

## Chapter 22

# Hypnotic Amplification–Attenuation Technique for Tinnitus Management

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This is a case that illustrates two important points for this volume. The first is that it is an example of what we have traditionally thought of as collaboration, that is, a referral for care then return to primary care. The second is that it demonstrates the use of a set of empirically validated techniques useful in many aspects of medicine but infrequently used. In this case the application is tinnitus, a vexing difficult-to-treat medical problem.

Tinnitus is the diagnostic term for the perception of sound in one or both ears in the absence of veridical external sound. It is typically described by patients as “ringing in the ears,” although some people report hissing, roaring, whistling, chirping, or clicking. Many people will experience it temporarily or intermittently. Others report experiencing tinnitus 24 h a day, 7 days a week. Its perceived volume can range from subtle to painfully shattering.

The American Tinnitus Association<sup>1</sup> estimates that over 50 million Americans experience tinnitus to some degree. Of these, about 12 million cases are severe enough to require medical and/or psychological interventions. About two million patients are so seriously debilitated that they cannot function as a normal person would.

Hypnosis has demonstrated effectiveness for numerous psychologically and medically related disorders. Despite the prevalence of tinnitus, few systematic investigations or clinical case studies of the effects of hypnosis in the treatment of this disorder have been reported. Most studies reported rely on scripted or audio-recorded hypnotic inductions which are known to be less effective than those tailored to the individual patient.<sup>2</sup> All but one of the studies reviewed failed to measure hypnotizability by an instrument with appropriate psychometric properties (e.g., the Stanford Scales). Thus, it is impossible to draw any conclusion about the specificity of hypnosis with regard to treatment outcomes.

Brattberg<sup>3</sup> employed hypnosis to treat 32 patients diagnosed with and suffering from tinnitus for an average of 5 years. All reported no response or relief from previous medical interventions. The hypnotic suggestion employed was that they would “no longer be troubled by the noise.” The first follow-up occurred between 2 months and 2 years. Twenty-two patients (69%) reported they felt better and three of the 22 reported they were “completely cured.” At a second follow-up, 10.5 months to 2.5 years later, for those who reported improvement at the first follow-up, relief from tinnitus was generally maintained. However, the criteria for improvement were not specified.

Harasymczuk<sup>4</sup> reported a case study of the treatment of persistent tinnitus employing hypnosis as an adjunct to tinnitus retraining therapy. The subject was 60-year-old married woman who had experienced bilateral tinnitus. Initially she reported being aware of it 80% of the time and rated it as 9 out of 10, with 10 being the most severe ever experienced. Following 7 months of tinnitus retraining therapy, she reported experiencing tinnitus 20% of the time and rated it as 6 out of 10. Hypnotizability was measured by the Stanford Hypnotic Clinical Scale<sup>5</sup> (SHCS) and revealed above-average capacity with a score of 4 out of a possible 5. At a 1 month follow-up, she reported awareness of tinnitus 5% of the time and severity was reported as 3 out of 10. The client also reported that she no longer feared her tinnitus.

Attias et al.<sup>6</sup> compared self-hypnosis with two control conditions: (1) presentation of a brief auditory stimulus or (2) a waiting list control in the treatment of tinnitus with young subjects. Following each of the four sessions, participants were asked to report if the tinnitus was not affected, was clearly reduced, or disappeared. Seventy-three percent of the self-hypnosis participants reported total disappearance of the tinnitus during the treatment sessions in contrast to 24% of the participants in the brief auditory stimulus group. Only the self-hypnosis group demonstrated a significant improvement at 1 week and 2 months on the Tellegen Absorption Questionnaire (TAQ) symptom profiles.

Mason and Rogerson<sup>7</sup> employed three sessions of “client centered hypnotherapy” with 41 patients with tinnitus. In the first session, participants “were encouraged to imagine a miniature of themselves wandering about their minds looking for the source of the tinnitus and to use whatever auditory and visual imagery they found most helpful to improve the full-sized person’s perception of the tinnitus.” Self hypnosis was also taught. Relaxation was taught during the next two 0.5-h sessions. The authors claimed that 28 (68%) of the participants showed some benefit.

Erika Fromm<sup>8(p6)</sup>, as clinical editor of the *International Journal of Clinical and Experimental Hypnosis*, explained that “It is important to state in clear cut, concrete form what was actually done so that others can replicate, test, or apply the procedure to their own patients”. To be useful to others in practice and to contribute to science, clinical case studies must include (1) a literature survey; (2) a clinical diagnosis; (3) hypnotizability testing data; (4) the patient’s history, including previous treatment and the referral source; (5) details of the hypnotic induction procedures used, including specific suggestions given; and (6) follow-up data on treatment outcomes, including unsuccessful as well successfully treated cases. The present case study is intended to meet these criteria with procedural detail sufficient for publication.

