

# THE ROLE OF HYNPOSIS IN THE TREATMENT OF TINNITUS

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It is estimated that approximately 1-2% of the general adult population experiences severe tinnitus (Hiller and Goebel 1992), however current estimates suggest that a less severe level of tinnitus may affect up to 10% of the population (Jacobson 1992). Recently, cases of severe tinnitus have resulted in disablement awards (Coles, Baskill and Sheldrake, 1985; Salter, 1992). A 1992 survey of over 7500 respondents conducted by the American Tinnitus Association (ATA) 1992, found that 25% of all respondents reported that tinnitus was a moderate interference in the overall quality of their lives, while 12.4% reported it greatly interfered. Slightly over 10% of all respondents reported they were often depressed due to their tinnitus. It is clear from these facts that tinnitus, like pain, has a significant impact upon those who "suffer" from it. However, of equal importance is the fact that many individuals who report chronic and severe tinnitus "do not suffer" from it. Hallam & Jakes (1985), in their study of tinnitus patients suggested that the actual measured frequency, volume or persistence of tinnitus does not necessarily correlate with reported levels of perceived discomfort or disability from the tinnitus. They suggest rather, that cognitive mediational factors may account for the subjective distress experienced by the individual.

A survey by the ATA of treatments utilized by its members suggests there was no significant differences in "relief" from tinnitus between the use of hearing aids, biofeedback, prescribed medication and temporomandibular joint (TMJ) therapy. For each modality approximately half the respondents reported no relief while the remaining half reported some amount of relief. Hypnosis was not among the treatments surveyed.

The question as to whether tinnitus should continue to be seen as a psychosomatic problem as it once was or whether it should be addressed as a somatopsychic problem as it is often seen today, seems to suggest that a comorbidity exists. Stress, especially of a chronic nature can contribute, through various physiological responses (clenching, muscle tension, increased blood flow) to tinnitus (Arlen, 1985). Conversely physical underlying structural abnormalities can produce tinnitus which in turn may trigger a full range of psychological problems. Often the tinnitus patients seeking psychotherapeutic intervention have seen a number of other professionals including physicians, dentists, audiologists and chiropractors. They typically arrive at therapy evidencing fear, frustration, self-directed anger, anger at the medical field, fatigue, depression and anxiety. They report financial, familial and personal stress. In many ways, they present a symptom pattern non unlike that of the chronic pain patient. In fact, McSpaden (1993) has suggested that "tinnitus is what pain would be if you could hear it." He further suggests

that “tinnitus appears to be (to the afferent auditory system) indifferntiable from chronic kinesthetic or proprioceptive pain (along other afferent nerve pathways)”.

In evaluating the impact of tinnitus upon patients, it has been strongly suggested that their subjective experience of tinnitus may be due more to the personality and/or coping mechanisms of patients than to the loudness or pitch (Kirsh, Blanchard and Parnes, 1989; House, 1981). Toward a fuller understanding of the psychological variables associated with tinnitus psychometric scales have been developed and employed with varying subject populations (Willson et al, 1991; Hiller and Goebel, 1992).

In contrast to this Gerber et al (1986) employing the MMPI, Cattels 16PF, Rotter’s Locus of Control and Homes and Rahe’s Life Stress Scale found that tinnitus patients did not emerge as presenting personality or psychosomatic profiles different from the general population.

A current understanding of tinnitus sufferers would seem to suggest that although personality factors may not be the guiding factor in the presence or not of tinnitus, the individuals ability to cope with the concomitant impact upon their lives may be mitigated by a variety of stressors secondary to the tinnitus (i.e. sleep disturbance, financial downward mobility, feeling of loss of control) and may contribute to the degree of “suffering” being incurred.

In a factor analytic study of Tinnitus Complaint Behavior Jakes et al. (1985) examination of 82 tinnitus patients indicated that two general complaint and three specific complaint factors were found; the “intrusiveness of the tinnitus” and “distress attributed to tinnitus,” as well as these ‘specific’ complaint dimensions (Sleep disturbance, use of medication and interference with auditory entertainment). They concluded that a therapeutic approach to tinnitus should include helping the patient learn that having “distress about” tinnitus is not determined by having tinnitus and that intrusive, subjectively loud tinnitus will not necessarily produce a strong effect on the patients social, domestic or economic functioning.

Of significance in the reduction of distress associated with tinnitus Jakes et al (1986) found that cognitive interventions directed towards helping patients change their perceptions of the controllability of the noise and coping beliefs and attitudes about the noise were of primary significance. In a later study comparing subjects placed in one of four groups; aural maskers; placebo maskers waiting list; a group cognitive therapy and group cognitive therapy plus a masker, a specific effect of group cognitive therapy on tinnitus distress, not observed in alternative treatments was found (Jakes et al 1992).

