

Comprehensive  
**Dictionary**  
of  
**Audiology**

**Illustrated**

Third Edition



Editor-in-Chief for Audiology  
**Brad A. Stach, PhD**

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**Dictionary**  
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## ☞ PREFACE ☞

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This reference text is a comprehensive source of terminology for the profession, practice, and science of audiology. The third edition is a response to the expansion of information and technology that has occurred over the past few years. The original list of terms for the first edition of this dictionary was compiled by extracting indices, glossaries, tables of contents, and appendices from a number of textbooks and journals. The lists were consolidated into a database that served as the basis of the dictionary. Definitions were then developed term by term and letter by letter. Additional terminology for the second and third editions was compiled in a similar manner. This dictionary is intended to be as authoritative as possible. A number of sources, many of which are listed in the Acknowledgments, were consulted as a way to ensure that nuances of the terminology were not lost and to ensure an appropriate level of overall quality. This dictionary is also intended to be as complete as possible. The third edition contains more than 8,000 terms, abbreviations, acronyms, and cross-references.

The boundaries of this edition were set to be thorough in coverage of terminology from the past, current in coverage of modern terminology, and cognizant of the manner and speed with which proprietary and obfusatory terminology disappears. Terms pertaining to hearing aids are included only if they are generic enough to stand the test of time or if they are deemed to be useful from a historic perspective. Speech audiometric tests are handled similarly. Medical terminology is included as it relates to hearing disorders or if it is used in a definition to describe a disease or disorder affecting the auditory system. Speech and language terminology is treated similarly. The style of the dictionary is intended to make it efficient to use. To the extent possible, cross-referencing, tables, and illustrations are used judiciously, hopefully in a manner that is congruent with the way in which readers use the dictionary.

—B.A.S.





## ACKNOWLEDGMENTS

---

David Kirkwood, then editor of *The Hearing Journal*, was responsible for the conceptualization of the first edition of the dictionary and for its overall orchestration. The inspiration for the work was a dictionary published in 1973 by James H. Delk. He authored *The Comprehensive Dictionary of Audiology* in the publication then known as the *National Hearing Aid Journal*. The fourth edition of the Delk dictionary was published in 1983. David Kirkwood revived the idea of a dictionary devoted to audiology, which resulted in the first edition of the current text. He also edited the content and copy of the first edition, an unquestionably tedious task, but one that enhanced the quality considerably.

I am grateful to audiologist Charlotte Destino for her assistance in the initial phase of the first edition of this project. Charlotte spent many hours consolidating the initial lists of terms from indices, glossaries, tables of contents, and appendices. She was responsible for compiling and distilling the list into an electronic database from which the definitions were ultimately generated.

The first edition was reviewed by George Lindley and Kiara Ebinger, who helped to identify missing terms. Juliet Byington and Cathy Esperti, from Delmar Learning, saw the second edition through to its completion. Their support was integral to its publication. Donna Bliggenstorfer played a vital role in completion of the second edition by helping identify the additional terms included in the text. Valerie Johns from Plural Publishing inspired and encouraged the third edition, and Kalie Koscielak and Lori Asbury from Plural were instrumental in seeing it through to completion. I am grateful to Stephanie Palazzolo who, during the fourth year of her AuD program at Wayne State University, took time to help find and compile the terms that are new to the third edition. Finally, my daughter, Madeline Stach, provided substantial administrative and editorial support in its completion. I am grateful to all.

