

# Letter to the Editor

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## TINNITUS AND SUICIDE

### To the Editor:

In "A Search for Evidence of a Direct Relationship between Tinnitus and Suicide" by Jacobson and McCaslin (*Journal of the American Academy of Audiology* 2001;12:493–496), the authors state that the purpose of their investigation was to determine whether there exists in the scientific literature support for a cause and effect relationship between tinnitus and suicide.

I would like to emphasize what we stated in our two articles on this subject (Lewis et al, 1992, 1994), that what determines whether a person commits suicide is complex and unlikely to be determined by one causal factor alone. Rather, it is influenced by the interaction of the person's mental state at the time of suicide with social and demographic factors, as well as, in certain individuals, their state of physical health.

Jacobson and McCaslin intimate that we are proposing a direct link between suicide and tinnitus. They quote us out of context, stating that "the practicing audiologist and otologist must be aware of the possible increased risk of suicide amongst tinnitus sufferers."

We made this statement in the setting of having found other potential risk factors in tinnitus suicide, and in our extended 1994 series, we quote a table of risk factors that included mental illness. Further, we offered a discussion on the interaction between tinnitus and these other risk factors in leading to suicide.

Having made this basic point, I feel that I must also comment on other inaccurate statements that Jacobson and McCaslin make in reviewing our two articles.

For example, in our 1994 article, we incorporated 28 completed suicides, not 27. The incidence rate of suicide among the tinnitus population was calculated over a 5-year period that the tinnitus clinic had running, not 1 year, as Jacobson and McCaslin debate. Again, of the 28 patients reported on in our 1994 study, only 5 were reported to have a history of depression before the tinnitus onset, and at the time of death, 18 were thought to be depressed. This

higher rate of depression at the time of death to us implied a complex interaction between tinnitus and depression.

We would accept that people suffering with depression are less resilient and able to cope with their tinnitus, but this cannot be the only explanation for the possible high incidence of suicide in a tinnitus population.

Many more tinnitus sufferers were reported depressed at the time of death, implying that distressing tinnitus may have precipitated their depression, which then may have acted deleteriously with their coping mechanisms.

Jacobson and McCaslin quote two other articles in their study. These were case reports of patients who suffered tinnitus but did not commit suicide, and one wonders, therefore, what strict relevance they have in a review of tinnitus-related suicides. As far as I am aware, our two articles remain the only studies on this important topic.

Jacobson and McCaslin's article adds little further to our understanding of the relationship between tinnitus and suicide. If anything, they endeavor to play down what we believe to be a significant association, as well as the awareness a practicing clinician in the field needs to have.

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## REFERENCES

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### The Authors' Reply

We are grateful for the opportunity to respond to the letter by Dr. Lewis.

Dr. Lewis states that we have intimated that he and his colleagues have proposed a direct link between tinnitus and suicide (Lewis et al, 1992, 1994). However, the conclusions of the 1994 report state that "The high number of suicides occurring within a relatively short time of tinnitus onset would implicate tinnitus, or tin-

nitus onset as a significant factor in their suicides." (p. 52) and the "...high incidence of tinnitus in our own clinic...suggests that tinnitus sufferers are a high risk group." (p. 53).

We admit that they also state that "The effect of tinnitus, therefore, may be considered as non-specific, and thought of in the same way as other stressors, such as unemployment, in increasing suicide risk." (p. 53).

Dr. Lewis has stated that we errantly reported that their sample consisted of 27 patients. In fact, we stated clearly in our article that 27 of 28 patients committed suicide (see Table 1 in Jacobson and McCaslin, 2002); however, one of the patients (i.e., reported by Lewis and colleagues, 1992, and included in the Lewis and colleagues, 1994 report) was strangled by his son and thus did not constitute a suicide. Additionally, by the authors' report, these cases often were not well documented. Evidence in support of these comments is the following statement by the authors (Lewis et al, 1994):

We received reports of cases from 17 practitioners, giving us information on 24 tinnitus sufferers who had committed suicide. *Not all the replies were fully completed, presumably reflecting the incompleteness of the original record, or the memory of the respondent* [our italics added for emphasis]. However, only one reply was so incomplete that it could not be used. Including our five local patients, this reached a total of 28 cases to be included in our series... (p. 51).

We believed the five patients the authors referred to above were five of six patients known to the authors who were reported on by Lewis and colleagues (1992), one of whom was murdered by his son.

