

Scientific Article



Title

The neurobiology of misophonia and implications for novel, neuroscience-driven interventions

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Abstract

Decreased tolerance in response to specific every-day sounds (misophonia) is a serious, debilitating disorder that is gaining rapid recognition within the mental health community. Emerging research findings suggest that misophonia may have a unique neural signature. Specifically, when examining responses to misophonic trigger sounds, differences emerge at a physiological and neural level from potentially overlapping psychopathologies. While these findings are preliminary and in need of replication, they support the hypothesis that misophonia is a unique disorder. In this theoretical paper, researchers begin by reviewing the candidate networks that may be at play in this complex disorder (e.g., regulatory, sensory, and auditory). We then summarize current neuroimaging findings in misophonia and present areas of overlap and divergence from other mental health disorders that are hypothesized to co-occur with misophonia (e.g., obsessive compulsive disorder). Future studies needed to further understanding of the neuroscience of misophonia will also be discussed. This research paper introduces the potential of neurostimulation as a tool to treat neural dysfunction in misophonia. It describes how neurostimulation research has led to novel interventions in psychiatric disorders, targeting regions that may also be relevant to misophonia. The paper is concluded by presenting several options for how neurostimulation interventions for misophonia could be crafted.



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