The first step in compilation of the first edition of the dictionary was to generate a database of terms to be defined. Numerous sources were used to accomplish this task. An electronic version of *Stedman's Medical Dictionary* served as a basis for the list. Relevant terms from *Terminology of Communication Disorders* by Nicolosi, Harryman, and Kresheck; *The Comprehensive Dictionary of Audiology* by Delk; and *Singular's Illustrated Dictionary of Audiology* by Lucks Mendel, Danhauer, and Singh were added. Indices, appendices, and glossaries were then compiled from a number of textbooks and journals, and missing terms were added to the database from these many sources. Textbooks from which terms were extracted included: Alpiner and McCarthy's *Rehabilitative Audiology*; Bess and Hall's *Screening Children for Auditory Function*; Bess and Humes' *Audiology the Fundamentals*; Borden and Harris' *Speech Science Primer*; Carpenter's *Core Text of Neuroanatomy*; Davis and Hardick's *Rehabilitative Audiology for Children and Adults*; Davis and Silverman's *Hearing and Deafness*; Durrant and Lovrinic's *Bases of Hearing Science*; Gelfand's *Essentials of Audiology*; Gulick, Gescheider, and Frisina's *Hearing: Physiological Acoustics, Neural Coding, and Psychoacoustics*; Hall's *Handbook of Auditory Evoked Responses*; Hall's *Handbook of Otoacoustic Emissions*; Hayes and Northern's *Infants and Hearing*; Hodgson's *Hearing Aid Assessment and Use in Audiologic Habilitation*; Jacobson and Northern's *Diagnostic Audiology*; Jerger and Jerger's *Auditory Disorders*; Jacobson's *Principles and Applications in Auditory Evoked Potentials*; Katz's *Handbook of Clinical Audiology*; Kryter's *Effects of Noise on Man*; Lipscomb's *Noise and Audiology*; Lalwani and Grundfast's *Pediatric Otology and Neurotology*; Lipscomb's *Hearing Conservation*; Martin's *Introduction to Audiology*; Minifie's *Communication Sciences and Disorders*; Mueller, Hawkins, and Northern's *Probe Microphone Measurements*; Musiek and Rintelmann's *Contemporary Perspectives in Hearing Impairment*; Niparko's *Cochlear Implants: Principles & Practices*; Northern's *Hearing Disorders*; Northern and Downs' *Hearing in Children*; Olishifski and Harford's *Industrial Noise and Hearing Conservation*; Palmer's *Anatomy for Speech and Hearing*; Palmer and Yantis' *Survey of Communication Disorders*; Pollack's *Amplification for the Hearing Impaired*; Richard's *Basic Experimentation in Psychoacoustics*; Roeser, Valente, and Hosford-Dunn's *Audiology Diagnosis*; Ross and Giolas' *Auditory Management of Hearing-Impaired Children*; Sandlin's

*Handbook of Hearing Aid Amplification*; Sandlin's *Understanding Digitally Programmable Hearing Aids*; Schow and Nerbonne's *Introduction to Aural Rehabilitation*; Schuknecht's *Pathology of the Ear*; Speaks' *Introduction to Sound*; Silman and Silverman's *Auditory Diagnosis*; Tyler's *Cochlear Implants*; Valente's *Hearing Aids: Standards, Options, and Limitations*; Valente's *Strategies for Selecting and Verifying Hearing Aid Fittings*; Valente, Hosford-Dunn, and Roeser's *Audiology Treatment*; Wiley and Fowler's *Acoustic Immittance Measures*; and Zemlin's *Speech and Hearing Science Anatomy and Physiology*. Journals from which terms were extracted included: *American Journal of Audiology*, *American Journal of Otolaryngology*, *Archives of Otolaryngology: Head and Neck Surgery*, *Audiology*, *Audiology Today*, *Ear and Hearing*, *International Journal of Audiology*, *Journal of the American Academy of Audiology*, *Scandinavian Audiology*, *Seminars in Hearing*, and *The Hearing Journal*.

For the third edition, textbooks from which terms were extracted included: Baguley and Fagelson's *Tinnitus: Clinical and Research Perspectives*; Fagelson and Baguley's *Hyperacusis and Disorders of Sound Intolerance*; Flint et al.'s *Cummings Otolaryngology Head and Neck Surgery*; Glasscock et al.'s *Glasscock-Shambaugh Surgery of the Ear*; Jacobson and Shepard's *Balance Function Assessment and Management*; Jones and Jones' *Genetics, Embryology, and Development of Auditory and Vestibular Systems*; Madell and Flexer's *Pediatric Audiology: Diagnosis, Technology, and Management*; McCaslin's *Electronystagmography/Videonystagmography (ENG/VNG)*; Northern and Downs' *Hearing in Children*; Richburg and Smiley's *School-Based Audiology*; Ricketts, Bentler, and Mueller's *Essentials of Modern Hearing Aids: Selection, Fitting, and Verification*; Speak's *Introduction to Sound*; Tharpe and Seewald's *Comprehensive Handbook of Pediatric Audiology*; Tremblay and Burkard's *Translational Perspectives in Auditory Neuroscience*; and Wolfe and Schafer's *Programming Cochlear Implants*.

