Musical Tinnitus

Auditory imagery is the phantom perception of well-known musical tones or of voices without any understandable speech (Berrios, 1991, Berrios and Rose, 1992, Goodwin, 1908). This perception is much less frequent, nevertheless, it is well documented and occurs primarily in older people with hearing loss. It is presumably a central type of tinnitus involving reverberatory activity within neural loops at a high level in the auditory cortex.

Melzak (1989) presented convincing data supporting the theory that: “the experience of a phantom limb has the quality of reality because it is produced by the same brain processes that underline the experience of the body when intact; neural networks in the brain generate all the qualities of experience that are felt to originate in the body, so that inputs from the body may trigger or modulate the output of the networks, but are not essential for any of the qualities of experience”. He further argued that similar mechanisms are involved in phantom seeing, and phantom hearing, including tinnitus.

Usually occurs with individuals that have significant hearing loss. The brain, in lacking adequate hearing/audibility will view this as a huge event. Musical tinnitus comes from auditory memory and uses “recorded” pieces of music from memory.

Associated with our “top down” processing. The limbic system stores auditory memory and can recall multiple or single frequency memories. It is possible that the is from the top-down path vs the bottom-up path of auditory processing as seen in most cases of tinnitus. The difference is that the working memory (in the hippocampus) is the filter between short- and long-term memory. If information is important it goes to long term memory. It could be important because we like it OR if we dislike it. If we dislike it then there is a greater chance that it stores in long term.

At the time of an event, we don’t feel good, and that moment gets associated with the meat and stored in long term memory = this is a learned conditioned response. It could be only for one second, but it still gets stored. It is possible that this all begins and ends in the limbic system.

Tinnitus treatment and musical tinnitus treatment is the same:

* Treatment of hearing loss with use of hearing aids – consistent use of adequately fit amplification
* Never be in quiet – Sound therapy – use combo (sound generation and amplification) device; bedside sound generators when hearing aids are not in use at night
* TRT – tinnitus retraining therapy – uses educational and instructional counseling to understand the brain systems, the grip of the limbic system and the realities of auditory phenomena. Stresses importance of stress relief, breathing exercises, mindfulness relaxation. Once tinnitus is realized as a neutral event then habituation can occur.
* CBT – when needed – mental health therapists can help change cognitive behaviors, replacing negatives with positives.