## The Patient

This patient was a 43-year-old married man who was employed as a commercial artist. He had been treated for depression with imipramine (Tofranil) during his senior year in college 20 years earlier. He became depressed when his long-term girlfriend, originally very dependent on him, became more independent and ended

the relationship. He had thrived on that dependence and the emotional support it had given him.

The patient's primary antihistaminic adverse side effect from the imipramine was weight gain<sup>9</sup> over the course of his 9–12 months of medication. He also experienced tinnitus in the form of ringing in both ears, which was recalled as “there but not really a worry then.” The weight gain was reversed after cessation of treatment, but the tinnitus persisted “on and off over the years.” Only recently had his tinnitus escalated to impairing his work schedule. In the past year alone, his symptoms had bothered him enough to use 1 year's worth of sick days in a period of 4 months. After repeated visits to his primary care physician, he experienced little relief from trials on alprazolam (Xanax) or from a self-hypnosis audio recording based on the procedure of Attias et al.<sup>10</sup> The physician, who had collaborated with our practice previously, discontinued the patient's medication and self-hypnosis assignment. He referred him to us for hypnotherapy while still seeing the patient for medical evaluations, including the ruling out of Meniere's disease.

## **Treatment with Hypnotherapy**

Hypnotherapy, ego-state therapy, and hypnoanalysis are primary emphases in our independent practices. We are both licensed psychologists using hypnosis for over 25 years. One is board-certified (American Board of Professional Psychology). Patients come to us for hypnotherapeutic interventions from throughout the USA. We both are faculty at an American Psychological Association accredited Ph.D. program at a university located in eastern Washington state. We have collaborative relationships with a number of medical practice groups nationally.

During his first visit, the patient met with us to provide a complete medical and psychological history. We debunked myths about hypnosis beyond the debunking already begun by his primary care physician. During this initial visit, the patient noted that he had been experiencing “almost constant” bilateral tinnitus which prevented him from getting to sleep, unless exhausted. He described periods of severe ringing for much of the day which he rated as 8 out of 10. He also described “brief but almost daily periods of intense (which he rated 10) “painful” tinnitus which impaired his concentration and coincided with anxiety about his boss's evaluations of his commercial art designs. He reported that his tinnitus “pain” had lasted from less than 1 min to nearly 1 h at a time over the previous month and noted that the self-hypnosis had done “nothing” to help. He had little expectation for any positive outcome from us but came because his primary physician really felt we “could do something” (with hypnosis) for him. He felt that he “would just give it a try” considering the debilitating problems the tinnitus was causing him with anxious mood and impaired relationships with family and friends.

We had concerns about the potential underlying psychodynamics given the association of the initial tinnitus with the break up of a 4-year relationship when his college girlfriend became more independent. His current marriage involved facing

similar issues relating to his wife's recently expressed wishes for greater independence. The tinnitus and resultant days missed from work served to awaken caring for him, as she had done in years past, including canceling her work and social plans. Thus, the patient's symptoms had helped to reestablish the control it gave him over his wife's behavior. However, given the current severity of the patient's symptoms, we agreed to work directly and immediately with suggestive hypnosis.<sup>11</sup> Moreover, at this time he was receptive to new messages from us and the collaborating physician about the importance of managing, rather than "curing," the tinnitus. Nonetheless, our expectations for a successful outcome were low (see Benham et al.<sup>12</sup> for the empirical finding showing the comparatively minor role expectation plays in hypnotic treatment outcomes).

## Procedure

Prior to using hypnosis in his second session, conducted later that same day, he was familiarized with hypnotic-like experiences to reinforce the debunking of myths about hypnosis and ameliorate potential underlying fears about the modality. The intention was also to build rapport and trust. These informal clinical tests are generally useful in screening suitable subjects for hypnosis practice, and evaluating patients for hypnotherapy. The tests not only serve to screen and evaluate, but their very administration can establish a positive psychological set and make later induction of hypnosis easier. For this patient, rapport and responsiveness was quickly established so we used only the (1) Chevreul's pendulum, (2) arm drop, and (3) hand clasp tests before administering the SHCS.<sup>5</sup>

Chevreul's pendulum test helps to reveal anxieties about hypnosis denied or left unstated in the initial interview. It is a nonthreatening demonstration of the effect of how the patient's thinking about something can affect his or her behavior without the formality of the initial hypnotic induction. The patient was seated at the table and given instructions as follows.

