

Managing Visual Snow

@MatthewRenze

#VisualSnowInitiative

Is it possible to be in mental,
physical, or emotional pain but
to not be suffering?

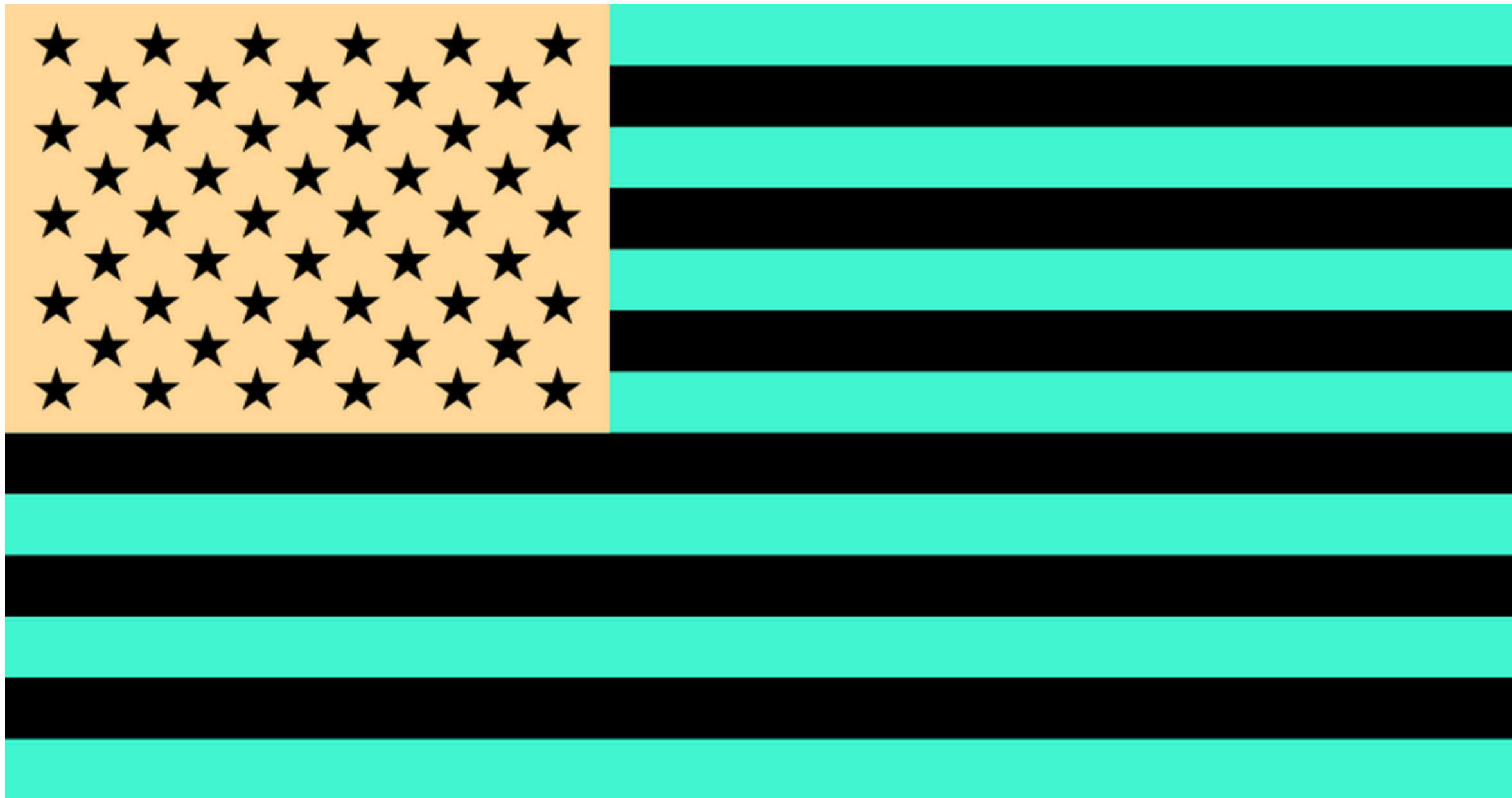
February 7, 2014











Other Symptoms

Visual

Vibration in text

Trailing images

Bright-light issues

Night-vision issues

Halos at night

Auditory

Loud-noise issues

Conversation issues

Environmental-noise issues

Ear pop/click noise

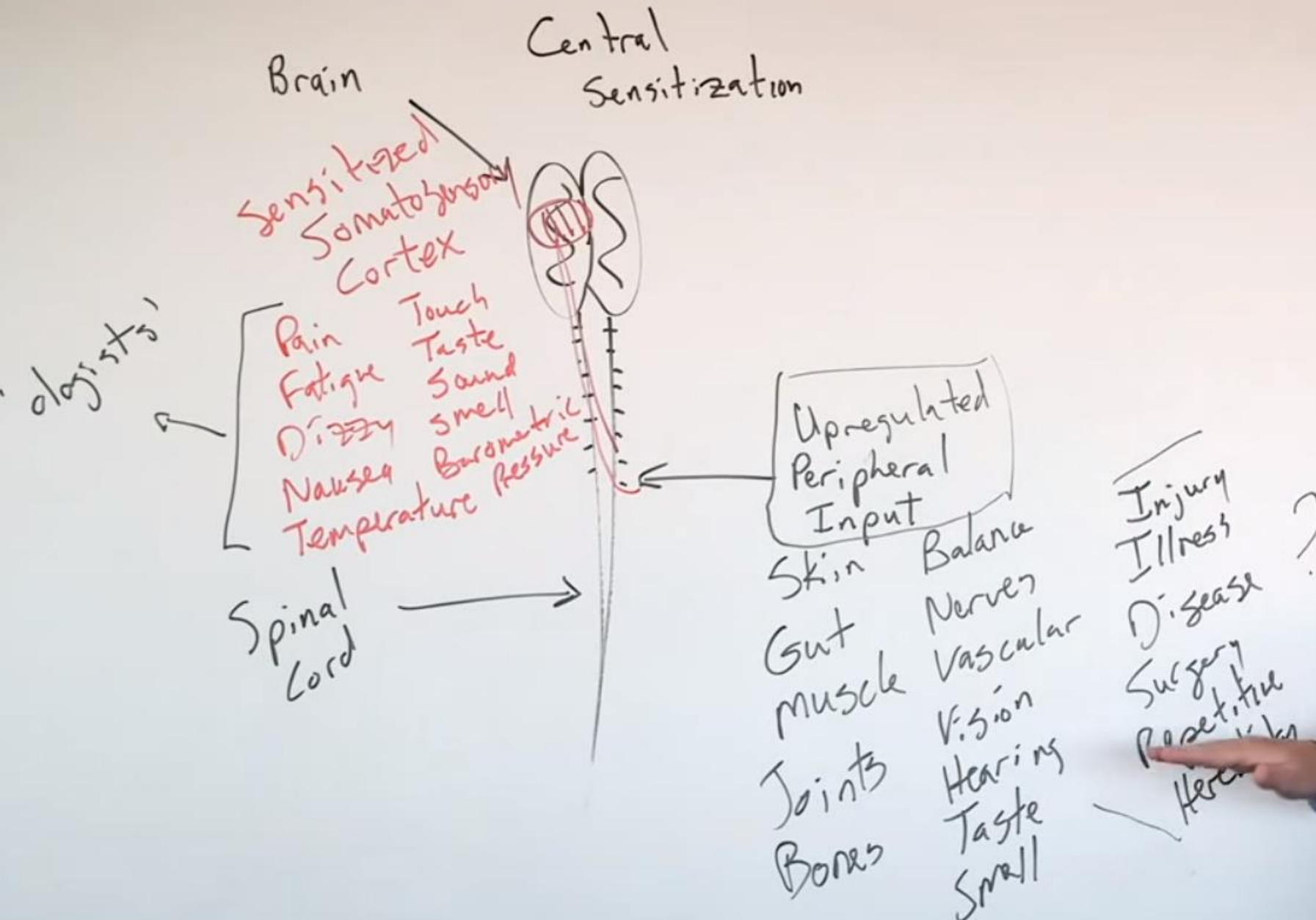
Tactile

Pulsating buzzing

Fine tremors









‘Visual snow’ – a disorder distinct from persistent migraine aura