## HYPNOSIS

As early as 1950, hypnosis was shown in case studies to provide improvement in patients with tinnitus. (Pearson & Bernes, 1950; Guild, 1959; Mihalyka & Whanger, 1959).

Hypnosis as an agent for cognitive change is well established in its ability to foster change in belief systems, attitudes and behaviors (Golden, Dowd and Friedberg, 1987; Erickson, 1982; Otani, 1990). Of major importance for the tinnitus patient is the role therapy may play in altering the “meaning” the tinnitus may uniquely have for that patient (Araoz, 1985).

MacLeod-Morgan, Court & Roberts (1982) helped clients utilize relaxation and imagery by instructing them to reframe the tinnitus as a cue for relaxation and comfort. They additionally suggest alternate ways of restructuring the clients thoughts to incorporate the “hum” to represent cognitively more pleasing associations ranging from Plato’s “harmony of the spheres” to Pooh Bears “happy hums.” They conclude by suggesting that “by teaching clients to make peace, not war, with the symptoms and by drawing on their own resources of creativity and motivation, much of their discomfort can be alleviated.

O’Hanlon (1986) applied hypnosis with metaphorical techniques in the treatment of tinnitus with some success, as did Erickson & Rossi (1979). Recently Attias et al (1990) in their study which compared self-hypnosis (SH); a brief auditory stimulus (BAS) to the ear with tinnitus and a no treatment waiting list control group, found that 73% of SH subjects reported the disappearance of symptoms compared with 24% of BAS subjects. At two months follow up only SH subjects continued to demonstrate continued improvement. They suggest that the difference may be due to the patient’s ability to successfully disregard or at least cope with their tinnitus.

Based on the above research it seems that a client centered hypno-therapeutic program directed at helping patients develop cognitive abilities and feelings of personal efficacy could play a significant role in improving their overall quality of life while reducing their subjective distress.

They further suggest that hypnotherapy provides a lifelong self-administrable therapy which may in certain cases circumvent the risks and limitations imposed by potentially destructive surgical procedures, perceptual reliance on drug interventions and side effects of maskers.

Another factor in helping the tinnitus patient overcome their distress derives from helping them to develop a sense of self-efficacy and to feel “in control” of their tinnitus. To achieve this Cochrane (1991) has suggested that a client-therapist collaboration must be established.

He suggests that this collaborative approach utilizing self-hypnosis and audio tapes as a complement to ongoing therapy was employed effectively in helping clients to “gain a sense of personal control though not totally free of intrusive sound.” This points out the need to focus on the patient’s requests, differentiating between such nuances as “not hearing the noise” versus “the noise stopping.” The former possibly being much more within the patients control.

Brattberg (1983) found that considerable gains could be obtained through the adjunctive use of relaxation audio cassettes which offered suggestions that the patients would no longer be troubled by the noise.

Although much less frequently reported and typically in a more anecdotal manner, researchers have suggested that the actual reduction or elimination of tinnitus through hypnosis has been obtained (Reiter, 1980; Brattberg, 1983). Marks, Karl & Onisphorou (1985) found a similar result with one highly hypnotizable subject while 36% of their subjects reported symptom relief (i.e. insomnia) with a minimal change in the loudness or pitch of the tinnitus.

Similarly, Marlow (1973) utilizing what might be viewed as a traditional directive approach found that when the actual symptom phenomenon was used as part of the deepening process in that the patient was instructed to concentrate on the “inner noise” and that as he did so he would note a gradually diminished intensity, the patient reported significant symptomological relief when going to sleep. He further suggests that a combination of learned relaxation as a response to the tinnitus in conjunction with ego strengthening may prove an effective tool in actual reduction or diminution of the tinnitus.

At this time four levels of intervention seem worth exploring as opportunities for hypnotic intervention. These are: tinnitus “noise” reduction or elimination; cognitive restructuring; family intervention and ego enhancement, and physiological/structural alteration.

### **Tinnitus “noise” reduction or elimination**

This first level of intervention raises the question as to whether patients can learn to alter the pitch of loudness of their tinnitus through hypnotic intervention. As previously discussed, it has been found that this could be accomplished with some patients, but not others (Marks et al, 1985). The following examples are techniques which have been employed with patients with some success. They are presented to act as models or styles of intervention and are reflective of the works of Erickson; Araoz; Rossi; Barber and others. They should be altered and expanded to meet the individual clients experiences and perceptions. The focus should be on the patient’s experiences as they move through trance.