## ☞ ABOUT THE AUTHOR ☞

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Dr. Stach previously served as director of the audiology and speech pathology service at The Methodist Hospital of Houston; director of the division of audiology and hearing research at the Georgetown University Medical Center in Washington, DC; vice president and director of audiology at the Californian Ear Institute at Stanford in Palo Alto, California; the chief executive officer and member of the board of directors of the Nova Scotia Hearing and Speech Clinic in Halifax, Nova Scotia; and the director of audiology and clinical services at the Central Institute for the Deaf in Saint Louis, Missouri.

In addition, he was on the faculties of the Department of Otorhinolaryngology and Communicative Sciences at the Baylor College of Medicine, the Department of Otolaryngology at Georgetown University Medical Center, the Division of Otolaryngology-Head and Neck Surgery at Stanford University Medical Center, and the School of Human Communications Disorders and the Department of Otolaryngology at Dalhousie University. He has also held faculty appointments at New Mexico State University, The University of Texas School of Public Health, the University of Maryland at College Park, San Jose State University, Nova Southeastern University, and Washington University at Saint Louis.

He is a founding board member of the American Academy of Audiology and has served as its president and the chair of its Foundation Board of Trustees. Dr. Stach is the author of a number of scientific articles, books, and book chapters, and is the Audiology Editor-in-Chief for Plural Publishing.



## Organization of the Vocabulary

Stach's *Comprehensive Dictionary of Audiology, Third Edition*, is organized in a manner used commonly in general English dictionaries. All words, acronyms, and abbreviations are organized alphabetically and set in **bold face**. Alphabetization is letter by letter as spelled.

Stach's *Comprehensive Dictionary* uses a format for multiple-word terms that is traditional in general dictionaries. For example, the definition of **immittance audiometry** is located in the I's, **speech audiometry** is located in the S's, and the chief noun **audiometry** is located in the A's. Stach's *Comprehensive Dictionary* also uses the traditional format of a specialty dictionary in which multiple-word terms are grouped under the chief noun as the main entry. Thus, **immittance audiometry**, **pure-tone audiometry**, and **speech audiometry** also all appear under the chief noun **audiometry**. Both formats are used to assist the readers in locating terms more efficiently.

## Cross-References

Cross-referencing is used sparingly as a service to the reader. Most dictionaries use cross-referencing to avoid defining a term twice. We chose to limit the use of cross-referencing so that the reader can access most definitions at a first glance. For example, for concepts that have two or three terms, a definition is included under each. However, in the case of concepts that have an excessive number of terms, the terms are cross-referenced to a single entry. For example, we chose the term **auditory brainstem response** as the main referent for **brainstem evoked response**, **brainstem auditory evoked response**, and so forth.

Cross-referencing is also used to direct the reader to synonyms, antonyms, complementary terms, and colloquial terms.

Synonyms are words or terms that are equivalent. The label **SYN:** is used in the text to identify synonyms. For example:

**audibility index** AI; measure of the proportion of speech cues that are audible; **SYN:** articulation index, speech intelligibility index

Antonyms are words or terms that are opposites. The label **ANT:** is used in the text to identify antonyms. For example:

**abduction** away from the midline of the body or away from each other; **ANT:** adduction

Complementary words or terms are those that help to complete the meaning by designating an alternative. The label **COM:** is used in the text to identify complementary terms. For example:

**cervical vestibular evoked myogenic potential** cVEMP; electromyogenic potential of the vestibular system evoked by high-intensity acoustic stimulation, recorded from the sternocleidomastoid muscle and reflecting the integrity of the saccule of the vestibular labyrinth and inferior branch of the vestibular nerve; **COM:** ocular vestibular evoked myogenic potential

Colloquial words or terms are those that are used only in informal speech or writing. The label **COL:** is used in the text to identify colloquial terms. For example:

**cerebral vascular accident** CVA; interruption of blood supply to the brain due to aneurysm, embolism, or clot, resulting in sudden loss of function related to the affected portion of the brain; **COL:** stroke