Christoph J. Schankin,^{1,2,*} Farooq H. Maniyar,^{1,2} Kathleen B. Digre³ and Peter J. Goadsby^{1,2}

1 Headache Group, Department of Neurology, University of California, San Francisco, San Francisco, CA, USA

2 NIHR-Wellcome Trust Clinical Research Facility, King's College London, London, UK

3 Departments of Neurology, Ophthalmology, Moran Eye Centre, University of Utah, Salt Lake City, UT, USA

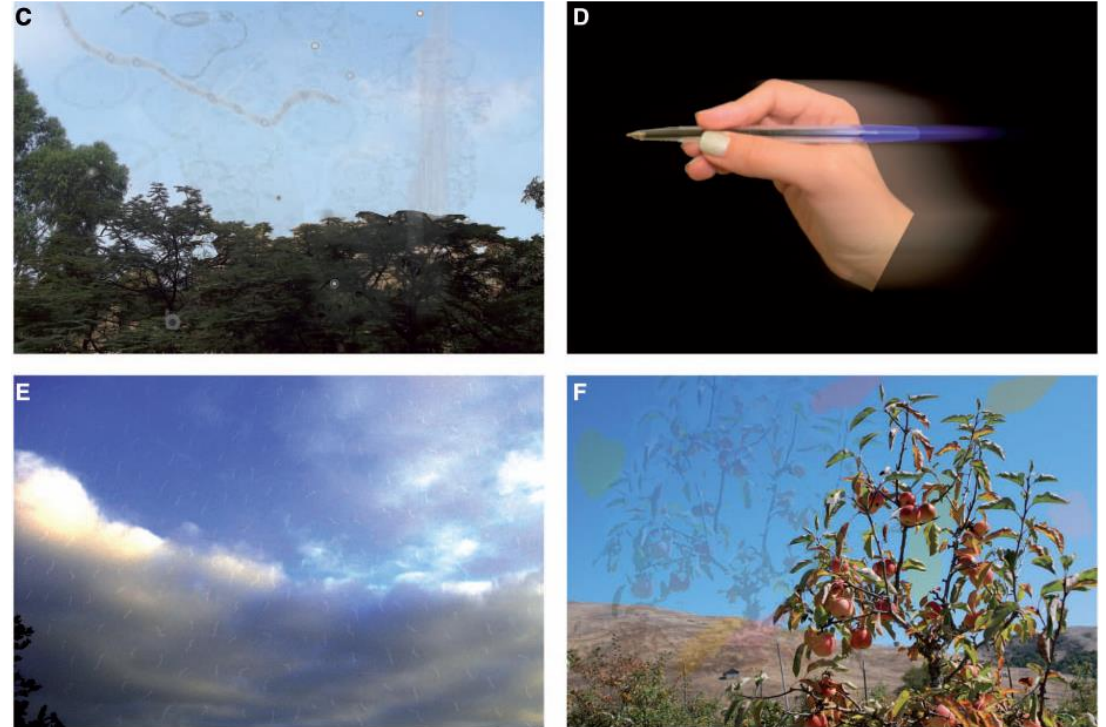
*Present address: Department of Neurology, University of Munich Hospital - Großhadern, Munich, Germany