- 1) Somatic awareness: In this technique the focus is to get the patient to begin to listen, non-fearfully to the sound. For example; I wonder if you have really listened to the sound to see if it is trying to say something ... we speak in so many different ways with our eyes, our bodies, our lips, perhaps you can begin a dialogue between yourself and the sound ... perhaps once you really listen or see or become aware of the sound’s message it won’t have to so incessantly repeat itself (i.e. inner nurturer). Once you get the message, perhaps you won’t have to listen to it again until you feel there is another message.

- 2) Reframe: Sometimes patients can be led to finding positive associations and increased controllability as they learn to reframe the sound. For example; as you listen to the sound, really listen, I wonder if a part of you can connect a sight or association to the sound. Perhaps a happy event or time in your childhood. A time when that sound could represent something special (i.e. the sound of a tea kettle in your grandmother's kitchen – this was an association emitted spontaneously by one particular client). Perhaps the sound can change as the heat is turned down ... lower and lower until it's gone and you sit and sip your tea peacefully, calm and relaxed.
- 3) Proprioceptive inattention: In this technique an analogy is drawn to the individual's natural tendency to focus on the sound as they would pain and to re-associate the sound as a bodily sound which they do not have to continually monitor. For example, our bodies make so many sounds. Sometimes they can be a signal that something is wrong, other times they are inconsequential and our minds learn to not pay attention to them. Since the moment you were born, perhaps even at a time before you can remember ... your unconscious mind was aware of your breathing and heartbeat, try and hear those sounds ... now find the part of you that allows you not to pay attention to them ... the part that lets you know it's okay not to listen ... to all those sounds. Try and connect that part of you to the sound you hear in your ears and turn it down so you don't have to pay attention to that either, (i.e. a control knob which can be set to listen or not, or a volume knob turned higher or lower). I wonder when you will no longer be aware of your heart beating ... yet your unconscious will keep you safe and comfortable.
- 4) External distraction/habituation: Another approach may include training patients in distraction techniques which incorporate external sounds into the distraction (i.e. riding on a train to a special place). Listen to the train, the rush of the air, now slow down or speed up the train. Notice how as you feel the train and observe the scenery you don't have to even listen to the sound of the air going by as it changes with the pace of the train. I wonder when you will no longer hear the air rushing by as you enjoy all the wonderful things you see and experience on the train ride. I wonder when you will reach your destination or what it will be like there when you have arrived ... and the train is no longer rushing to its destination. In a variation of this, Hallam (1989) suggests that "external images" during self-induced relaxation which are perceived as external attributions for the noise will reduce the patients sense of intrusion into their "personal space" (their heads). For example, imagine the throbbing you hear as the sound of the engines on a cruise ship and allow that sound to lull you to sleep as you relax.
- 5) Pain control techniques: Specific pain control techniques might include teaching patients to; trade off sound for another sound or employ a form of glove anesthesia (i.e. aural anesthesia) to imagine an hypnotically induced masker "being on and under their control." They can then imagine adjusting it to maximum comfort. The common factor in all of these approaches is to help the

patients develop through direct or indirect means a system of perceived controllability over the “noise” they are hearing.

A review of some of the hypnotic pain control literature may prove helpful in developing additional approaches (Alman and Lambrou, 1992; Burte and Burte, 1991; Edelson and Fitzpatrick, 1989, Guisepppe, Panerai and Villamira, 1989; Hilgard and LeBaron, 1984; Sacerdote, 1982).

### **Cognitive Restructuring**

At the second level of intervention, hypnotherapy can be utilized to help the patients explore their beliefs and attitudes about their tinnitus. This may include issues of primary concern ranging from fears that they are going crazy to fears of debilitation, unemployment and future ruin. Additionally, many patients report chronic fatigue from sleep deprivation; loss of concentration and effectiveness. Attitudes of personal self worth, self-esteem and social relations may be extremely negatively loaded. Many of these patients engage in what Araoz (1981, 1985) has termed Negative Self Hypnosis (NSH). The focus of their thoughts about the tinnitus are of helplessness to eliminate it and hopelessness about the eventual outcomes.

The role of therapy at this level is to help the patients express and understand their NSH and develop the positive self experiences necessary for developing coping, belief and attitude change. To accomplish this, helping patients develop “somatic bridges” without assuming directionality (i.e. psychosomatic vs. somatopsychic) is necessary (Araoz, 1983). Some of the specific techniques employed might also include: Self visualization – Ask the patient to see themselves “as they seem right now: and then to see how they “would be” if they were able to not listen to the tinnitus. From there, this “inner helper” can offer reassurance and alternative emotional states.

