

Audiologic Guidelines for the Diagnosis and Management of Tinnitus Patients

Tinnitus refers to an auditory perception not produced by an external sound. It is commonly described as a "hissing, roaring or ringing" and can range from high pitch to low pitch, consist of multiple tones or sound like noise (having no tonal quality at all). It most often is constant but can also be perceived as pulsed or intermittent. It may begin suddenly, or may come on gradually. It can be sensed in one ear, both ears or in the head. It has been estimated that as many as 40-50 million United States residents have experienced more than momentary tinnitus with as many as 2.5 million reporting feeling debilitated by the condition. As many as 10-12 million individuals have sought help for tinnitus. It may cause or be associated with a wide range of problems including sleep difficulties, fatigue, stress, trouble relaxing, difficulty concentrating, depression and irritability. As a result it can affect one's quality of life including social interactions and work.

SCOPE OF PRACTICE

Audiologists are qualified to evaluate, diagnose, develop management strategies and provide treatment and rehabilitation for tinnitus patients. In evaluating and managing tinnitus it is helpful and worthwhile for audiologists to work in a multidisciplinary team approach.

SUGGESTED EVALUATION GUIDELINES

Prior to recommending or beginning any treatment for tinnitus, it is essential that a differential diagnosis be attempted. It is important to consider the entire person, not merely the audiogram and/or the characteristics of the tinnitus. There are many factors that can cause and affect tinnitus and its perception that will influence the management plan and outcome of any treatment.

The basic tinnitus evaluation (beyond the audiologic examination) should consist of the following measures:

- Comprehensive case history including, but not limited to, questions regarding time of onset, course of progression, description, location, perceived cause, extent to which the patient is bothered, exacerbating factors (such as food, stress, lack of sleep, etc.), history of noise exposure, medications, familial history of hearing loss or tinnitus,

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effect on sleep and effect on personal/social/occupational relationships;

- Loudness discomfort levels;
- Tinnitus pitch matching;
- Tinnitus loudness matching;
- Minimal masking level;
- Subjective questionnaires. (There are several valid and reliable surveys designed to measure the disability and handicap associated with tinnitus.)

Professionals that specialize in the assessment and treatment of tinnitus also may find additional audiologic procedures useful for diagnosis and counseling.

TINNITUS PATIENT MANAGEMENT PROCEDURES

Similar to the evaluation process, the treatment of patients with tinnitus is most likely to succeed when a multidisciplinary approach is employed. While it is true that at this time there is no cure for most cases of tinnitus, it is not true that "there is nothing that can be done about it". A number of treatment approaches can be performed by audiologists and have been described with various degrees of reported success. They are listed below (in alphabetical order) along with a brief description:

- Counseling

A trained professional counselor can be very helpful whenever the tinnitus becomes problematic. Counseling should be considered both as a primary approach when appropriate and as an adjunctive approach to all treatment strategies. Counseling con-

sists of gathering data through careful listening, making adjustments in one's strategies based on that knowledge and conveying information. Thus, it serves both a diagnostic and therapeutic function.

- Cognitive Behavioral Therapy

One type of counseling that may be successful in helping people cope with tinnitus is cognitive behavioral modification therapy. This approach can help persons identify the way they react to their tinnitus and learn new responses, thereby minimizing the negative thoughts and behavior patterns that are associated with tinnitus.

- Habituation and Tinnitus Retraining Therapy

Tinnitus Retraining Therapy is a method developed to facilitate habituation to tinnitus. It combines sound enrichment therapy with directive counseling. Sound is employed to reduce the contrast between silence or ambient noise and the perception of the tinnitus. It may be in the form of environmental sounds, amplification or broadband sound generating devices. A reduction of the perception of the tinnitus (but not complete obliteration of it) is considered essential to the process of habituation. Counseling and education serve to demystify tinnitus and provide the patient with an intellectual and emotional framework in which habituation can occur.

- Hearing aids and tinnitus instruments

For individuals with hearing loss, environmental sounds may be inadequate in themselves to afford relief. However, amplifying them with the assistance of hearing aids may provide enough background stimuli to give tinnitus relief while simultaneously enhancing the individual's listening and communication abilities. If hearing aids alone are inadequate tinnitus instruments may be of help. Tinnitus instruments are devices that provide amplification and add the option of an independently controlled broadband sound generator.

- Maskers & home masking devices

Maskers are used to cover up the tinnitus perception with a competitive signal that either partially or completely competes with or conceals the tinnitus. This can be achieved by a number of methods ranging from envi-

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ronmental masking to ear level worn sound generators. Also, there are commercially available recordings of a wide range of sounds that can provide complete or partial masking. In addition to their masking effect these sounds may assist in relaxation.

- Self-help and Support/Education Groups

Some people find help, stay informed on the latest information and share treatment experiences by talking to others with similar problems. These groups should be facilitated or at least attended by an audiologist or a psychologist (to prevent misinformation from being conveyed) and may include lectures from a variety of related disciplines.

- Stress Management

Stress can aggravate tinnitus and tinnitus can be very stressful. There are many procedures that can be helpful in learning to manage stress. Biofeedback assisted relaxation is one technique by which people can learn to control breathing, muscle tension and heart rate. Other methods of stress reduction include yoga, meditation, self-hypnosis and exercise.

There is no evidence to support the effectiveness of alternative treatments such as acupuncture, homeopathy and herbal remedies such as ginkgo biloba.

EXTERNAL REFERRALS


Due to issues regarding scope of practice, areas of interest and time constraints, many hearing health care facilities across the country cannot afford to offer comprehensive and extensive tinnitus evaluation and consultation. Therefore, it is highly recommended that health care providers advise tinnitus patients of other resources (such as the American Tinnitus Association) and/or refer them to appropriate professionals who have a special interest in tinnitus. Furthermore, because tinnitus may be symptomatic of a treatable disease, referrals to physicians and other health care professionals are commonly indicated. Included among the professionals who may provide valuable services are specialists in otolaryngology, psychiatry, psychology, relaxation therapy, dental (temporomandibular joint dysfunction) and neurology.

OUTCOME MEASURES

Further measurement of outcome using randomized clinical trials and investigations with appropriate placebo controls is needed for the tinnitus patient management procedures cited in this document. The use of valid and reliable questionnaires can be

helpful in assessing treatment outcome. It is essential that conclusions regarding outcome not be finalized at the conclusion of the formal treatment. Long term follow up data are needed to determine whether treatment strategies are successful.

CPT CODE CONSIDERATIONS

Although CPT codes exist for diagnostic audiologic procedures, CPT codes are lacking for components of the formal tinnitus evaluation beyond the audiologic assessment. There are, for example, no CPT codes for a tinnitus consultation, loudness discomfort levels, tinnitus pitch and loudness matching, minimal tinnitus masking levels or high frequency audiometry. Likewise, specific CPT codes do not currently exist for tinnitus patient management procedures performed by audiologists, such as, counseling, habituation and tinnitus retraining therapy. Lack of appropriate coding impedes the comprehensive diagnosis and rehabilitation of the tinnitus patient, in view of the extensive time requirements necessary for these patients' assessment and treatment. The availability of appropriate CPT codes with associated adequate reimbursement could potentially facilitate the delivery of clinical services by audiologists to tinnitus patients. 

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