## Acronyms and Abbreviations

Acronyms and abbreviations are an integral part of the vocabulary of audiology. They appear in three locations in the dictionary: as entries, in the text of the definitions of the terms to which they apply, and in a separate appendix. The appendix includes all acronyms and abbreviations that appear in the body of the dictionary. An acronym or abbreviation appears as an entry, followed by the term to which it applies, followed by a definition of that term. For example:

**ABR** auditory brainstem response; auditory evoked potential, originating from Cranial Nerve VIII and auditory brainstem structures, consisting of five to seven identifiable peaks that represent neural function of auditory pathways and nuclei

Acronyms and abbreviations also appear in the definition of the term to which they apply. For example:

**benign paroxysmal positioning vertigo** BPPV; a recurrent, acute form of vertigo occurring in clusters in response to positional changes

## Appendices

The appendices are designed to serve as a source for those words, terms, and concepts that are useful to have easily accessible. Acronyms, abbreviations, and symbols are included as described previously. Auditory disorders, including syndromes associated with hearing impairment, are included as a quick reference guide.

(In order of appearance)

amplitude  
amplitude modulation  
analog-to-digital conversion  
audiogram  
audiometric configuration, flat  
audiometric configuration, high-frequency  
audiometric configuration, low-frequency  
audiometric configuration, precipitous  
audiometric configuration, rising  
audiometric configuration, sloping  
auditory brainstem response  
auditory response area  
bone-conduction oscillator  
Carhart's notch  
central auditory nervous system  
cochlear duct  
cochlear partition  
common mode rejection  
compression limiting  
count-the-dots procedure  
crista ampullaris  
descending method  
distortion-product otoacoustic emission  
DP gram  
DSP hearing aid  
ear  
earmold  
electrocochleogram  
fitting range  
frequency  
frequency modulation  
frequency response  
functional hearing loss  
hearing aid, linear  
hearing aid, nonlinear  
hearing loss  
insert earphone  
insertion gain  
latency-intensity function  
long-latency auditory evoked response  
loudness recruitment  
macula  
membranous labyrinth  
middle-latency auditory evoked response  
noise notch  
organ of Corti

ossicular chain  
otoscope  
peak clipping  
performance-intensity function  
plateau  
probe microphone  
pure tone  
reflex decay  
rollover  
sensory epithelium  
sine wave  
spectrum, line  
spiral ganglia  
supra-aural earphone  
transient evoked otoacoustic emission  
tuning curve  
tympanic membrane  
tympanogram, Type A  
tympanogram, Type A<sub>s</sub> and A<sub>d</sub>  
tympanogram, Type B  
tympanogram, Type C  
tympanometric width  
vestibular labyrinth