Visual Snow

“continuous tiny dots in the entire visual field similar to noise of an analog television”

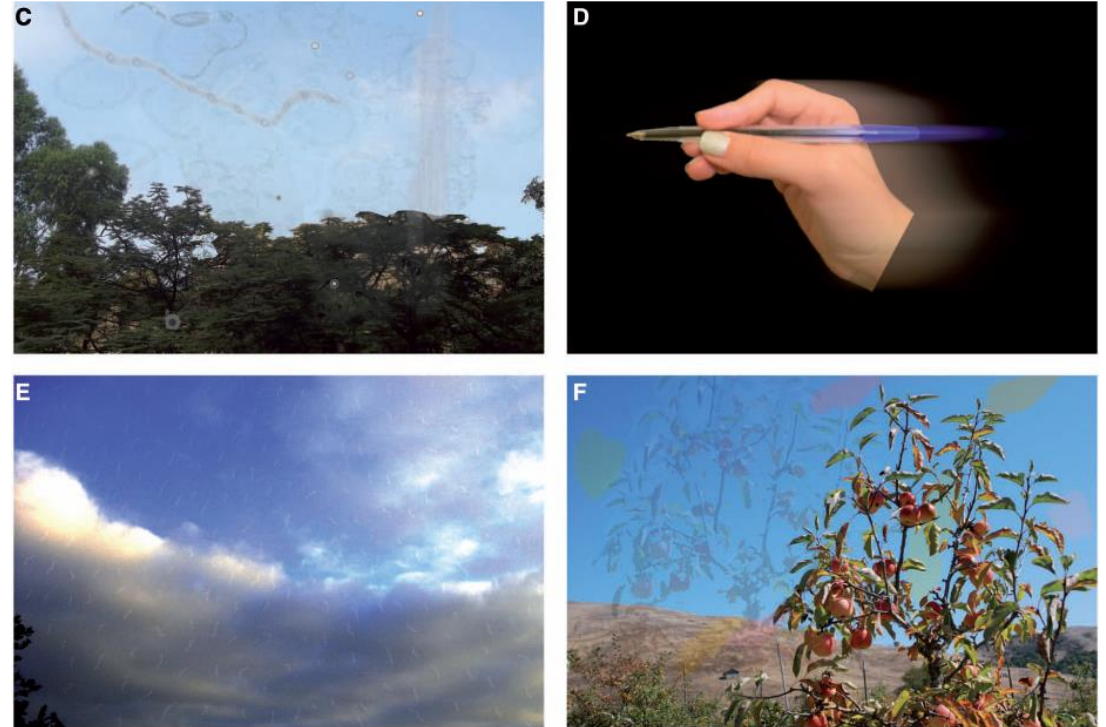


Visual Snow Syndrome



Visual Snow Syndrome

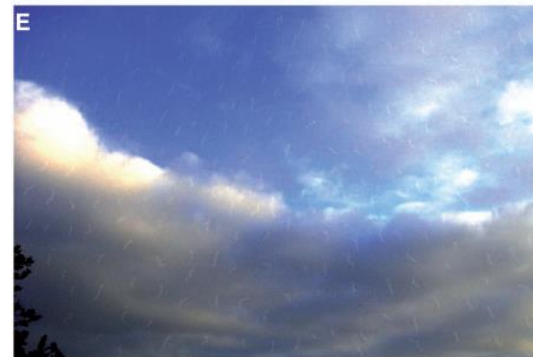
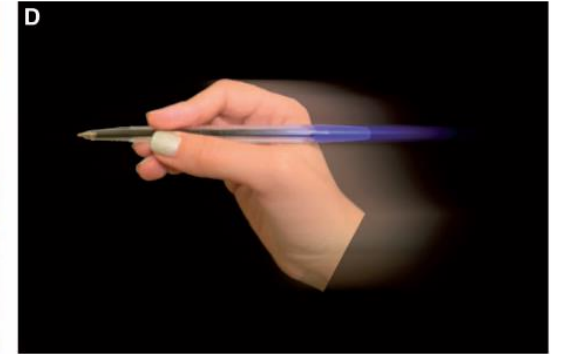
Palinopsia



Visual Snow Syndrome

Palinopsia

Entoptic phenomena

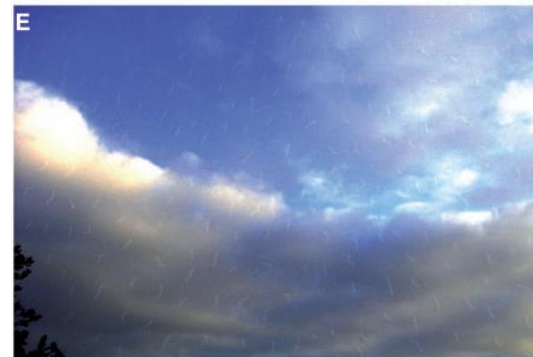
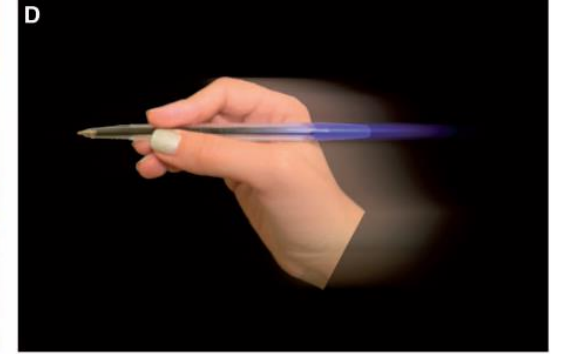


