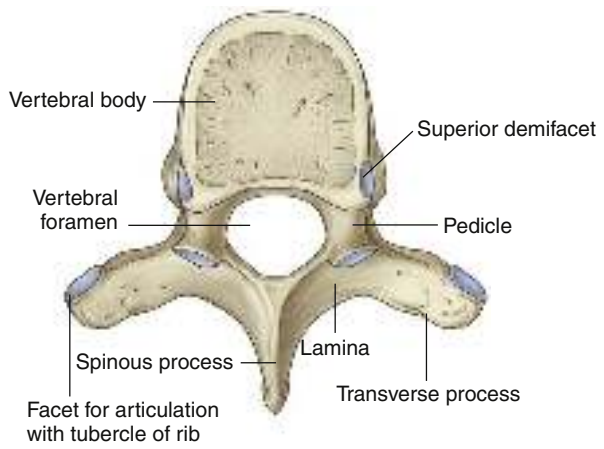
SECOND CERVICAL VERTEBRA (AXIS)



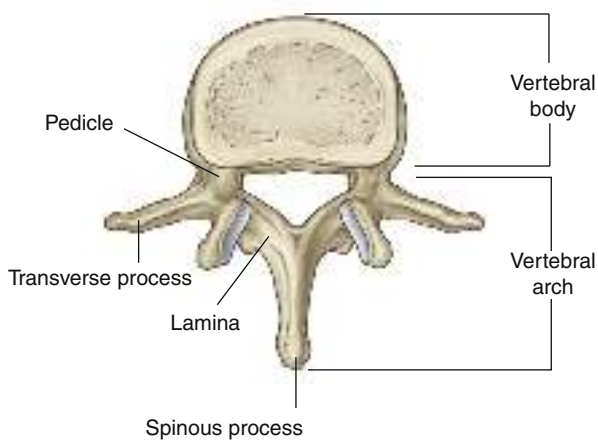
FIFTH CERVICAL VERTEBRA



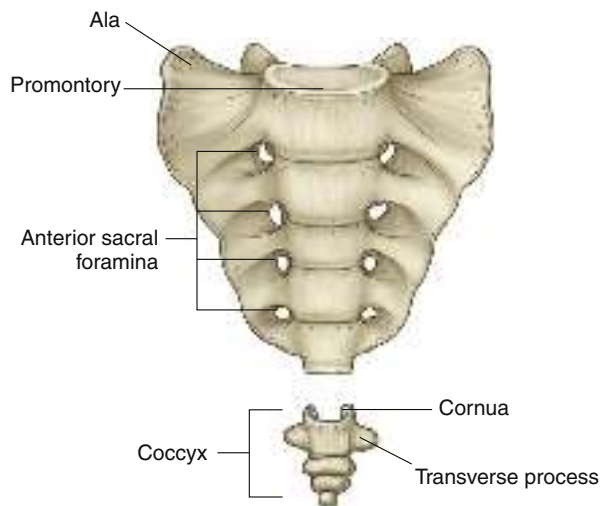
THORACIC VERTEBRA



LUMBAR VERTEBRA



SACRUM AND COCCYX



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