"Put your elbow on the desk and hold this string between your fingers so that the ball just misses touching the desk." The suggestions were continued: "Stare at the weight and concentrate all your attention on it. As you look at it you will notice that it has a tendency to move." Movements, even though initially slight, appeared quickly. Once stabilized, he was told, "You notice that the weight is beginning to swing back and forth, back and forth, back and forth." (This movement was continued until it was clear to the patient that this movement was indeed taking place.) Then a change in the direction of the movement was suggested, "Now, as you watch this weight, you will notice that the direction of movement begins to change...."

He was then asked, "Were you making the weight perform those movements or were they just happening?" "Were you aware of any movements on your own part that caused it to swing back and forth, then up and down?"

As is usually the case, he stated that he was not aware of any voluntary action on his part causing these movements to occur. He was pleasantly surprised, thus

helping to create an accepting attitude toward future positive responses. Sometimes patients mention that they tried consciously to resist the movements, but that they occurred in spite of their efforts.

Next, the arm drop test was administered. The patient was told, “I would like to test your reflexes. Would you please sit up straight in your chair and extend both arms straight out in front of you, palms down? Don’t let them touch each other. That’s right. Now close your eyes and imagine that I am giving you a bucket to hold in your right (or left) hand. Please close your fingers around the handle of the bucket.” (Note that the imagined, “bucket” is now treated by the hypnotist as a reality by asking the patient to close his or her fingers around the handle.) “Now I want you to visualize what it would be like if I were standing in front of you pouring water into your bucket from a pail of water which I am holding. Your bucket can hold over 2 gallons (81) and I am now pouring 1 quart (nearly 1 l) into the bucket. Observe the stream of water flowing into your bucket. Now, I’m pouring more and more water into your bucket. There are now 2 quarts in it, and you can feel the increase in weight. Three quarts. More and more water going into it. Four quarts, now 5 quarts, and your bucket is half filled. You are becoming increasingly aware that more and more water is being poured into your bucket. I shall continue to pour water into it. Six quarts, 7 quarts, 8 quarts, and the bucket is beginning to fill up. Notice how heavy 2 gallons of water is? Now 9 quarts and the bucket is almost full, almost full. There now. I shall pour the tenth quart into it, and the bucket is full right up to the brim. Two and a half gallons of water and the bucket is completely full.”

The following indicated the probability of hypnotic responsiveness:

1. The hand gradually lowered while suggesting that more quarts were being poured into “the bucket.” The degree of lowering of the arm is significantly related to hypnotizability. In this case the patient’s hand went all the way down until it rested on his lap. Thus, it was probable that he would show an above-average response to hypnosis.
2. If during the period of the test his hand lowered somewhat, but did not go all the way down, the inference would have been that he is responsive to hypnotic suggestions, but may either be resistant, a slow responder, or capable of reaching only a light or medium trance, not a deep one. However, in our experience, the individual who responds in this way may eventually become a very good hypnotic subject after his or her initial doubts and anxieties have been resolved and a better relationship has been established with the therapist. The slowness of response may only be his or her way of saying, “I don’t completely trust you yet, and this situation is disturbing to me.” The extent of one’s response is related to his or her hypnotizability at this point in time. Thus, if the right hand is some six or more inches below the left at the end of the test, then he or she shows a substantial degree of hypnotizability even if it has not come all the way down. If it has slowly moved downward, for at least three inches, this shows a positive response even if it is not strong. Such a subject indicates to their therapist that he or she is at least able to become hypnotically involved to some degree and with proper handling may be able to achieve an even more significant response level. Occasionally,

a participant's right hand will not drop downward at all, but he or she will manifest a considerable struggle to keep it level with the left one. There may even be slight tendencies for it to drop, followed by slight corrective movements designed to pull it up, level with the left hand again. This might be interpreted that the patient is responsive to hypnosis, but doesn't think that they should be, that they are fearful of "losing control," or the situation manifests into competition with the psychologist or one in which they must demonstrate their strong "will power." When this occurs, Barabasz and Watkins (2005) recommend that the therapist should not let it deteriorate into a struggle for "control." The patient might be approached as follows: "I noticed that you seemed to have some difficulty. It was as if the arm felt like dropping down as the bucket became heavier, but you did not want it to do so, and wished to show that you were capable of holding the bucket. You obviously are quite capable of resisting it, like I said when we were talking about what hypnosis is and I mentioned that its you, its not the hypnotist, you are always ultimately in control. But it might be interesting to see what would happen if you did not fight such tendencies; simply let happen whatever occurs naturally, don't make it happen, just let's see if it happens by itself, without interfering."