Dr. Lewis has stated that the incidence rate of suicide in tinnitus patients was calculated over a 5-year period (i.e., not 1 year as we reported). Nowhere in the Lewis and colleagues (1994) article can we find where this data collection interval is stated explicitly. Instead, it is stated that

During the period from March 1990 to April 1991, there were four deaths from suicide amongst tinnitus sufferers attending the Welsh Hearing Institute in Cardiff (p. 50).

Later in that same section it is stated that

The number of patients in this original report was small, and it was difficult to arrive at firm conclusions, so we felt it imper-

ative to collect data from a larger series of tinnitus sufferers (p. 50).

Since the patients from the original report by Lewis and colleagues (1992) were included in the Lewis and colleagues (1994) paper, we assumed that the data from other practitioners were collected over the same interval. Dr. Lewis states that this was not the case, and we stand corrected. This new information would affect calculations of incidence of suicide in tinnitus patients.

We agree with the assertion by Dr. Lewis that there exists a "...complex interaction between tinnitus and depression." However, validation of such a statement would require a population-based study instead of their limited method of data acquisition (i.e., data reported by the authors were only from those practitioners surveyed who provided data). The authors present no convincing evidence that these suicides did not occur as a result of depression alone. In fact, there was a lack of documentation for many of the patients included in the article by Lewis and colleagues (1994). For example, in their article they state at various points that:

At the time of death, 18 were thought to be depressed—of these 10 had been diagnosed as such by a psychiatrist, *the remainder reported to be depressed, either by their family or by the family physician* [our italics]. There was no information as to how many were receiving treatment for their depressive illness (p. 51).

Accordingly, it appears that 8 of 18 patients did not carry a clear diagnosis of depression. It is noteworthy that it has been estimated that up to 15 percent of patients with severe major depressive disorder commit suicide. Additionally, the existing data suggest that there is a four times increase in suicide rates among persons over age 55 years who have a major depressive disorder (*Diagnostic and Statistical Manual of Mental Disorders*, 4th ed. [DSM-IV]). It has been reported that 10 percent of patients with schizophrenia will commit suicide (DSM-IV). These epidemiologic data must be taken into consideration when evaluating the relationship between tinnitus and suicide.

Dr. Lewis also has questioned our decision to include in our report two patients who attempted suicide. We reported these parasuicides for the sake of being comprehensive in our review of tinnitus and suicide.

A later report, unknown to us at the time of our writing, was brought to our attention by Dr. S. D. G. Stephens. In this report, Lewis and Stephens (1995) evaluated the prevalence of tinnitus patients and tinnitus-free patients admitted to Regional Poisons Unit for self-poisoning (self-poisoning was the method of suicide for 29% of those where the method was known in the 1994 report). They evaluated data from 184 patients (27 of whom repeated their suicide attempt). The authors reported a prevalence of tinnitus in 1.6 percent of the parasuicides. However, they reported the prevalence of tinnitus in the general population to be 7 percent. Accordingly, tinnitus in this particular sample of parasuicides was under-represented, compared with the incidence of tinnitus in the general population, by a factor of more than four. These data appear to argue against tinnitus playing a significant role as a trigger for suicide for this subgroup of parasuicides.

We do not dispute the contention that depression is seen in tinnitus patients presenting to an audiology or otology clinic for assessment and management. We do not dispute the contention that depressed patients may attempt suicide. We do dispute the contention that it is the tinnitus experienced by depressed patients that increases greatly the risk for suicide. Dr. Lewis may argue differently; however, it is our view that the existing data simply do not support that interpretation, and that was the purpose of our report. We agree with the author that more systematic study of tinnitus and suicide is needed. However, such a population-based investigation will require control of many factors, including preexisting and well-documented mental illness(es), factors predisposing patients to mental illness (e.g., genetic predisposition), comorbid conditions (e.g., hearing impairment) and significant diseases (e.g., cancer), and medications

used to treat this illness(es). For example, it is possible that a patient who previously was able to cope with their tinnitus acquired a disease that was treated with high doses of corticosteroids that could have caused depression that resulted in suicide. In such an instance, we wonder whether this hypothetical patient would have been reported as a depressed tinnitus patient who committed suicide. As stated in our article, we do recommend using standardized screening tools to help identify patients who may be depressed. Once they have been identified, we recommend referring these patients to our medical colleagues for assessment and intervention.

We are happy that the author has taken this opportunity to clarify his report. However, we stand by our original interpretation of the existing data. We reject the assertion of Dr. Lewis that our report has added "...little further to our understanding of the relationship between tinnitus and suicide." Indeed, we would argue that our report has served to clarify this relationship (or lack thereof) and underscores the need for practitioners to read existing research critically.

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