In approaching the tinnitus patient, it seems especially helpful if we start from the viewpoint that they are frequently in pain. And as in the case of pain control, it is the patient’s “subjective” experiences and cognitive “meanings” associated with the pain which are of primary concern. Toward this end the role of the hypnotherapist is to guide the tinnitus patient toward initially understanding what the tinnitus represents to them and then to an understanding that there are alternatives. Such patients typically see themselves as “at the end of their rope” or at “wit’s end.”

It becomes important to follow their lead and to work within the modality of their experiences (i.e. visual, auditory, kinesthetic, proprioceptive, olfactory or gustatory) (Araoz, 1985; Burte and Araoz, 1987). For example, if they use an analogy such as just mentioned, ask them to explore the rope, how long or strong it is, how the rope feels or how far the drop is, further encouraging them to experience it in a range of modalities as a means of developing other resources for change alter. Hypnosis is an ideal “subjective experience” when utilized in this way to help the patient alter their “subjective experience” and meanings associated with their tinnitus.

Marks et al (1985), utilizing an initial trance induction had the patient describe the noise (i.e. gas escaping a cylinder) and then utilizing the patient's imagery generate a corrected image, (i.e. putting a new improved leak proof valve on the cylinder).

Jakes et al (1986) conclude that in an examination of distraction relaxation and reassurance, helping the patient develop "coping beliefs and attitudes" is more important than teaching "coping skills."

As Hallam & Jakes (1984) have suggested, emotional distress may be associated with the "meaning" (i.e. a signal of serious illness, worries about a breakdown, source of disability) the noise acquires for the individual. Hypnotic imagery to explore the negative images the patient generates (i.e. themes of death, paralysis, disability) and offering cognitive alternatives through the patient's chosen sensory modality has proved to be successful. Relaxation as a cognitive coping technique to the panic associated with these "meanings" has also proven helpful in reducing the distress as part of the cognitive restructuring. MacLeod-Morgan et al (1982) used the noise as a cue for learned relaxation and associated it with an imagined control knob which the patient could turn down while immersed in a positive imagined setting (i.e. a tea garden).

Marlowe (1973) utilized direct suggestion and post-hypnotic suggestion instructing the patient that as he focused on the noise it would diminish and as it did, he would go deeper and deeper relaxed. The patient would incur from this reduced fears of fatigue associated with insomnia and increased feelings of controllability.

In general, it has been suggested that beliefs about controllability of noise can have a direct positive influence upon the emotional impact of that noise and upon mediating behaviors (Glass & Singer, 1972). This in fact may be one reason why maskers which reproduce the noise associated with tinnitus but are under the patient's control prove somewhat effective (Hallam, 1989). Another more structured approach may be that suggested by Golden (1987). Utilizing Rational Emotive Therapy as part of an hypnotic matrix to uncover irrational beliefs, self-downing and awfulizing, Golden from within the matrix offers disputes and alternative rational belief systems, as part of a cognitive restructuring (i.e. it is not terrible and awful, merely inconvenient) or less elegantly addressing the specific self-defeating statements and offering positive therapeutic suggestions (i.e. if I fail as a musician I am not a failure).

### **Family Support**

The third level of intervention which is all too often neglected in the tinnitus patient is the family. Often times much of the distress associated with tinnitus comes from a) the patient's feeling that he/she is failing their family (i.e. lack of sexual drive, chronic fatigue, irritability and unemployment) and b) the family's lack of acceptance of the degree of distress the patient may be experiencing. Although cognitive explanations may prove helpful, utilizing hypnotic family interventions with a few

external elements may prove fruitful where family members are resistant to accepting the patient's distress (Negley-Parker and Araoz, 1986).

As with the chronic pain patient, the tinnitus patients often feel guilty about the impact their disability is having upon their loved ones. In turn family members may not understand why certain activities have to be avoided. Families may have to deal with financial hardship from loss of wages and medical expense. In severe cases social and work withdrawal may be so significant that families go into crisis. Frequently non-tinnitus patients have difficulty accepting that a "little noise in daddy's ear" should mean such hardship.

In one technique, utilizing a family hypnotherapy approach, the family members are placed in a trance and a noise machine which has been adjusted by the patient to approximate the patient's frequency is turned on. The family members are instructed to listen to the sound and as they listen they are led through a variety of daily life experiences, they are encouraged to feel how the sound affects their bodies and concentration. Time progression carries them through days, weeks and years of experiencing the sound. They are then encouraged to discuss the experience as a family and how they experience their disabled family member. Each member is asked to speak openly about it so that it is understood to be a real part of family life to be dealt with in a manner similar to any other medical condition.