3. Perhaps the response which is most related to lack of hypnotic talent is no response whatsoever. The hand does not go down; it does not rise, and its position parallel to the other hand seems to be maintained without any effort. In this case, it is often useful to ask the patient about his or her response and their feelings concerning it with such questions as: "Could you visualize the bucket when I described it to you?" "Could you experience the water being poured into it?" Often the non-responsive patient will say, "I was not able to imagine the bucket" or "I could see the bucket, but I didn't feel as if any water was being poured into it." Further questioning might be continued as follows: "Did the bucket feel heavy?" "Did you notice any difference in the feel of your two arms?" "Do your arms feel tired now?" (This often elicits a positive response, even in the resistant subject. Holding one's arms out for a minute or more naturally creates physiological fatigue. The normal person admits it. A complete denial of feeling any fatigue suggests an individual who is very fearful of hypnosis and is determined to show that he or she can be "the Rock of Gibraltar.") If the patient admits that their arms feel tired, they may then be asked: "Which arm feels the most tired?" The response that they both feel equally tired usually indicates considerable resistance to hypnosis, either because the individual does not possess any hypnotic talent or because of fear and a strong determination not to be "controlled." When there has been no overt movement of the hand downward, but the patient states that the right arm feels more tired than the left one, he or she is showing at least to some extent, they are capable of responding, but that the influence is at a perceptual level, not at the motor level. With such a patient, the possibility of using hypnotherapy is still open.

The hand clasp test was the final informal prehypnosis test we used with this patient. The patient was instructed as follows: "Please clasp your hands tightly in front of you and look carefully at my clasped hands at the same time." The therapist demonstrated by interlacing his own fingers so that the hands gripped each other

very tightly. The suggestions to the patient were then given, both verbally by the commands of the therapist and visually, as the focus is on the clasped hands of the therapist, which were clasping tighter and tighter. “Now make those hands tighter and tighter. Imagine they are like fingers of steel encased in a block of concrete, which is shrinking or a vice that is being screwed down and locked. The hands get tighter and tighter and tighter.” The voice of the therapist rose and became ever stronger and firmer. At the same time, his own fingers dug into each other so that the muscles and blood vessels stood out. “Notice how the colors change in those fingers.” (Note the term “those fingers” rather than “your fingers” is used to facilitate dissociation of the hands from the subject as if acting on their own involuntarily.)

“That’s it, tighter, tighter, tighter. In fact, so tight that it doesn’t seem as if they could come apart. It seems as if the more you try to take them apart, the tighter they stick together. The more you try to take them apart, the tighter they stick. They are sticking so tightly they will not come apart. They will not come apart. They are tightly stuck together. Try to pull them apart. Try to pull them apart. You see, they are so tightly stuck together they cannot come apart. The harder you try to pull them apart, the tighter they stick together.” etc.

At this point, a challenge had been issued, and it was found he was unable to pull his hands apart, suggesting to us that a genuine hypnotic response may have been elicited. Then, within no more than 3–5 s, the first author released his own hands and placed them around the patient’s clasped hands moving them up and down gently and reassuringly while saying, “Your hands are relaxing, they are normal and can now come apart.” The patient was gently assisted in performing the release.

The amount of hypnotic talent of any subject may be inferred by the degree of difficulty he or she experiences in pulling the hands apart at the time of the challenge. In this test we are, of course, enlisting normal physiological function on our side. By “freezing” the tightly clasped hands together, we make it much more difficult physically to draw them apart.

Upon completion of the abovementioned tests, the SHCS<sup>5</sup> was administered in less than 20 min. The patient scored four out of the five possible points, failing only an item that can generate amnesia. He reported a cessation of the tinnitus for the latter part of the test with no perceptible change from the initial 7 out of 10 rating of the ringing after the relaxation induction phase. He was very pleased with his experiences with the tests and felt “more confident that this might help after all.” Given the patient’s high level of tinnitus perception and our wish to capitalize on the report and trust established thus far the third session was scheduled on the following day.