- A-weighted scale** sound level meter filtering network weighted to approximate an equal loudness contour at 40 phons; decibel level measured with this scale is usually designated dBA or dB(A)
- A1** left (1) earlobe (A) electrode location, typically used for inverting-electrode placement in auditory evoked potential testing, according to the 10-20 International Electrode System nomenclature
- A2** right (2) earlobe (A) electrode location, typically used for inverting-electrode placement in auditory evoked potential testing, according to the 10-20 International Electrode System nomenclature
- AAA** American Academy of Audiology; professional association of audiologists founded in 1988
- AABR** automated auditory brainstem response; method for measuring the auditory brainstem response in which recording parameters are under computer control and detection of a response is determined automatically by computer-based algorithms
- AAIDD** American Association on Intellectual and Developmental Disabilities; a professional organization of specialists from many fields who provide care for individuals with intellectual disability and related developmental disabilities; formerly AAMD
- AAMD** American Association on Mental Deficiency; former name of the American Association on Intellectual and Developmental Disabilities (AAIDD); a professional organization of specialists from many fields who provide care for individuals with intellectual disability and related developmental disabilities
- AAO-HNS** American Academy of Otolaryngology—Head and Neck Surgery; professional organization of otolaryngologists
- AAOHN** American Association of Occupational Health Nurses
- AAOO** American Academy of Ophthalmology and Otolaryngology; former professional association that divided into two organizations, the American Academy of Ophthalmology and the AAO-HNS
- AAP** American Academy of Pediatrics; professional organization of pediatricians
- AARP** American Association of Retired Persons; consumer organization of people over the age of 55
- AAS** American Auditory Society; multidisciplinary association of professionals in audiology, otolaryngology, hearing science, and the hearing industry; formerly American Audiology Society
- Abbreviated Profile of Hearing Aid Benefit** APHAB; self-assessment questionnaire used for evaluating benefit received from amplification, consisting of four subscales—the aversiveness scale, background noise scale, ease of communication scale, and reverberation scale
- ABC** Activities-Specific Balance Confidence Scale; self-assessment questionnaire designed to assess balance confidence in daily activities at home and in public
- abducens nerve** Cranial Nerve VI; cranial nerve that provides efferent innervation to the lateral rectus muscles involved in eye movement
- abducens nucleus** nucleus of Cranial Nerve VI, responsible for controlling the lateral rectus muscles for horizontal eye movement
- abduction** away from the midline of the body or away from each other; ANT: adduction
- aberrant** differing from the normal
- ABESPA** American Board of Examiners in Speech-Language Pathology and Audiology; independent organization responsible for national examinations in audiology and speech-language pathology
- ABG** air-bone gap; difference in dB between air-conducted and bone-conducted hearing thresholds for a given frequency in the same ear, used to describe the magnitude of conductive hearing loss
- ABI** 1. Auditory Behavior Index; 2. auditory brainstem implant
- abiotrophy** premature loss of vitality or degeneration of tissue
- ablation** surgical removal of a body part or destruction of its function
- ABLB** alternate binaural loudness balance test; auditory test designed to measure loudness growth or recruitment in the impaired ear of a patient with unilateral hearing loss
- ABO** American Board of Otolaryngology

**ABR** auditory brainstem response; auditory evoked potential, originating from Cranial Nerve VIII and auditory brainstem structures, consisting of five to seven identifiable peaks that represent neural function of auditory pathways and nuclei

**Abruzzo-Erickson syndrome** orofacial clefting syndrome, characterized by cleft palate, eye anomalies, short stature, and mixed or sensorineural hearing loss

**abscess** circumscribed collection of pus resulting from localized infection in a tissue or organ

**abscess, subdural** collection of purulent fluid between the dura mater and brain that can occur secondary to chronic otitis media

**abscissa** horizontal or X-axis on a graph, such as frequency axis on an audiogram

**absolute bone conduction** bone-conduction thresholds established with the ears occluded; COM: relative bone conduction

**absolute latency** in auditory brainstem response analysis, the time in msec from signal onset to a waveform peak; COM: interpeak latency, interaural latency

**absolute pitch** rare capability of identifying the pitch of a note; SYN: perfect pitch

**absolute refractory period** time following the major phase of an action potential, during which a nerve cannot discharge again regardless of the magnitude of stimulation

**absolute sensitivity** the capacity of the auditory system to detect faint sound; SYN: absolute threshold; COM: differential sensitivity

**absolute threshold** 1. psychophysical term used to denote the value of stimulus magnitude that elicits a desired response and is often related to detection threshold of a signal; 2. in audiometry, the lowest intensity level at which an acoustic signal can be detected

**absorption** in acoustics, reduction of sound intensity by materials that prevent reflection

**absorption coefficient** ratio of sound energy absorbed by a surface to sound energy reflected by the surface

**absorption loss** transmission loss due to the dissipation of sound energy into other forms of energy

**AC** 1. air conduction; 2. alternating current

**AC audiometry** air-conduction audiometry; measurement of hearing in which sound is de-

livered via earphones, thereby assessing the integrity of the outer, middle, and inner ear mechanisms; COM: bone conduction audiometry

**Academy of Doctors of Audiology** ADA; organization of audiologists with a particular interest in dispensing hearing aids; formerly Academy of Dispensing Audiologists

**Academy of Rehabilitative Audiology** ARA; association of audiologists with a particular interest in rehabilitation issues

**accelerated speech** recorded speech signals that have been temporally altered to increase the speed of playback; COM: time-compressed speech

**acceptable noise level** ANL: the highest level of background noise deemed to be acceptable when listening to speech at a comfortable listening level

