Rec 29/2 Annex 01 : Tinnitus Retraining Therapy (TRT)

Tinnitus Retraining Therapy (TRT) is one of the more successful approaches currently available for the treatment of tinnitus. The overall goal in TRT is habituation for tinnitus and hyperacusis. TRT was developed in the late 1980's by Pawel J. Jastreboff, in association with Jonathan W. P. Hazell.

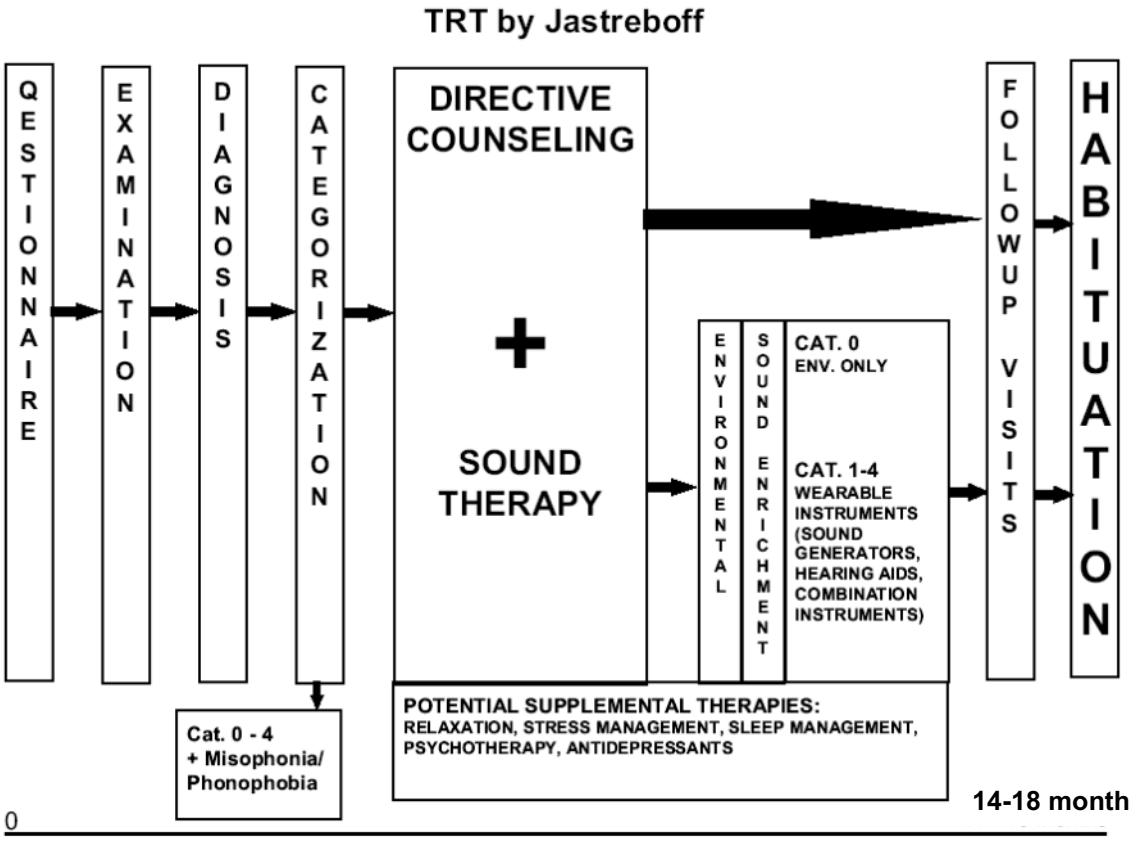
The Neurophysiological Model

TRT is based upon the "neurophysiological model" which portrays tinnitus as a problem involving various interacting brain structures - not just the hearing system. The limbic projections are responsible for our emotional and stress responses and modulate the individual perception. By this mechanism around 20% of the patients with a permanent tinnitus perceive their tinnitus emotionally as an alarming and frightening signal. For these 20% tinnitus is a main problem.

Habituation

TRT is based on the natural ability of the brain to "habituate" to a signal, to filter it out on a subconscious level so that it does not reach conscious perception. Importantly, habituation is a passive event, in contradiction to "ignoring" something, which is an active event. Thus habituation requires no effort. For example, we don't actively listen to air conditioners or other continuous background sounds. Such sounds are simply part of the background sound environment. The goal of TRT is to render tinnitus to the status of a meaningless background sound that is easily ignored. Successful habituation to tinnitus would result in a patient commenting, "I haven't noticed my tinnitus all day," or "I haven't noticed my tinnitus in days." If there is no awareness of tinnitus, the tinnitus is not a problem. In this regard, it cannot truly be viewed as a technique for coping with or "learning to live with" tinnitus, since one neither needs to cope with nor learn to live with an entity that is no longer an issue in one's life.

Directive Counseling and Sound Therapy



Categorisation by Jastreboff depending on a questionnaire and examination (s.a. Recom. 29/1)

Categories	Symptoms				Treatment
	Tinnitus severity	hyperacusis	noise exposition	subj. hearing loss	Thorough counselling for all catagoriescategories
0	mild	none	no lasting effect	irrelevant	
I	severe	none	no lasting effect	none	+ noiser
II	severe	none	no lasting effect	significant	+ hearing aid or Hearing aid –noiser -combination
III	severe	yes	no lasting effect	irrelevant	+ noiser
IV	severe	yes	lasting effect	irrelevant	+ noiser

To achieve habituation, TRT utilises "directive counselling" and "sound therapy." The directive counselling is a structured approach to educate patients primarily with regard to how the brain and auditory system are involved in tinnitus. The counselling aims to remove any fears or anxieties that patients have about their tinnitus. The counselling is repeated and extended if necessary at all the follow-up appointments. The follow-up intervals for category I-IV typically are at 1,2,4 weeks and 3,6,9,12,18 months. The overall time that is needed for the counselling alone can vary between 1-10 hours. The “TRT-Specialist” has to explain to the patient, in an for the patient appropriate way, topics like: The function of the middle and the inner ear, the activity in the hearing nerve, the function and the activity in the auditory nervous system, filtering processes in the auditory nervous system, brain plasticity and habituation …..

In category I-IV the counselling is supported by a sound therapy. The purpose of sound therapy is to enrich the patient's sound environment, to distract him from the perception of his tinnitus and thus facilitate the process of habituation. For more severe cases, sound therapy is accomplished through the use of wearable ear-level sound generators or, in cases of significant hearing loss, hearing aids or combination units. To understand how sound therapy works, it is important for the patient to understand the various aspects of hearing.

The multi-disciplinary team for TRT consists of a specially TRT-trained ENT-specialist and audioprothesist /audiologist supported by a psychologist.

Literature:

1. Jastreboff, P.J. and Hazell, J.W.P. (1993) A neurophysiological approach to tinnitus: clinical implications. Brit.J.Audiol. 27:1- 11, 1993.
2. ADANO, Tinnitus-Retraining-Therapie HNO 48 (2000) 887-901

Websites:

1. The Tinnitus and Hyperacusis Centre, London UK - Jonathan Hazell and Jacqueline Sheldrake www.tinnitus.org
2. Tinnitus & Hyperacusis Center Pawel J. Jastreboff, Ph.D., Sc.D. Emory University Atlanta, Georgia http://www.tinnitus-pjj.com/