In this third session we planned to use the relaxation induction from the Stanford SHCS because of the patient’s positive responses to the test items that followed and because the induction emphasizes the achievement of hypnotic depth. Upon completion of the induction, the patient was asked to indicate the intensity of the tinnitus perception on the 1–10 scale we had previously used with him. He reported “it’s about a 7.” Given that the patient reported tinnitus at the end of the hypnotic induction, the first author utilized this as an opportunity to demonstrate how he could

control its perception by first amplifying the tinnitus and then reducing it. With use of ‘a concept described by Barabasz and Wakins,<sup>11</sup> the patient was instructed to “focus on the ringing and notice it is getting louder and louder, worse and worse, louder and louder still, the intensity is going higher and higher, and you can hardly stand it.” Within less than 1 min he began to grimace, as if in pain. He was then asked “to raise a finger if the ringing was much worse now than before.” He raised several fingers on his left hand almost instantly and said “its damn near a 10, I can’t stand it, it really hurts, it really hurts.” He was then told that since “you know all hypnosis is really self-hypnosis and *you* turned up the ringing, you can turn it down, go ahead and slowly turn it down, go ahead, its getting less and less, you are making it softer and softer, until it’s just still there but very tolerable.” His facial muscles immediately began to relax, his previously stiffened body visibly relaxed, and he slumped in the chair as if he had returned from running a race. “There that’s better, not bad really now.” When asked to rate the tinnitus, he said, without hesitation, “it’s a 3 at most—not that bad at all now.” Thus, the patient learned hypnosis offers new self-control where he never had it before. If you can make it worse *you* can make it better.

While he was still in hypnosis, he was then told, “It can only get less and less intense, it’s like a of July 4 rocket fired off that, of course, has to run out of fuel. It was so bright and intense but it’s out of fuel and beginning to arc, coming back down. It’s burned out, the rocket engine noise is gone. The only annoying sound is just the rush of the wind whistling by. But now it is on the outside, not the inside of your head” (this is a key point). “So now if you’re ready and want even less noise just imagine stuffing in foam earplugs. There, the wind noise gets less and less as the plugs expand, less and less, quieter still, almost quiet completely. Sure enough, you can still hear something out there but it’s on the outside now.”

The emphasis on attenuation rather than elimination is consistent with the EEG event related potential underpinnings of hypnotic states.<sup>13–17</sup> Simultaneously, attenuation allows the symptom to still function for the patient if needed for an underlying psychodynamic reason not addressed at this level of hypnotherapeutic intervention. This would allow sufficient reconstruction of the patient’s personality with the goal of eliminating the cause of the symptom. Thus, we ensure to the best of our ability that it will not reoccur at some future date which is common for therapies limited to cognitive behavioral interventions. However, in the present case the patient was able to greatly improve his functioning (severity reduced to 2–3 out of 10 and frequency decreased by “over half the time it used to be”) again over the course of four more sessions using the same protocol during the following week. The lowest long-term success rates with suggestive hypnosis are obtained when attempts are made to transfer responsibility for treatment to the patient prematurely via instructions to use self-hypnosis,<sup>11</sup> as was typically done in previous research on hypnosis for tinnitus. Therefore, we took and maintained responsibility for tinnitus attenuation until the patient spontaneously volunteered he was “Really doing it on my own now.” This occurred during the seventh session, less than 2 weeks after the initial session. When he felt ready to use hypnosis on his own. the final hypnotic suggestion of “eventually when you’re ready, the slight remaining sound

can burn out altogether” was made. The hypnotherapeutic strategies of maintaining therapist responsibility for the hypnotic intervention until the patient made the decision to take over responsibility combined with the open-ended final hypnotic suggestion may have facilitated the success of the treatment. In our opinion, these therapeutic features may have helped make up for our lack of direct attention to the dynamic issues relating to exacerbation of the patient’s symptoms.

The patient was seen for two follow-up sessions, the first of which was about 2 weeks after the seventh treatment session and the second was 2 months after that. At both meetings he reported not missing any further workdays and tinnitus ratings of “around no more than 3 out of 10 most of the time.”

Additional monthly follow-ups were conducted by telephone over the next year and quarterly over the following year. Consistent with reports received from continued collaboration with the patient’s primary care physician, it was confirmed that tinnitus was no longer a persistent or debilitating perception for the patient. Furthermore, there were no reported symptom substitutions and counseling about “home problems” was continuing with better mutual understandings.

This case illustrates that a persistent, intruding medical problem that has generated multiple medical treatment visits with no resolution was resolved in a short period of time by a psychological, hypnotic intervention that is more than a simple instruction to relax. Follow-up suggests that the effects persisted, and medical consultation had returned to a diminished level with no further episodes of acute tinnitus related complaints. It is consistent with the Three Worlds conceptualization of responding to the clinical and economic implications of a vexing case whose resolution was both clinically and administratively manageable.

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