**acceptable noise level test** a behavioral test designed to determine a patient's perception of the highest background noise level acceptable for listening to speech

**acceptable risk** in determining damage risk criteria for noise exposure, the proportion of the population that will be allowed to become materially impaired

**accessory auricle** craniofacial anomaly characterized by an additional auricle or additional auricular tissue

**accessory nerve** Cranial Nerve XI; cranial and spinal nerve that provides efferent innervations to muscles of the larynx and neck

**acclimatization, auditory** systematic change in auditory performance over time due to a change in the acoustic information available to the listener; for example, an ear becoming accustomed to processing sounds of increased loudness following introduction of a hearing aid

**accommodation** adjustment or adaptation of an environment to ensure accessibility for a person with disabilities

**Accutane** retinoic acid drug prescribed for cystic acne that can have a teratogenic effect on the auditory system of the developing embryo when taken by the mother during pregnancy, resulting in congenital hearing loss

**acetylcholine** ACh; excitatory neurotransmitter, released in synaptic regions, that controls the action of muscles and nervous system receptors

**acetylsalicylic acid** analgesic and anti-inflammatory agent that can cause temporary ototoxicity in high doses; SYN: aspirin

**ACh** acetylcholine

**achondroplasia** 1. abnormality in the conversion of cartilage to bone; 2. autosomal dominant disorder characterized by short stature, short limbs, large head, and middle and inner ear anomalies with associated hearing loss; SYN: chondrodystrophia fetalis

**ACOEM** American College of Occupational and Environmental Medicine

**acouesthesia** unusually acute sense of hearing

**acoumeter** predecessor of the audiometer

**acoupedics** method of auditory training that emphasizes acoustic stimulation of residual hearing without visual training

**acouphone** early generic name for an electronic hearing aid

**acusmatagnosia** loss of recognition of sounds

**acusmatamnesia** loss of memory for sounds

**acoustic** pertaining to sound and its perception

**acoustic admittance**  $Y_a$ ; total acoustic energy flow through a system determined by both in-phase (resistive) and out-of-phase (reactive) components; reciprocal of acoustic impedance

**acoustic analysis** detailed study of sound in a specified environment

**acoustic chiasm** a crossing of auditory nerve projections of the lateral lemniscus from the superior olivary complex to the inferior colliculus through which contralateral fibers carry high-frequency information and ipsilateral fibers carry low-frequency information

**acoustic compliance** ease of energy flow through the middle ear system that is the principal component of reactance at low frequencies; reciprocal of stiffness

**acoustic conductance**  $G_a$ ; in-phase, resistive component of acoustic admittance; reciprocal of acoustic resistance

**acoustic coupler** cavity of predetermined shape and volume used for the calibration of an earphone

**acoustic coupling** an arrangement that joins parts together for the transference of sound waves

**acoustic cue** segment of speech providing the necessary identifying information

**acoustic damper** a valve that provides smoothing of the frequency characteristics of an acoustic signal

**acoustic damping** reduction in sound energy by absorption

**acoustic dispersion** spreading of sound or change of speed of sound

**acoustic distortion** undesired product of an inexact, or nonlinear, reproduction of an acoustic waveform

**acoustic feedback** sound generated when an amplification system goes into oscillation, produced by amplified sound from the receiver reaching the microphone and being reamplified; COL: hearing aid squeal

**acoustic gain** 1. increase in sound output; 2. in a hearing aid, the difference in dB between the input to the microphone and the output of the receiver

**acoustic immittance** global term representing acoustic admittance (total energy flow) and acoustic impedance (total opposition to energy flow) of the middle ear system

**acoustic impedance** total opposition to energy flow of sound through the middle ear system; reciprocal of acoustic admittance

**acoustic inertance** inertia of a sound medium, or the tendency of that medium to remain at rest or continue in a fixed direction

**acoustic insulation** material designed to absorb sound waves

**acoustic meatus** canal extending from the auricle to the tympanic membrane; SYN: external auditory meatus

**acoustic modification** in hearing aid amplification, adjustment to an earmold or hearing aid to change output characteristics

**acoustic mho** unit of measure of conductance of sound wave flow through a medium; reciprocal of acoustic ohm

**acoustic muscle reflex** reflexive contraction of the tensor tympani and stapedius muscles in response to sound; SYN: acoustic reflex