Visual Snow Syndrome

Palinopsia

Entoptic phenomena

Photophobia



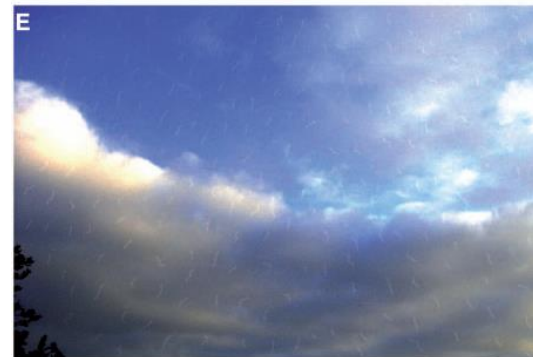
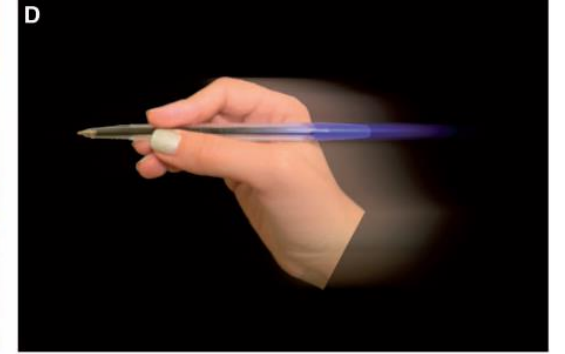
Visual Snow Syndrome

Palinopsia

Entoptic phenomena

Photophobia

Nyctalopia



Visual Snow Syndrome

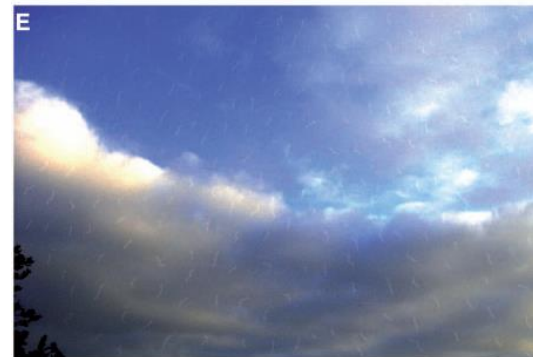
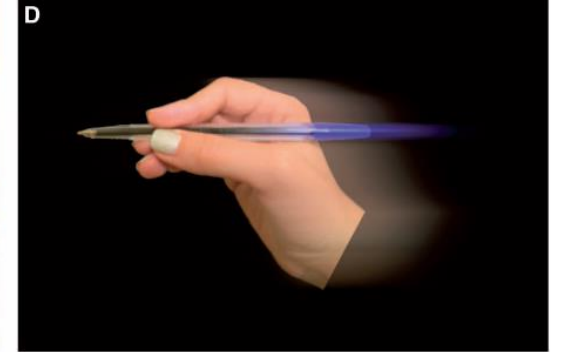
Palinopsia

