2023 HRV and biofeedback

Mayo has a biofeedback department [Biofeedback - Mayo Clinic](https://www.mayoclinic.org/tests-procedures/biofeedback/about/pac-20384664)

[What is Heart Rate Variability Training? (sadarpsych.com)](https://sadarpsych.com/biofeedback-therapy-training/heart-rate-variability/)

[Heart rate variability biofeedback: how and why does it work? - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4104929/)

[hrv biofeedback - Search Results - PubMed (nih.gov)](https://pubmed.ncbi.nlm.nih.gov/?term=hrv%20biofeedback)

[The App - HRV4Biofeedback](https://www.hrv4biofeedback.com/the-app.html)

HeartMath [Inner Balance Coherence Sensor | HeartMath Institute](https://www.heartmath.org/store/products/inner-balance/)

[Home - Hanu Health, Inc.](https://www.hanuhealth.com/)

[Lief Therapeutics - The wearable for mental health (getlief.com)](https://getlief.com/)

[Homepage (mightier.com)](https://www.mightier.com/) for kids and monthly plan

[HRV Biofeedback - Apps on Google Play](https://play.google.com/store/apps/details?id=com.achimsapps.hrv)

Apparently, developers can use the Apple watch metrics to create their own apps.

[Apple Watch guide to understanding and using HRV (Heart Rate Variability) - MyHealthyApple](https://www.myhealthyapple.com/guide-to-understanding-and-using-heart-rate-variability-hrv-on-your-apple-watch/)

[11 Best Heart Rate Variability Biofeedback Monitors (2023 Review & Comparison) Used By Pros (outliyr.com)](https://outliyr.com/best-hrv-biofeedback-monitors)

Here is an example of a study that we could do:

[Comparing Effectiveness of HRV-Biofeedback and Mindfulness for Workplace Stress Reduction: A Randomized Controlled Trial - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7644531/)

Results did not show any statistically significant differences between HRV-Bfb and MBI groups, and neither of the intervention groups (IGs) differed from the WLC.

Lit review:

[My Life in HRV Biofeedback Research - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8899772/)

[Paul Lehrer Ph.D. » EOHSI Directory - EOHSI (rutgers.edu)](https://eohsi.rutgers.edu/eohsi-directory/name/paul-lehrer/)

[Paul Lehrer – APA Psychologist Locator](https://locator.apa.org/profile/paul-lehrer)

[Digital Biomarkers for Scalable Clinical Trials (vivosense.com)](https://www.vivosense.com/)

[An Overview of Heart Rate Variability Metrics and Norms - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5624990/)

[Is heart rate variability biofeedback useful in children and adolescents? A systematic review - PubMed (nih.gov)](https://pubmed.ncbi.nlm.nih.gov/34155631/)

yes

[Heart rate variability monitoring for emotion and disorders of emotion - PubMed (nih.gov)](https://pubmed.ncbi.nlm.nih.gov/30974428/)

“It is suggested that HRV is an effective tool for the measurement and regulation of emotional response, with a broad application prospect.”

[Physical Activity, Mindfulness Meditation, or Heart Rate Variability Biofeedback for Stress Reduction: A Randomized Controlled Trial - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4648965/)

The HRV-BF exercises consisted of slow breathing with a heart rate variability biofeedback device. … No significant between-intervention effect was found, suggesting that PA, MM, and HRV-BF are equally effective in reducing stress and its related symptoms.

[Neuromodulation Applied to Diseases: The Case of HRV Biofeedback - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9571900/)

the levels of evidence for the benefits of HRV-B is high in CHD, pain, and hypertension, moderate in cancer, and poor in diabetes and dementia.

[Comparing Effectiveness of HRV-Biofeedback and Mindfulness for Workplace Stress Reduction: A Randomized Controlled Trial - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7644531/)

Results did not show any statistically significant differences between HRV-Bfb and MBI groups, and neither of the intervention groups (IGs) differed from the WLC.

[The effect of heart rate variability biofeedback training on stress and anxiety: a meta-analysis - PubMed (nih.gov)](https://pubmed.ncbi.nlm.nih.gov/28478782/)

HRV biofeedback training is associated with a large reduction in self-reported stress and anxiety.