**acoustic nerve** Cranial Nerve VIII; auditory nerve, consisting of a vestibular and cochlear branch

**acoustic neurilemoma; neurilemmoma** cochleovestibular schwannoma; benign encapsulated neoplasm composed of Schwann cells arising from the intracranial segment of Cranial Nerve VIII; SYN: acoustic neuroma; acoustic neurinoma; acoustic tumor

**acoustic neurinoma** cochleovestibular schwannoma

**acoustic neuritis** inflammation of the auditory portion of Cranial Nerve VIII, often of a viral nature, resulting in acute retrocochlear disorder; SYN: cochlear neuritis

**acoustic neuroma** AN; generic term referring to a neoplasm of Cranial Nerve VIII, most often a cochleovestibular schwannoma; SYN: acoustic tumor

**acoustic neuromodulation** therapeutic tinnitus reduction approach by acoustic presentation of tone patterns designed to interrupt the spontaneous neural activity underlying the tinnitus

**acoustic ohm** unit of measurement of acoustic impedance equal to 1 dyne per square centimeter producing a volume velocity of 1 cc per second

**acoustic output** sound emanating from an amplification system

**acoustic phonetics** branch of phonetics devoted to the study of sound and auditory perception of speech sounds

**acoustic radiations** bundle of nerve fibers emanating from the medial geniculate body to the primary auditory cortex; SYN: auditory radiations

**acoustic reactance**  $X_a$ ; opposition to acoustic energy flow due to storage; out-of-phase component of impedance

**acoustic reactance, compliant** capacitive reactance that opposes change in voltage; out-of-phase component of impedance with greatest influence at lower frequencies

**acoustic reactance, mass** inductive reactance that opposes change in current flow; out-of-phase component of impedance with greatest influence at higher frequencies

**acoustic reflex** AR; reflexive contraction of the intra-aural muscles in response to loud sound, dominated by the stapedius muscle in humans; SYN: acoustic stapedial reflex

**acoustic reflex, contralateral** crossed acoustic reflex

**acoustic reflex, crossed** acoustic reflex occurring in one ear as a result of stimulation of the other ear; SYN: contralateral acoustic reflex

**acoustic reflex, ipsilateral** uncrossed acoustic reflex

**acoustic reflex, uncrossed** acoustic reflex occurring in one ear as a result of stimulation of the same ear; SYN: ipsilateral acoustic reflex

**acoustic reflex arc** pathway of the auditory periphery and brainstem through which the

acoustic stapedial reflex courses, from Cranial Nerve VIII through the superior olivary complex to Cranial Nerve VII

**acoustic reflex decay** peristimulatory reduction in the magnitude of the acoustic reflex, considered abnormal if it is reduced by over 50% of initial amplitude within 10 seconds of stimulus onset

**acoustic reflex latency** time interval between the presentation of an acoustic stimulus and detection of an acoustic reflex

**acoustic reflex pattern** any of the patterns of relations among crossed and uncrossed acoustic reflex thresholds for the right and left ears that describe abnormalities of the efferent, afferent, and central portions of the reflex arc

**acoustic reflex threshold** ART; lowest intensity level of a stimulus at which an acoustic reflex is detected

**acoustic resistance**  $R_a$ ; dissipation of acoustic energy; in-phase component of impedance, measured in ohms, reciprocal of acoustic conductance

**acoustic shock** cluster of symptoms, including aural pain, tympanic flutter, and sensation of aural pressure, following exposure to an intense, abrupt sound

**acoustic shock disorder** ASD; acoustic shock persisting beyond 2 months and associated with the development or escalation of hyperacusis

**acoustic signature** characteristic feature of a sound that identifies it as being from a distinct source

**acoustic spectrum** magnitude and frequency composition of a sound

**acoustic stapedial reflex** reflexive contraction of the stapedius muscle in response to loud sound; SYN: acoustic reflex

**acoustic stria, dorsal** DAS; nerve fiber bundle that emanates from the dorsal cochlear nucleus and synapses in the contralateral lateral lemniscus and inferior colliculus, bypassing the superior olivary complex

