NOTES ON THE USE OF THIS DICTIONARY

Main Entries and Subentries

Main entries appear in boldface type, with bullets indicating syllabication. Terms consisting of two or more words are ordinarily given as subentries under the noun, as is traditional in medical dictionaries; subentries are also set in boldface type, and each is set on a new line. Although this arrangement may be confusing at first to those accustomed to general dictionaries, it has the advantage of allowing related terms to be grouped together (for example, all the *lymphocyte* entries appear under the main entry *lymphocyte*).

According to this scheme, *Howell-Jolly bodies*, *ketone bodies*, and *pineal body* are all to be found under the main entry *body*, and *carotid pulse*, *dicrotic pulse*, and *paradoxical pulse* are to be found under the main entry *pulse*. It is important for the user to bear in mind that it is impossible to provide entries for every variation of every term, so that a phrase that is not found under one main entry should be sought under a synonymous main entry. For example, the same entity may be described as a disease or a syndrome (as *Fabry disease—Fabry syndrome*, which is to be found under *disease*). In such cases, the main entry should be consulted for references to synonymous terms under which the desired phrase may be found.

Example:

> **treatment** . . . the management and care of a patient for the purpose of combating disease or disorder. See also under *care*, *maneuver*, *method*, *technique*, *test*, and *therapy*.

In subentries, the main entry word is represented only by the initial letter, e.g., *cogwheel r.* under *respiration*, unless it occurs in the plural form. Regular English plurals are represented by the initial letter followed by *'s*, as *b's* for *bones* under *bone*. Irregular plurals, such as *teeth* under *tooth*, and Latin plurals, such as *foramina* under *foramen*, are spelled out in full.

Chemical Compounds

Exceptions to the use of subentries are made for specific acids and for enzymes and enzyme deficiencies. Names of specific acids will be found as main entries under the first word of the name, for examples, *sulfuric acid* under *S*, as will enzyme names, for example, *acetyl-CoA carboxylase* under *A*. Enzyme deficiencies, when they occur as separate entries, will be found as main entries immediately following the entry for the enzyme in question, for examples, *carbamoyl phosphate synthetase deficiency* after *carbamoyl phosphate synthetase*.

Chemical compounds having a binary name will be found under the first word, so that *aluminum acetate*, *aluminum hydroxide*, and *aluminum sulfate* are all located under *aluminum*, and *ferric citrate* is found under *ferric*.

Drug Names

Drugs are to be found under the active moiety, if that is a main entry. For example, *prednisolone acetate*, *prednisolone hemisuccinate*, and *prednisolone sodium phosphate* all appear under *prednisolone*. If the active moiety is not itself a main entry then the entire drug name appears as a main entry, for example, *methadone hydrochloride* under *M*.

Syllabication

Acceptable word divisions are indicated for main entries by the use of bullets within the entry word; syllabication is based on pronunciation. Not all syllable breaks are given; for example, the separation of a single vowel from the beginning or end of a word is not allowed and is not shown. Likewise, single letters should not be separated from the word elements to which they belong in compound words. In many cases a word may be broken at places other than the ones indicated; for example, different pronunciations imply different sets of breaks, so that *melanocyte* could be divided *mel•a•no•cyte* or *me•lano•cyte*, depending on which syllable, the first or second, is stressed. In any case, breaks that could confuse a reader as to the meaning of a word are to be avoided.

Sequence of Entries

Main Entries

Main entries will be found alphabetized on the sequence of letters, regardless of spaces or hyphens that may occur between them. (Special rules govern terms that begin with proper names, which are mainly eponyms; see below.) Thus the following sequences will be found:

formboard	**heart**
form-class	**heartbeat**
forme	**heart block**
form-family	**heartburn**

Subentries

Subentries, like main entries, are alphabetized letter by letter. The main entry word, whether it is represented by the initial letter, the initial plus *'s*, or a spelled-out plural, is ignored in alphabetizing subentries, as are prepositions, conjunctions, and articles. Inflected forms, such as genitives and plurals of Latin words, are treated as if they were nominative singular. (For what is meant by "inflected forms," see "Presentation of Plurals and Other Inflections,") The following forms, all from

os craniale "cranial bone," are considered equivalent for purposes of alphabetization: *os craniale*, *ossis cranialis*, *ossa cranialia*, and *ossium cranialium*.

