

*Disclaimer: This is a machine generated PDF of selected content from our products. This functionality is provided solely for your convenience and is in no way intended to replace original scanned PDF. Neither Cengage Learning nor its licensors make any representations or warranties with respect to the machine generated PDF. The PDF is automatically generated "AS IS" and "AS AVAILABLE" and are not retained in our systems. CENGAGE LEARNING AND ITS LICENSORS SPECIFICALLY DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES FOR AVAILABILITY, ACCURACY, TIMELINESS, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Your use of the machine generated PDF is subject to all use restrictions contained in The Cengage Learning Subscription and License Agreement and/or the Gale Health and Wellness Terms and Conditions and by using the machine generated PDF functionality you agree to forgo any and all claims against Cengage Learning or its licensors for your use of the machine generated PDF functionality and any output derived therefrom.*

## **Investigators at University Hospital Zurich Target Tinnitus (Combining neurofeedback with source estimation: Evaluation of an sLORETA neurofeedback protocol for chronic tinnitus treatment).**

**Date:** July 31, 2020  
**From:** Health & Medicine Week  
**Publisher:** NewsRX LLC  
**Document Type:** Report  
**Length:** 504 words

### Full Text:

2020 JUL 31 (NewsRx) -- By a News Reporter-Staff News Editor at Health & Medicine Week -- Data detailed on Hearing Diseases and Conditions - Tinnitus have been presented. According to news reporting originating in Zurich, Switzerland, by NewsRx journalists, research stated, "Alpha/delta neurofeedback has been shown to be a potential treatment option for chronic subjective tinnitus. Traditional neurofeedback approaches working with a handful of surface electrodes have been criticized, however, due to their low spatial specificity."

The news reporters obtained a quote from the research from University Hospital Zurich, "The purpose of this study was to evaluate an innovative tomographic neurofeedback protocol that combines neural activity measured across the whole scalp with sLORETA source estimation. Forty-eight tinnitus patients participated in 15 neurofeedback training sessions as well as extensive pre, post, and follow-up testing. Patients were randomly assigned to either a tomographic (TONF) or a traditional electrode-based neurofeedback (NTNF) group. Main outcome measures of this study were defined as tinnitus-related distress measured with the Tinnitus Handicap Inventory (THI) and Tinnitus Questionnaire (TQ), tinnitus loudness, and resting-state EEG activity in trained frequency bands. For both groups a significant reduction of tinnitus-related distress and tinnitus loudness was found. While distress changes remained persistent irrespective of group, loudness levels returned to baseline in the follow-up period. No significant between-group differences between the 2 neurofeedback applications (TONF vs. NTNF) were found, which suggests a similar contribution to symptom improvement. The trained alpha/delta ratio increased significantly over the course of the training and remained stable in the follow-up period. This effect was found irrespective of group on both surface and source levels with no meaningful differences between the 2 groups."

According to the news reporters, the research concluded: "Our study shows that a tomographic alpha/delta protocol should be considered a promising addition to tinnitus treatment but that more individually specific neurofeedback protocols should be developed."

For more information on this research see: Combining neurofeedback with source estimation: Evaluation of an sLORETA neurofeedback protocol for chronic tinnitus treatment. *Restorative Neurology and Neuroscience*, 2020;( ):1-17. Restorative Neurology and Neuroscience can be contacted at: IOS Press, Nieuwe Hemweg 6B, 1013 BG Amsterdam, The Netherlands.

Our news correspondents report that additional information may be obtained by contacting Tobias Kleinjung, Dept. of Otorhinolaryngology, University Hospital Zurich, Zurich, Switzerland. Additional authors for this research include Dominik Guntensperger, Patrick Neff, Christian Thuring and Martin Meyer.

The publisher of the journal *Restorative Neurology and Neuroscience* can be contacted at: IOS Press, Nieuwe Hemweg 6B, 1013 BG Amsterdam, The Netherlands.

Keywords for this news article include: Zurich, Europe, Tinnitus, Switzerland, Otolaryngology, Hearing Disorders, Health and Medicine, Sensation Disorders, Neurologic Manifestations, Ear Diseases and Conditions, Hearing Diseases and Conditions, Nervous System Diseases and Conditions.

Our reports deliver fact-based news of research and discoveries from around the world. Copyright 2020, NewsRx LLC

The citation for this news report is: NewsRx. Investigators at University Hospital Zurich Target Tinnitus (Combining neurofeedback with source estimation: Evaluation of an sLORETA neurofeedback protocol for chronic tinnitus treatment). *Health & Medicine Week*. July 31, 2020; p 2429.

**Copyright:** COPYRIGHT 2020 NewsRX LLC

<http://www.newsrx.com/newsletters/Health-and-Medicine-Week.html>

**Source Citation** (MLA 8th Edition)

"Investigators at University Hospital Zurich Target Tinnitus (Combining neurofeedback with source estimation: Evaluation of an sLORETA neurofeedback protocol for chronic tinnitus treatment)." *Health & Medicine Week*, 31 July 2020, p. 2429. *Gale Health and Wellness*, link.gale.com/apps/doc/A630597573/HWRC?u=mlin\_b\_bpublic&sid=bookmark-HWRC&xid=0fa06397. Accessed 1 July 2021.

**Gale Document Number:** GALE|A630597573