

## Tinnitus at the Junction of Traditional Medicine and Modern Technology.

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Editorial

### Tinnitus at the Junction of Traditional Medicine and Modern Technology

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**Special Issue**  
Hearing Loss and Tinnitus—Impact of Different Factors concerning Vulnerability, Lifestyle, Nutrition,  
Sociodemographic Factors and Gender  
Edited by  
Prof. Dr. Birgit Mazurek, Prof. Dr. Heiger Schulze, Prof. Dr. Christian Dobel and Dr. Winfried Schlee

### Abstract:

**Background:** This Special Issue of Nutrients aims to focus on a collection of basic research and clinical studies detailing advancements in the field of hearing loss and tinnitus, with a focus on vulnerability factors. The goal is to enhance understanding of the trajectory of tinnitus-related maladaptation, including the identification of novel biomarkers and approaches that account for the complex phenotypes of comorbidity, such as nutrition, lifestyle, sex, and gender, in tinnitus and hearing loss.

**Methods:** Research suggests that tinnitus is a multidimensional phenomenon involving auditory processing, with individuals experiencing varying degrees of distress. Executive or attentional networks for control appear to be involved. Connections between frontal and limbic brain segments in tinnitus networks have been well studied and are associated with frequent affective comorbidity. Chronic comorbid diseases should be considered as states of a multifactorial and complex system, influenced by factors such as genetics, lifestyle, and environmental stressors.

**Results:** Addressing chronic comorbid diseases through system medicine involves understanding them as multifaceted system perturbations influenced by various factors. This paradigm shift allows for the development of early risk predictors and targeted interventions, potentially improving therapeutic outcomes and managing chronicity.

**Conclusion:** Future research should focus on developing technological approaches for a more profound and precise

understanding of the pathways involved in pathological development. Identification of these pathways will provide opportunities for predicting disease development and devising preventive and therapeutic strategies. Existing datasets can be reprocessed with modern statistical methods to explore specific risk factors and their impact on tinnitus and its comorbidities.

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