



Universiteit  
Leiden  
The Netherlands

## **Hitting the right nerve: effects of transcutaneous vagus nerve stimulation on symptoms of anxiety**

Burger, A.M.

### **Citation**

Burger, A. M. (2019, May 15). *Hitting the right nerve: effects of transcutaneous vagus nerve stimulation on symptoms of anxiety*. Retrieved from <https://hdl.handle.net/1887/72624>

Version: Not Applicable (or Unknown)

License: [Leiden University Non-exclusive license](#)

Downloaded from: <https://hdl.handle.net/1887/72624>

**Note:** To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/72624> holds various files of this Leiden University dissertation.

**Author:** Burger, A.M.

**Title:** Hitting the right nerve: effects of transcutaneous vagus nerve stimulation on symptoms of anxiety

**Issue Date:** 2019-05-15

Stellingen behorende bij het proefschrift

Hitting the Right Nerve  
Effects of Transcutaneous Vagus Nerve Stimulation  
on Symptoms of Anxiety

Andreas M. Burger

1. It is still unclear whether stimulating the vagus nerve accelerates the extinction of fear in humans (this thesis).
2. The role of physiological arousal on the effects of tVNS should be further investigated (this thesis).
3. There is no direct evidence that tVNS increases noradrenergic activity, a widely hypothesized working mechanism (this thesis).
4. Although tVNS decreases spontaneous negative thought intrusions in high trait worriers, worry inductions offset this effect (this thesis).
5. Given the anatomical evidence for innervations of the ear, it is incorrect to stimulate the tragus and call it tVNS (this thesis).
6. In the coming years, research on tVNS should primarily focus on developing a reliable biomarker for vagus nerve activation.
7. Efferent cardiac effects are in no way a necessary requirement for afferent effects of tVNS.
8. Failure to embrace the open science movement hampers the advancement of knowledge and leaves psychology open to accusations of being a 'cargo cult science'.
9. Analyzing fear conditioning data using RM ANOVA instead of linear mixed models is like ordering a single malt whisky and pouring it in your coke.
10. *"If you thought that science was certain – well, that is just an error on your part."* – Richard Feynman