In accordance with the above rules, the following sequences of subentries are found under *ganglion* and *prolapse*:

ganglion	**prolapse**
Andersch ganglia	anal p.
ganglia aorticorenalia	p. of anus
auditory g.	p. of cord
Auerbach g.	frank p.
g. autonomicum	p. of iris

A special case is that of what may be called inverted subentries, in which the initial word or words are moved to the end of the entry, set off by a comma. This is done in order to allow related terms to fall together in the subentry list; such inversions are especially common in the anatomical vocabulary for anterior/posterior structures and the like. These terms are alphabetized as usual up to the comma marking the inversion; words following the comma, however, are not counted except within the group of repeated entries:

lobe
- inferior l., left
- inferior l., right
- inferior l. of left lung
- inferior l. of right lung

Proper Names

A number of main entries are included for terms beginning with a proper name, usually eponymic terms; these give information about the term's origin (most often a bit of biographical information) and cross-references to entries where definitions may be found. These cross-references can be helpful in giving an indication of where to look for an entry that may go by more than one name (such as disease or syndrome). Entries of this sort are alphabetized as entries for the proper name only, following this set of rules:

(1) The *'s*, if one occurs, is never counted for alphabetization. *Jackson's law*, *Jackson membrane*, *Jackson safety triangle*, *jacksonian* appear in that order.
(2) Words following the name are not counted for alphabetical order unless the names are the same. Thus, *Addison disease* precedes *Addison planes*.
(3) Only the first name in a term containing more than one proper name is counted for alphabetization unless the entries are the same in all other respects. *Babinski reflex*, *Babinski-Frohlich syndrome*, *Babinski-Nageotte syndrome*, *Babinski-Vaquez syndrome* appear in that order.
(4) Umlauts (*ö*, *ü*) are ignored for purposes of alphabetization. *Löwe ring*, *Lowe syndrome*, *Lowe-Terry-MacLachlan syndrome*, *Löwenberg canal*, *Löwenthal tract*, *Lower rings* appear in that order.
(5) Names beginning *Mac* or *Mc* are alphabetized as if spelled *Mac*.

Subentries that begin with a proper name also follow the above rules for sequencing.

Proper nouns (or capitalized entries) appear before common nouns (or lower case entries). Thus *Bacillus* precedes *bacillus*.

Chemical Terms

In the alphabetization of chemical names, italic prefixes (e.g., *o-*, *p-*, *m-*, *trans-*, *cis-*) are ignored, as are numbers, Greek letters, and the prefixes D-, L-, *d-*, *l-*, (+)-, and (−)-. When a prefix is spelled out, however, the term is to be found under the fully spelled out form, for example, *levodopa* under *L*, *orthocresol* under *O*, and *beta-naphtholsulfonic acid* under *B*.

Indication of Pronunciation

A phonetic spelling of a term appears in parentheses after the boldface entry word. The pronunciation is given for all main entries; it is generally not given for subentries but does appear in some subentries that are foreign phrases. As a rule, the most common pronunciation is given, with no effort to list the variants, although exceptions to this do occur. The phonetic spelling is kept as simple as possible, with few diacritical marks; the only special character used is ə, the schwa, used to represent the unstressed vowel sound heard at the end of *sofa*. The schwa is also used in combination with *r* in unstressed syllables to represent the sound heard in the second syllable of *sulfur* or *other*.

There are four basic rules:

(1) An unmarked vowel ending a syllable (an "open" syllable) is long. Thus *ma* represents the pronunciation of *may*.
(2) An unmarked vowel in a syllable ending in a consonant (a "closed" syllable) is short. Thus *not* represents the pronunciation of *knot*.
(3) A long vowel in a closed syllable is indicated by a macron. Thus *māt* represents the pronunciation of *mate*.
(4) A short vowel that ends or itself constitutes a syllable is indicated by a breve. Thus *ĭ-mūn′* represents the pronunciation of *immune*.