Entoptic phenomena

Photophobia

Nyctalopia

Tinnitus

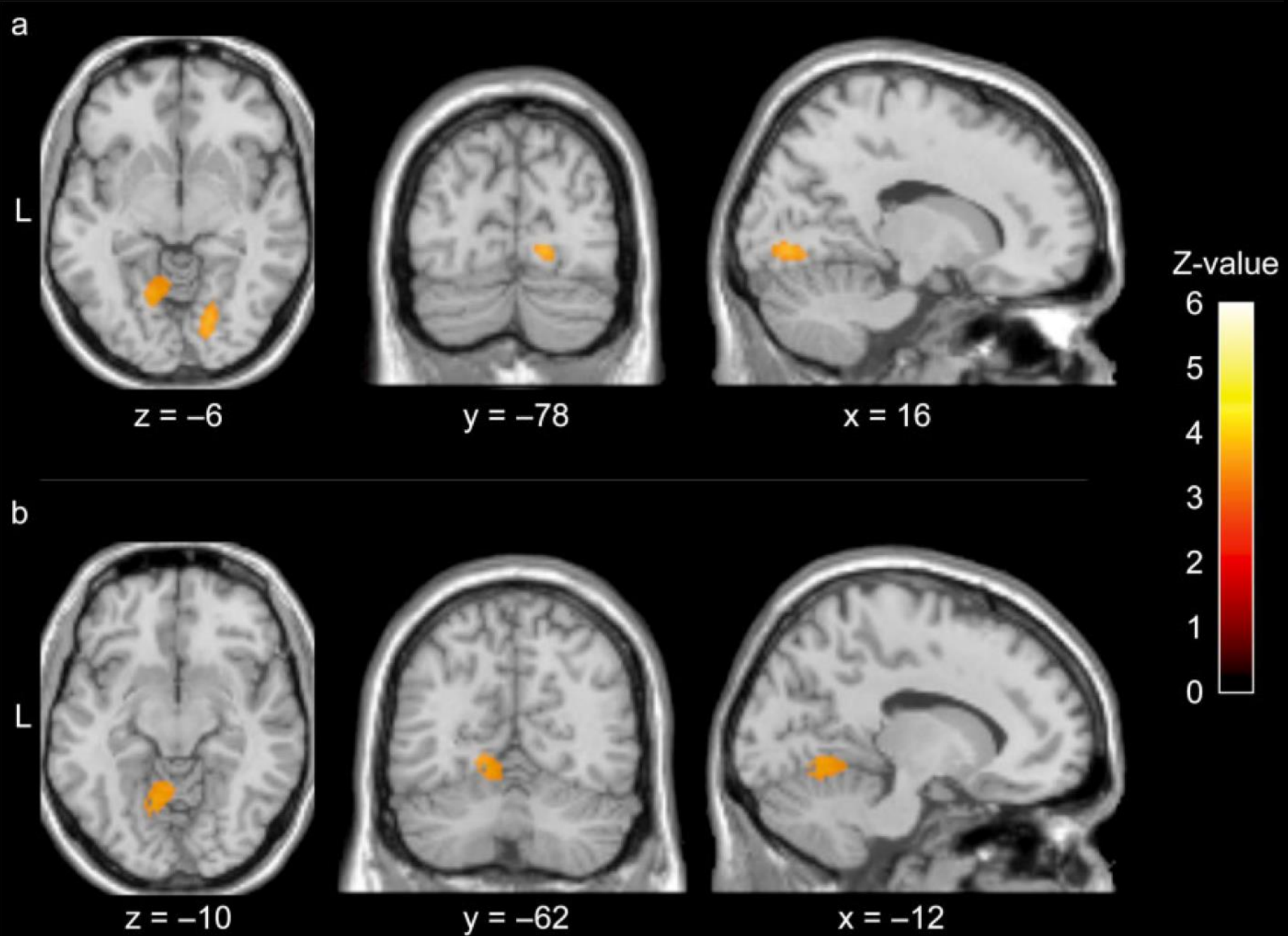


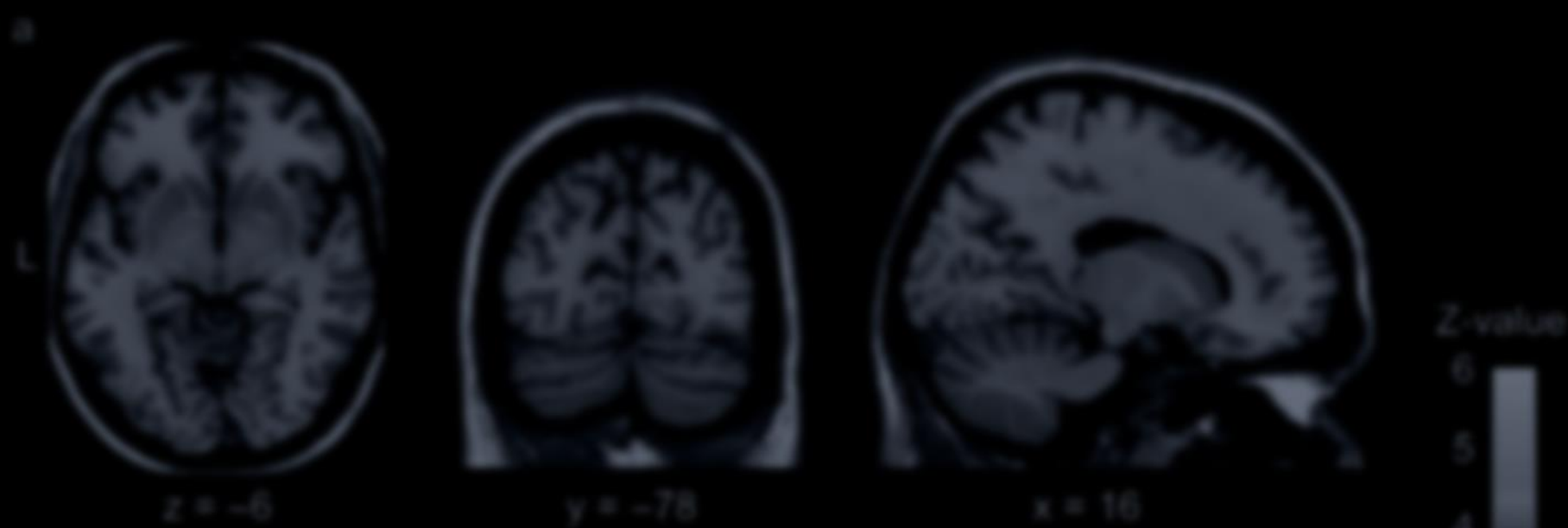
2014 Wolff Award Paper

The Relation Between Migraine, Typical Migraine Aura and “Visual Snow”

Christoph J. Schankin, MD; Farooq H. Maniyar, MD; Till Sprenger, MD; Denise E. Chou, MD;
Michael Eller, MD; Peter J. Goadsby, MD, PhD

Objective.—To assess the relationship between the phenotype of the “visual snow” syndrome, comorbid migraine, and typical migraine aura on a clinical basis and using functional brain imaging.





Let's take a moment...