Family members are then encouraged to find ways of reframing the identified member and focus on their assets and abilities rather than their limitations. They are encouraged to imagine the ideal family, even as the background noise continues. The role of the family is in many cases critical in bringing about cognitive and subjective changes in the level of distress incurred from the tinnitus. Hypnotically reframing the identified patient within the family framework has been shown to be successful in reports of work with chronically ill children (Negley-Parker and Araoz, 1986; Burte, 1991).

In some cases family members are taught ways to help the tinnitus patients with heterohypnotic techniques. Not only does this help the family as a whole, (i.e. perhaps by reducing their feelings of helplessness) but the patient often reports significant relief at being understood. In some cases tinnitus patients have reported that family hypnotherapy has actually helped reduce the severity of the volume, pitch or frequency of the tinnitus. This may relate to a reduction in stress levels or the psychogenic causes such as being heard and acknowledged. IN one such case a patient who had totally disabled herself out of a fear of performing adequately when the tinnitus was more severe was able to within three visits of family hypnotherapy return to a part time job and become more involved in family affairs (Burte, 1993).

To help family members further understand the subjective experience of the tinnitus "sufferer." It may be helpful to have each family member hypnotically recall a chronic pain (i.e. back pain, headache, tooth ache) and they try and "listen" to it and to create a sound for it. Have them imagine always having that sound with them.

Further, asking them to try and develop “meanings” or “consequences” to that discomfort also promotes identification with and understanding of the patient’s distress.

Aroaz & Negley-Parker (1988) suggest that families should be encouraged in trance to image the ideal family and to try this model by going through daily activities and interactions to see where the family functions can be improved. They offer five master techniques of family hypnotherapy. These techniques may prove equally helpful in the family therapy of the “tinnitus family.” They include the use of mental rehearsal, past accomplishments, actuation of personality parts, positive outlook and inner wisdom. Through the utilization of right hemispheric functions, the family develops alternatives and perceptions of controllability of the impact of the tinnitus upon them.

Often the tinnitus sufferers find themselves trapped in a rigid mindset which requires them to behave or respond in a prescribed manner which precludes the opportunity to consider breaking self-imposed rules or redefining social/family expectation.

Riterman (1983) in describing one such case of a tinnitus patient suggests that these processes are “unconscious principles” which may guide the individual in patterns of behavior and thought which prevent them from asking for or receiving help (i.e. “I must not ask for help,” “If my wife and son talk too low to hear, that is the way things are”).

### **Physiological/Structural Change**

Another new and interesting level of intervention and one in which to date a review of the literature has revealed no past or current study, is the use of hypnosis applied directly to creating physiological changes in the structures which may be contributing to the tinnitus. The closest to this has been the application of hypnosis to treating musculo-skeletal aspects to TMJ (Arlen, 1985). However current medical research suggests that structural and vascular abnormalities, carotid pulse and the jugular bulb location in the case of pulsatile tinnitus (Adler and Ropper, 1986; Mosak, 1985) as well as inner ear hair cell regeneration may one day lead to the reduction or elimination of tinnitus in certain cases, possible through improved hearing (Vernon, 1993). Hypnosis has been utilized for tumor reduction (via reducing blood flow to tumors); reduced scarring in burn victims (via reduced Bradykinin production); changing blood flow in dental procedures and anesthesia to mention but a few of its applications. It would seem a fruitful course that armed with a clear understanding of a physiological/structural cause for a patient’s tinnitus, hypnotic intervention may one day play an active role in physiological or structural change.

## **SUMMARY**

Hypnosis is perhaps best viewed as not a singular intervention but rather part of a matrix in which various hypnotic interventions interweave with the various levels of personal experience of the tinnitus for the patient. For this reason the patient in hypnotic intervention is encouraged to experience their tinnitus as “they perceive it” from as symptomological perspective of pitch, and loudness from an understanding of what “they believe” about the condition, it’s “meaning” in their life, even its message as well as how it reaches beyond their personal life and touches others, and finally how they envision (realistic or not) the origin and conduction of the sound.

The hypnotherapist should be prepared to engage the patient in all their negative self hypnotic experiences with an openness to understanding the scope of their experience and not try to merely “eliminate the ringing” in their ear. Even if we cannot fully or always offer the patient a cure, we can help them learn they do not have to “suffer” of “live with” their tinnitus, but rather can develop means to remove its negative impact upon their conscious daily lives.