Primary (′) and secondary (″) stresses are shown in polysyllabic words, with unstressed syllables followed by hyphens, as in *rep″lĭ-kā′shən*. Monosyllables have no stress mark unless they are part of a compound term, in which case each word is given a stress mark for clarity. Thus, *broun* is used to represent *brown*, but *den′is broun′* is used for *Denis Browne splint*. Primary stresses are also given as part of the boldface subentries for foreign phrases. However, even in compound terms, stresses are omitted from prepositions, conjunctions, and other similar small words.

It is impossible with *Dorland's* simplified phonetics to represent the native pronunciations of many foreign words and proper names. These are shown as closely as possible in English phonetics.

Pronunciation Guide

Vowels

(For the use of breves and macrons, see the four rules above.)

ə	sof*a*	ŏ	g*o*t
ā	m*a*te	ū	f*u*el
ă	b*a*t	ŭ	b*u*t
ē	b*e*am	aw	*a*ll
ĕ	m*e*t	oi	b*oi*l
ī	b*i*te	o͞o	b*oo*m
ĭ	b*i*t	o͝o	b*oo*k
ō	h*o*me	ou	f*ow*l

Consonants

b	*b*ook	s	*s*igh
d	*d*og	t	*t*in
f	*f*og	w	*w*ood
g	*g*et	z	si*z*e, pha*s*e
h	*h*eat	ch	*ch*in
j	*j*ewel, *g*em	ks	si*x*
k	*c*art, pi*ck*	kw	*qu*ote
l	*l*ook	ng	si*ng*
m	*m*ouse	sh	*sh*ould
n	*n*ew	th	*th*in, *th*an
p	*p*ark	zh	mea*s*ure
r	*r*at		

Presentation of Plurals and Other Inflections

In main entries for foreign (nearly always Greek or Latin) nouns, the original and anglicized plurals are given after the phonetic spelling; irregular plurals of English nouns are also given.

Example:

sto·ma (stoʹmə) pl. *stomas*, *stoʹmata*. . .
tooth (tooth) pl. *teeth*. . .

The original foreign plural is often given a separate boldface listing in its proper alphabetical place in the vocabulary.

Example:

sto·ma·ta (stoʹmə-tə) [Gr.] plural of *stoma*.

Latin is used, especially in anatomy, to form phrases of the type "the X of Y," for example, *arcus aortae*, "the arch of the aorta." The prepositional phrase introduced by "of" corresponds to the Latin genitive case (*aortae* "of the aorta," from *aorta*). For this reason, the genitive case (= English "of") for Latin nouns is also frequently given, introduced by the abbreviation *gen*.

Examples:

pa·pil·la. . .gen. and pl. *papilʹlae*. . .
os[1]. . .gen. *oʹris*, pl. *oʹra*. . .
os[2]. . .gen. *osʹsis*, pl. *osʹsa*. . .

Latin and Greek (and a number of other languages, such as German and Russian, for that matter) are said to be inflected, that is, words change form to show how they are related to other words in a sentence. An example of this is the "aortae" phrase given above, where the change in the ending of the word corresponds to the use of the English preposition "of." Other Latin inflected forms are found in subentries; these forms will be the objects in a prepositional phrase. For example, under the main entry *fissura*, there is the subentry *f. in ano*; *ano* is the object of the preposition *in* and is one of the half-dozen or so different inflected forms of *anus*, which is a main entry in the Dictionary and has listed with it the genitive and plural form *ani*. As in all subentries, differences in singular and plural forms do not count for alphabetizing, nor do prepositions or conjunctions (e.g., *et* "and," *in* "in"); thus under the main entry *fissura*, the subentry *f. in ano* precedes *f. ansoparamedianis cerebelli*.

Etymology

Information on the origin of a word appears in brackets after the phonetic spelling or a plural form of the entry when that is given. The information is necessarily brief, and the reader must often reason from the etymon, the original word from which other words are derived, to the meaning. For example, for the main entry *dualism* the etymological section reads [L. *duo* two]. L. stands for Latin (languages are either abbreviated or spelled out; see "Abbreviations Used in This Dictionary," p. xxi). The word *duo* is the etymon, and "two" is the English translation of the etymon, not of the entry. The reader proceeds from *duo* to *dual* to *dualism*. Furthermore, space limitations preclude the listing of all the stages in the passage from the etymon to the modern derivative (i.e., the entry). For example, the etymological part of the entry for *vein* is simply [L. *vena*]; in full, it would be [Middle English *veine*, from Old Fr., from L. *vena*].