‘Visual snow’ – a disorder distinct from persistent migraine aura

Christoph J. Schankin,^{1,2,*} Farooq H. Maniyar,^{1,2} Kathleen B. Digre³ and Peter J. Goadsby^{1,2}

1 Headache Group, Department of Neurology, University of California, San Francisco, San Francisco, CA, USA

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2014 Wolff Award Paper

The Relation Between Migraine, Typical Migraine Aura and “Visual Snow”

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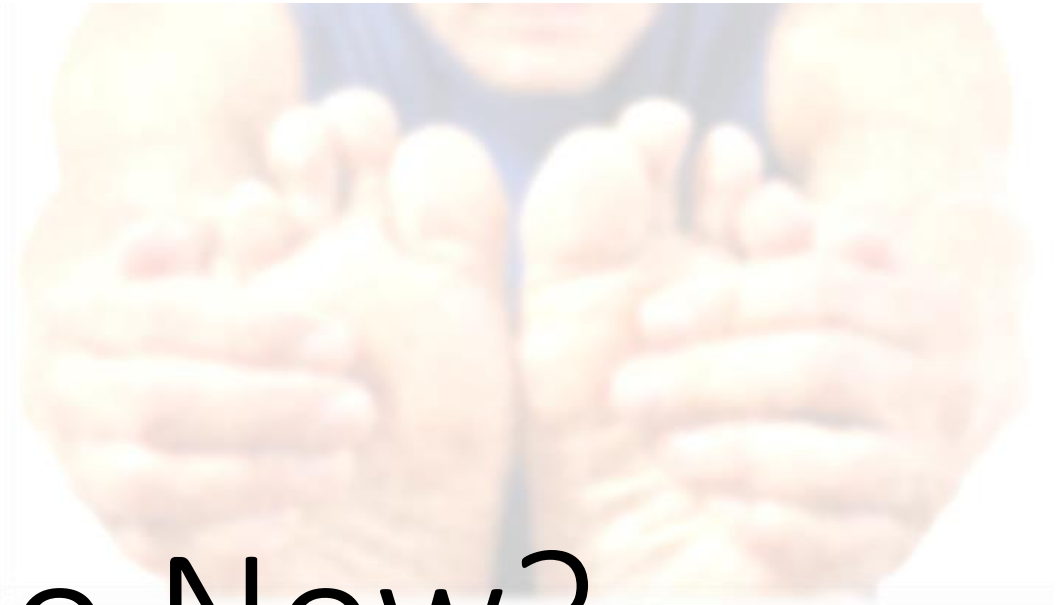
Objective.—To assess the relationship between the phenotype of the “visual snow” syndrome, comorbid migraine, and typical migraine aura on a clinical basis and using functional brain imaging.

Background.—Patients with “visual snow” suffer from continuous TV-static-like tiny flickering dots in the entire visual field. Most patients describe a syndrome with additional visual symptoms of the following categories: palinopsia (“afterimages” and “trailing”), entoptic phenomena arising from the optic apparatus itself (floaters, blue field entoptic phenomenon, photopsia, self-light of the eye), photophobia, nyctalopia (impaired night vision), as well as the non-visual symptom tinnitus. The high prevalence of migraine and typical migraine aura in this population has led to the assumption that “visual snow” is caused by persistent migraine aura. Due to the lack of objective measures, alternative diagnoses are malingering or a psychogenic disorder.

Methods.—(1) The prevalence of additional visual symptoms, tinnitus, and comorbid migraine as well as typical migraine aura was assessed in a prospective semi-structured telephone interview of patients with “visual snow.” Correlations were calculated using standard statistics with $P < .05$ being considered statistically significant. (2) Areas with increased brain metabolism in a group of “visual snow” patients in comparison to healthy controls were identified using [^{18}F]-2-fluoro-2-deoxy-D-glucose positron emission tomography and statistical parametric mapping (SPM8 with whole brain analysis; statistical significance was defined by $P < .001$ uncorrected for multiple comparisons).

Results.—(1) Of 120 patients with “visual snow,” 70 patients also had migraine and 37 had typical migraine aura. Having comorbid migraine was associated with an increased likelihood of having palinopsia (odds ratio [OR] 2.8; $P = .04$ for “after-

[20101022 - Disorders of visual perception - Journal of Neurology, Neurosurgery & Psychiatry](#)
[20120430 - 'Visual Snow' Called Real, Not Drug Related - Medpage Today](#)
[20120523 - Melting the Myths of Visual Snow - Psychology Today](#)
[20120815 - 'Visual Snow' May Be a Distinct Clinical Entity - Clinical Neurology News](#)
[20130128 - The woman who sees snowflakes even when it's sunny - Daily Mail Online](#)
[20130200 - Visual Snow - It's perception and it's cause](#)
[20140318 - 'Visual snow' - a disorder distinct from persistent migraine aura. - PubMed – NCBI](#)
[20140509 - The relation between migraine, typical migraine aura and visual snow - PubMed – NCBI](#)
[20140806 - Should 'visual snow' and persistence of after-images be recognised as a new syndrome – JNNP](#)
[20141100 - Le phénomène de neige visuelle \(The Visual Snow Phenomenon\)](#)
[20150600 - Visual snow - persistent positive visual phenomenon distinct from migraine aura - PubMed NCBI](#)
[20150900 - Das Visual-Snow-Syndrom - Symptome und ophthalmologische Befunde](#)
[20150900 - Visual Snow - Report of three cases](#)
[20160600 - Visual Snow - A thalamocortical dysrhythmia of the visual pathway – JCN](#)
[20160808 - The mysterious eye condition of 'visual snow'- The Guardian](#)
[20160810 - Visual Snow Syndrome - Symptoms and Ophthalmological Findings - PubMed – NCBI](#)
[20160926 - When 'seeing snow' means your eyes are in danger - Daily Mail Online](#)
[20161127 - Visual Snow - A Newly Recongized Neurological Disorder](#)
[20170127 - Visual Snow-Syndrom - Verrauschtes Bild vor Augen - ARD Mediathek](#)
[20170205 - Rare Disease Visual Snow – Jetzt](#)
[20170319 - Visual Snow Guide - Axon Optics](#)



What to Do Now?









