BIAP Recommendation 29/3:

Misophonia

Foreword

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Comments on this document are welcome and should be sent to the Secretary General of the International Bureau for Audiophonology BIAP. The address can be found on the BIAP website at www.biap.org.

Introduction

Misophonia is a selective intolerance to sound and was first described as a distinct medical pathological condition by Pawel Jastreboff in 2001.

Patients affected by this disturbance may be severely handicapped and experience certain sounds as unpleasant, severely disturbing or even totally disabling.

These so-called “triggering sounds” may consist of any type of signal, like for instance a chewing sound or the sound of clearing one´s throat. Typically, they are human-made, but this it is a not necessary condition. The triggering sounds can be, e.g. lawnmowers, trains, airplanes, dogs barking, refrigerators, popping popcorn, the hum of a computer or copier.

The word “misophonia” is a combination of two words: “miso = hatred” and “phonia = sound”. It is important to recognize that the term misophonia should not be translated word for word. Misophonic patients do not literally hate sound. The term simply denotes various and abnormally strong and negative reactions of a person to particular acoustic sound patterns.

These responses involve reactions of the limbic and autonomic nervous systems. Therefore, it has to be noted that misophonia, as well as tinnitus and other types of sound intolerances, have a negative and clinically significant influence on the affected person and bear a disabling potential, primarily by activating also non-auditory parts of the central nervous system.

Recommendation

Symptoms of misophonia (selective intolerance to sound):

- Various and specific ordinary sounds are able to cause discomfort, aversion and negative emotional feelings like annoyance, irritation, tension, anxiety, fear and disgust.
- Trigger signals typically consist of eating or chewing sounds, breathing, sniffing, clicking of ballpoint pens, air condition, etc.
- These annoying trigger sounds can lead to strong reactions like aggression, agitation etc.
- The strength of the reaction may depend on who is producing the trigger sound (e.g. parent vs friend) and on the environment (e.g. home vs office).
- Triggers are able to cause reactions of the autonomous nervous system as well, like hypertension, tachycardia, restlessness, vomiting etc.
- These negative emotions, feelings and internal reactions are not in control of the affected subject, while in most cases external reactions can be controlled. The condition of Misophonia often leads to a withdrawal from social life.

Physiological causes of misophonia:

Misophonia is a medical condition in which unique specific sounds can lead to a specific aversive reaction.

The effectiveness of a specific trigger sound depends rather on its meaning than on its specific physical sound parameters. A specific sound may be able to trigger misophonia-symptoms in some persons and at the same time may be totally neutral to others, i.e. trigger sounds are specific to a given person. The effectiveness of a trigger signal depends on the situation, context and meaning, as well as on who is producing it. The physical characteristics of the sound, however, are irrelevant.

Virtually every sound, even the human voice, can receive an extremely negative emotional value attributed to it by the limbic system via an abnormal conditioning reflex, linking the auditory system with other systems in the brain, particularly (but not exclusively) with the limbic and autonomic nervous system. This emotional value depends on past experiences and the life history of the patient.

Acoustic triggers:

The typical acoustic triggers are for instance noises when eating, i.e. chewing, swallowing, slurping, breathing, snoring and so on – see examples presented above.

All these types of sounds normally do not affect people in their everyday life at all. In individuals suffering from misophonia, however, precisely these same sounds may be perceived as being unbearable, may not be tolerated, may cause discomfort and in some cases even aggression. An affected person may not be able to control the emotional reaction provoked by the triggers, but typically the person can control the external manifestation.

Non-acoustic triggers:

An interesting fact is, that the above described malfunction called misophonia may also be triggered by visual or other non-acoustic sensations. This is due to a kind of meta-conditioning. This means that the mere smell or visual appearance of someone eating is able to start the cascade of the typical aversive reactions that previously had been elicited from the acoustic stimulus alone.

Diagnosis:

Since the symptoms of misophonia greatly vary from patient to patient, a fixed acoustic stimuli pattern cannot be used for diagnosis. Therefore, it is also extremely difficult to find competent and specialized therapists, who are experienced in the therapy of this condition.

Most patients have already thoroughly searched the internet and made an effort trying to find therapeutic orientation to relieve their symptoms. It is not unusual that the patients themselves are the first to find the right diagnosis. However, in order to confirm the diagnosis and carefully evaluate the functions of the ear and higher parts of the hearing system, it is mandatory to consult an ENT- specialist.

Besides the physical examination and all the audiological tests, a structured interview is crucial. Additionally, questionnaires filled out by the patient and evaluated together with him and the ENT- specialist may be useful.

Taking all into account, the structured interview, the test results and the information from the questionnaires, the ENT-specialist is able to design an individually customized and effective therapeutic concept for the patient.

Therapy of misophonia:

Many aspects of misophonia are still unknown, only some basic principles of the physiological nature and of the symptomatic patterns of this disease have been uncovered and described so far.

The first explanation of the underlying mechanisms of misophonia has been given by Pawel Jastreboff. According to his theory the functional disturbance is based on a conditioned reflex, linking the auditory system with other parts of the brain, which furthermore involve pattern recognition through which the triggering sounds are linked with particular emotions, reactions, qualities and quantities of negative meaning.

Therefore, in order to successfully reduce this disturbance, the most effective way of reversing these reflexes is to reassociate the triggering sounds with something positive, a procedure known as active extinction of conditioned reflexes. Thus, during treatment of misophonia, a positive association with external sounds is created by a systematic exposure to pleasant sounds to which the patient is asked to pay attention. In addition, the method of passive extinction is effective and helpful. The uncoupling from the underlying conditioned reflexes can be supported with the help of noise generators.

These devices create a “shield” which decreases the strength of triggering sounds. It is essential, that patients have control over the thickness of this “shield” by controlling the level of sound produced by the sound generators.

Patients are advised to increase the sound level before entering an environment with a triggering sound (e.g. cafeteria) and to decrease the level of sound after leaving this environment.

The application of so-called pink noise is a useful tool. One example: While a soft “shshsh” is calming, a loud hissing “zzzz” does not have this effect.

With the help of the noise generators during Misophonia-Retraining-Therapy, patients learn to transform the noise to which they have negative reactions, into a normal sound that does not lead to aggression, fury and disgust. The desensitization of the overstrained hearing system is regarded as very helpful and beneficial by the patients, also for reducing fears and calming down the whole vegetative system.

In addition, relaxation exercises and psychosomatic measures should be recommended to cope with side effects and the additional stress in everyday life caused by misophonia.

There are no pharmacological treatment options against misophonia available up to now, as no medication has yet been found, neither against hearing impairment nor against tinnitus.

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This recommendation was created and approved in multidisciplinary cooperation between professionals of all audiophonologic disciplines, which are medicine, pedagogy, speech therapy, psychology and hearing instrument audiology.

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