For those foreign words or phrases taken into English entire, only the language is given, with a translation given within quotation marks.

Example:

déjà vu [Fr. "already seen"] . . .

If the meaning of the foreign word or phrase is the same as that of the entry word, no translation is given.

There are three further additions:

(1) Many technical terms of Greek or Latin derivation are listed twice as main entries (and both times with meaning and cross-references), first as an independent word (with an etymology), then as a combining form (without an etymology), e.g., *ectomy* and *-ectomy*.
(2) There is an essay, "Fundamentals of Medical Etymology" (see p. xxiii), which explains the basic rules for the derivation and composition of Greek, Latin, and Greco-Latin terms in medicine. Appendix 1 is an analytical word list of Greek and Latin roots, prefixes, and combining forms; the list is an aid for the analysis of existing medical terms and the creation of new ones.
(3) The prefixes (e.g., *hyper-*, *hypo-*), suffixes (e.g., *-ia*, *-oid*), and combining forms (e.g., *action-*, *-emia*) from the analytical word list are also listed as main entries in the vocabulary.

Official Publications

Certain terms listed in official publications are identified by an abbreviation in brackets. In main entries, these abbreviations usually appear after the etymology (or after the phonetic spelling if no etymology is given). In subentries, they appear immediately after the boldface subentry word. When a term has more than one meaning, the abbreviation is placed at the beginning of the

definition to which it applies. The following abbreviations are used:

[DSM-IV]	*Diagnostic and Statistical Manual of Mental Disorders* of the American Psychiatric Association, 4th Edition, 1994
[EC]	Enzyme Commission number (e.g., citrate (*si*)-synthase . . .[EC 2.3.3.1]) from the Recommendations of the Nomenclature Committee of the International Union of Biochemistry and Molecular Biology on the Nomenclature and Classification of Enzymes published in *Enzyme Nomenclature* (1992), with updates published electronically at http://www.chem.qmul.ac.uk/iubmb/enzyme/
[TA]	*Terminologia Anatomica* (1998)
[NF]	*The National Formulary*, 24th edition (2006)
[USP]	*The United States Pharmacopeia*, 29th edition (2006)

Placement of Definitions and Cross-References

With few exceptions, a definition is given in only one place for two or more synonymous terms. Entries for the synonyms provide cross-references to the term where the definition is to be found. Such cross-references are in place of a definition and are set in roman type:

mas·to·plas·ty (mas′to-plas″te) mammaplasty.

The definition will be found at *mammaplasty*. In many cases, a list of synonyms is given at the end of the entry where the definition appears. This list is introduced by the phrase "called also" and the synonyms are set in italic type.

Cross-references from one subentry to another subentry under the same main heading use the abbreviated form of the main entry:

syndrome
hypersomnia-bulimia s. Kleine-Levin s.

Cross-referencing has also been used for earlier terms that have been supplanted and for variant spellings of a term. In such instances, the definition is attached to the term that is currently the preferred term. A word of warning is, however, warranted here. In some instances, preference for one term over another may be slight or even nonexistent, while in others, different spellings or terms may be preferred by different authorities, by different specialties, or in different regions. In such cases, the practice of defining words only at one place has been adhered to as a means of keeping down the size of the Dictionary by avoiding duplication of definitions, and the user should remember that the appearance of a cross-reference or definition does not always indicate a preference for one form or synonym over another.

Related Entries

Cross-references to related entries or to entries where additional information may be found are also given. They are identified by "see also," "cf.," and "q.v." (or "qq. v."). (For the abbreviations, see "Abbreviations Used in This Dictionary,") Cross-references introduced by "see also" or "cf." are set in italic type.

Run-On Entries

As a space-saving device, one or more undefined forms (usually adjectives) related to the main entry may occur at the end of the main entry definition. Their meaning is basically the same as that of the main entry, but they have different grammatical functions. They are set in bold type and given a stress mark, and they are followed by a part-of-speech label. Alternative forms with the same part of speech are separated by commas, with a single part-of-speech label following.