**acoustic stria, intermediate** IAS; nerve bundle, the fibers of which emanate from the posterior ventral cochlear nucleus and synapse on the ipsilateral and contralateral periolivary nuclei and the contralateral lateral lemniscus

**acoustic stria, ventral** second-order fiber bundle leaving the AVCN and projecting ventrally and medially to distribute fibers to the ipsi-

lateral LSO and MSO and continuing across midline to distribute fibers to the contralateral MSO and MNTB; SYN: trapezoid body

**acoustic striae** second-order fiber bundles that leave the cochlear nucleus toward higher brainstem levels, the ventral acoustic stria from the AVCN, intermediate a.s. from the PVCN, and dorsal a.s. from the DCN

**acoustic susceptance**  $B_a$ ; out-of-phase, reactive component of acoustic admittance; reciprocal of acoustic reactance

**acoustic susceptance, compliant** out-of-phase, reactive component of acoustic admittance; related to change in voltage with greatest influence at lower frequencies

**acoustic susceptance, mass** out-of-phase, reactive component of acoustic admittance, related to change in current flow with greatest influence at higher frequencies

**acoustic transformer effect** enhancement of all frequencies with half-wavelengths smaller than the total length of a tube

**acoustic trauma** 1. damage to hearing from a transient, high-intensity sound; 2. long-term insult to hearing from excessive noise exposure

**acoustic treatment** use of materials or structural changes to alter sound transmission within a specific environment

**acoustic tumor** generic term referring to a neoplasm of Cranial Nerve VIII, most often a cochleovestibular schwannoma; SYN: acoustic neuroma; vestibular schwannoma

**acoustic venting** the addition of a bore in an earmold or hearing aid that permits the passage of sound into an otherwise blocked external auditory meatus

**acoustical** acoustic

**acoustical test fixture** method for measuring the attenuation of hearing protection devices using an inanimate fixture in place of a test subject

**acoustically modified earmold** ear coupler with adjustments made to the bore, tubing, or vent that results in changes in sound transmission

**acousticolateralis organs** collective reference to the lateral line organs, organs of balance, and organs of hearing

**acousticopalpebral reflex** auropalpebral reflex

**acousticovestibular** pertaining to the combined cochlear and vestibular end organ

**acousticovestibular ganglia** embryologic precursor to the vestibular and auditory ganglia

**acoustics** the study and science of sound and its perception

**acoustics, earmold** the influence of an earmold's dimensions, such as bore length and diameter, on the spectral content of sound reaching the tympanic membrane

**acoustics, room** features of sound characteristic of a specific environment

**acquired** obtained after birth; ANT: congenital

**acquired hearing loss** hearing loss that occurs after birth as a result of injury or disease; not congenital; SYN: adventitious hearing loss

**acquired immunodeficiency syndrome** AIDS; disease compromising the efficacy of the immune system, characterized by opportunistic infectious diseases that can affect the middle ear and mastoid as well as peripheral and central auditory nervous system structures

**acoustical suprathreshold asymmetry** the decline in word recognition ability in the poorer ear of a person with asymmetric hearing loss or in the unaided ear of a person fitted with one hearing aid, resulting in asymmetric stimulation; SYN: late-onset auditory deprivation, auditory deprivation effect

**acquired syphilis** sexually transmitted disease, caused by the spirochete *Treponema pallidum*, which in its secondary and tertiary stages may result in auditory and vestibular disorders due to membranous labyrinthitis

**acquired syphilis, secondary** secondary stage of a syphilis infection, which can result in membranous labyrinthitis association with acute meningitis

**acquired syphilis, tertiary** late stage of development of syphilis infection, occurring within 3 years to 10 years of initial infection, often resulting in otosyphilis

**acrocephalosyndactyly, type I** congenital syndrome characterized by a peaked head, fused digits, low-set ears, otitis media, stapes fixation, and associated conductive hearing loss; SYN: Apert syndrome

**acrodysostosis** skeletal dysplasia syndrome with recurrent otitis media and associated conductive hearing loss

**acrofacial dysostosis** syndrome of mandibulo-facial dysostosis, or Treacher Collins syndrome, with absence of thumbs, often associated with ear and facial anomalies similar to those in Treacher Collins; SYN: Nager syndrome