Example:

adac·ty·ly . . .a developmental anomaly characterized by the absence of digits on the hand or foot. **adac′tylous** *adj*

Official Terminology

In general, when a term is included in one of the official publications listed in the preceding section ("Official Publications"), its definition appears at the official term. Thus the definition for "pelvic bone" is found at *os coxae*; a cross-reference to the official term is found at the subentry under *bone*. Exceptions have been made in a few cases where the nonofficial term is so common or important that it makes the most sense to put the definition on the unofficial term (for example, *heart* is defined, not *cor*).

Entries Containing a Proper Name

Entries containing a proper name are generally entered twice. The definition for the entity is given in a subentry under the appropriate main entry, as *Down syndrome* under *syndrome*. Biographical, geographical, or other information attached to the proper name is given in a main entry (see "Proper Names" in the section "Sequence of Entries," p. xviii.) A cross-reference is given from the main entry for the proper name to the subentry where the term is defined. For example:

Down syndrome (disease) (doun) [John Langdon Haydon *Down*, English physician, 1828–1896] see under *syndrome*.

Form of Eponyms

The tendency in recent years has been to drop the *'s* from medical eponyms and to use the nonpossessive form of the personal name. Although this tendency is far from universal and the possessive is still commonly found, it was decided after much debate that for the sake of consistency the *'s* would be omitted from eponymic entries for the 31st edition of *Dorland's*. Exceptions were made for a very few categories (such as the entries for *law*) where there is a large amount of nonmedical terminology and the possessive is still the rule in general use. This decision should by no means, however, be taken as a proscription of the possessive eponym, and whether or not to use the

possessive is very much a matter of individual preference. The user should be aware that some terms, such as *Apgar score*, have never had an *'s* and that for some terms, such as *Christmas disease* and *Down syndrome*, the nonpossessive form is always preferred. On the other hand, use of the eponym by itself to stand for the entity, as in the common phrase "living with Alzheimer's," requires the possessive form; "living with Alzheimer" has an entirely different meaning.

Symbols and Abbreviations

Symbols, abbreviations, and acronyms are included as main entries; definitions consist of the term for which the symbol or the abbreviation stands, with a translation if the term is in a foreign language. These terms will usually be found at the appropriate places in the vocabulary; some terms, however, are self-explanatory and have no entry, such as the names of organizations and phrases like the following:

q.h. [L.] *qua'que ho'ra* (every hour).

In a few cases, the definition is placed at the abbreviation or acronym instead of at the term for which it stands, for example, *ELISA*; in such cases, the abbreviation, not the term, is what is actually in use.

Abbreviations appear both with and without periods. This should not be taken to denote proper usage, since abbreviations may appear either way; at the present the trend is away from the use of the period for most abbreviations.

A list of selected abbreviations also appears in Appendix 2.

Abbreviations Used in This Dictionary

a.	artery (L. *arteria*); agar
aa.	arteries (L. *arteriae*)
ant.	anterior
Ar.	Arabic
A.S.	Anglo-Saxon
c.	about (L. *circa*)
cf.	compare (L. *confer*)
def.	definition
dim.	diminutive
EC	Enzyme Commission
e.g.	for example (L. *exempli gratia*)
Fr.	French
gen.	genitive
Ger.	German
Gr.	Greek
i.e.	that is (L. *id est*)
inf.	inferior
It.	Italian
L.	Latin
l.	ligament (L. *ligamentum*)
lat.	lateral
ligg.	ligaments (L. *ligamenta*)
m.	muscle (L. *musculus*)
med.	medial; median
mm.	muscles (L. *musculi*)
n.	nerve (L. *nervus*)
neg.	negative
NF	National Formulary
nn.	nerves (L. *nervi*)
obs.	obsolete
pl.	plural
Port.	Portuguese
post.	posterior
qq. v.	which (things) see (L. *quae vide*)
q.v.	which see (L. *quod vide*)
sing.	singular
Sp.	Spanish
sup.	superior
TA	Terminologia Anatomica
USAN	United States Adopted Names
USP	United States Pharmacopeia
v.	vein (L. *vena*)
vv.	veins (L. *venae*)