Disclaimer

Symptom Aggravators

Stress

Lack of sleep

Cold/flu

Screen time

Alcohol

Caffeine

Sodium

Sugar







Deep Learning: The Big Picture



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Deep Learning: The Big Picture

Hello... and welcome to Deep Learning: The Big Picture
I'm Matthew Renze with Pluralsight
In this course we'll learn about deep learning and neural networks...

Deep Learning: The Big Picture



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Benefits

Concentration

Non-judgement

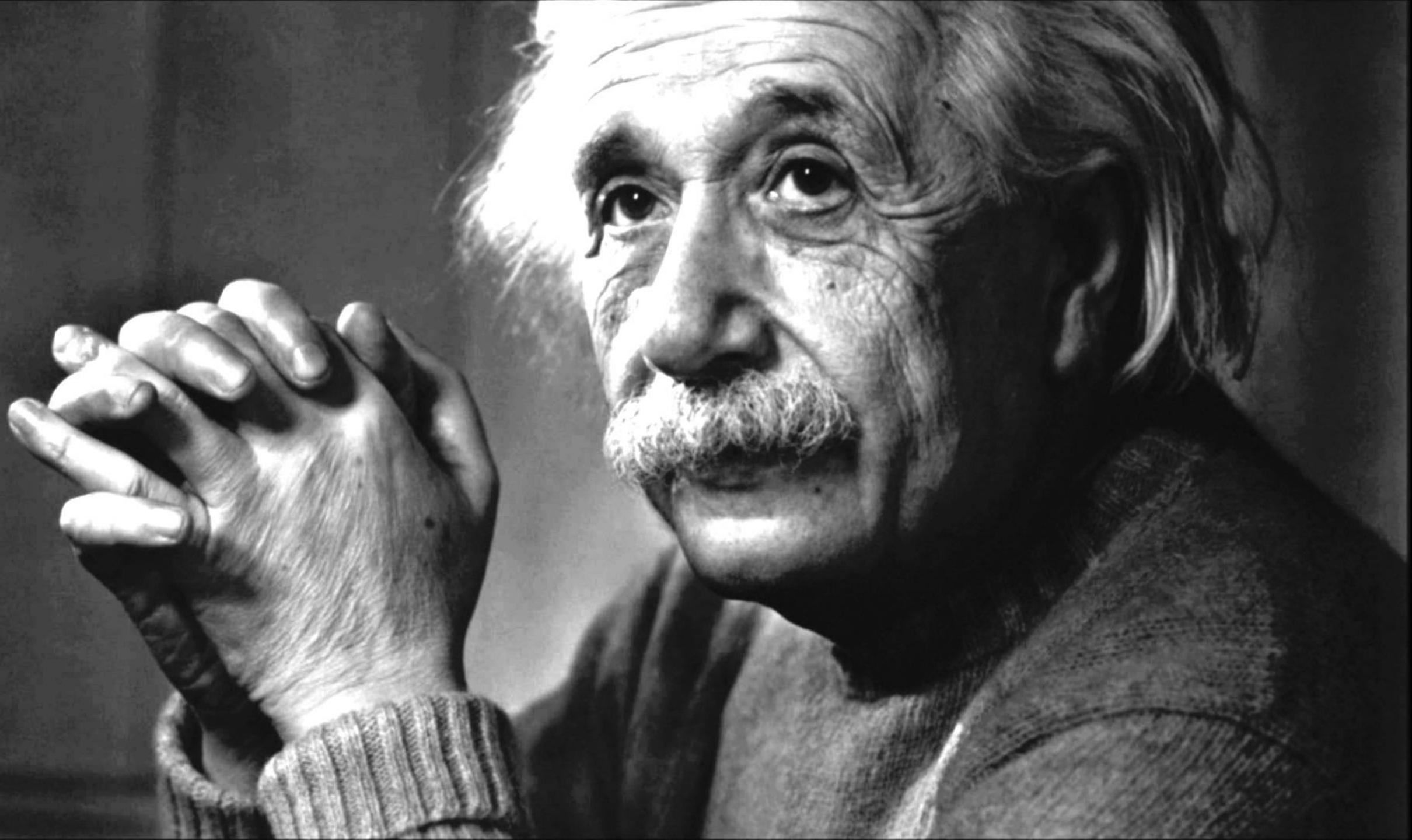
Equanimity

Egolessness

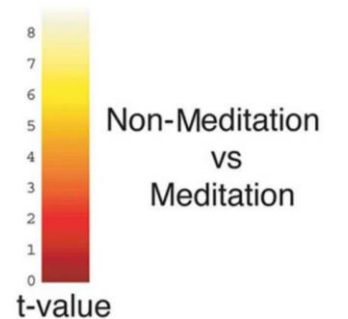
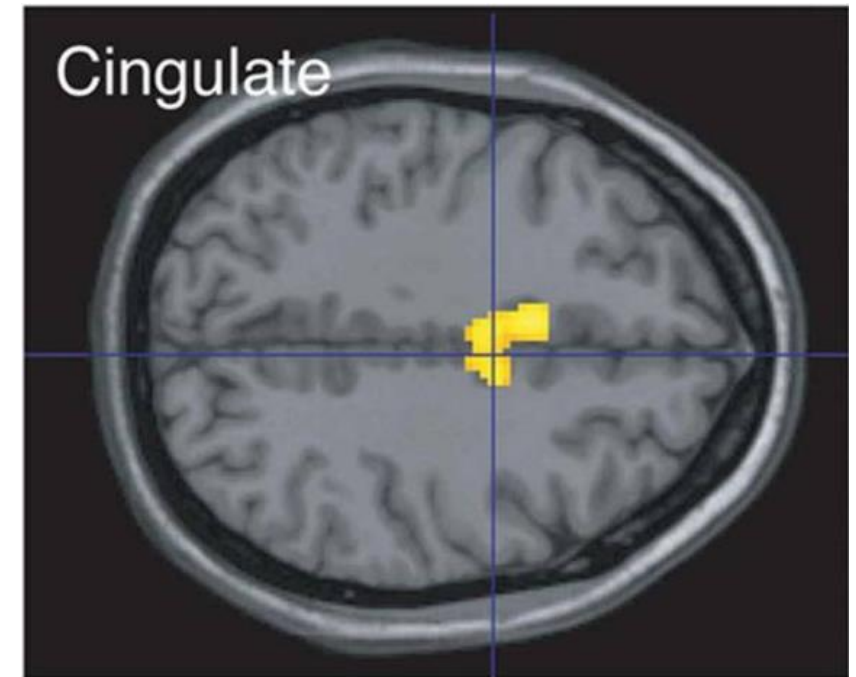
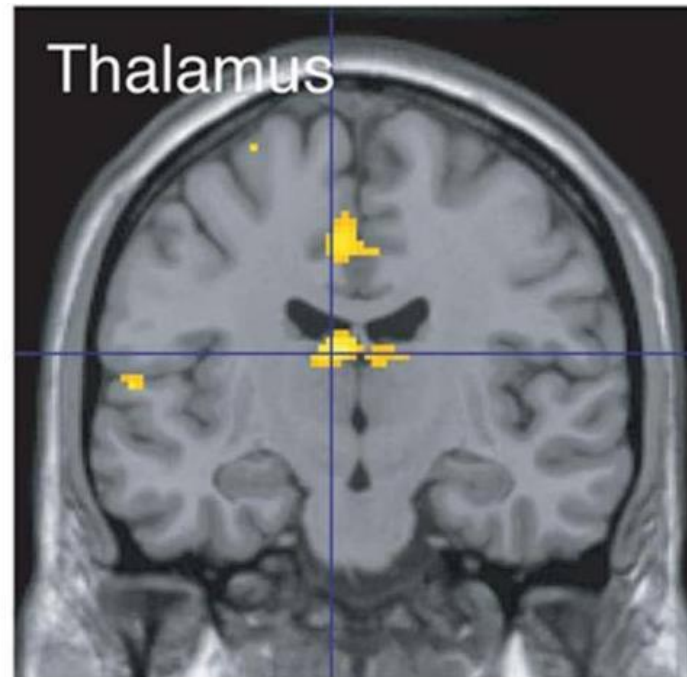
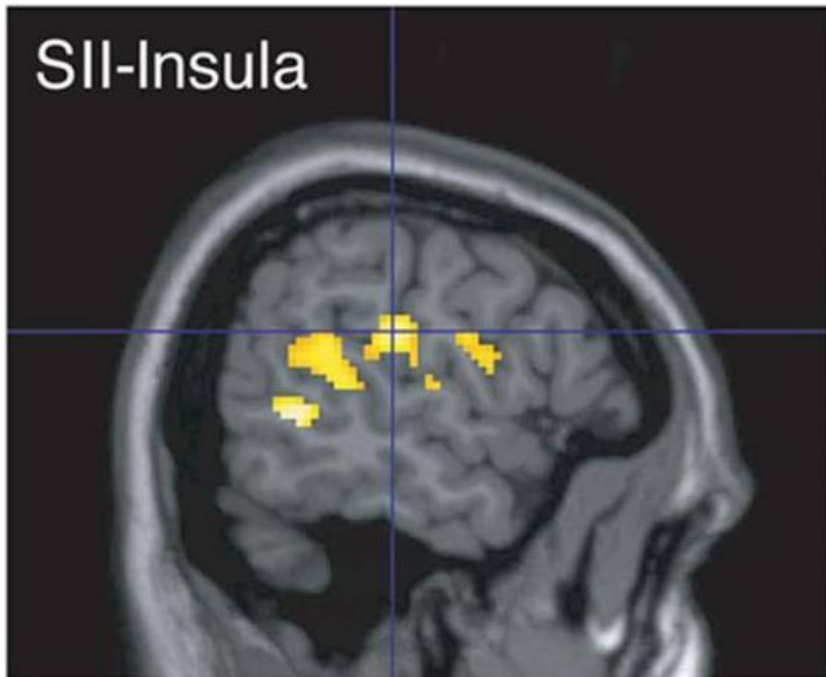
Compassion

Sustainability





Meditation reduces pain-related neural activity in the anterior cingulate cortex, insula, secondary somatosensory cortex, and thalamus



Other Structural and Functional Changes

Amygdala

Default-mode network

Cortical thickness

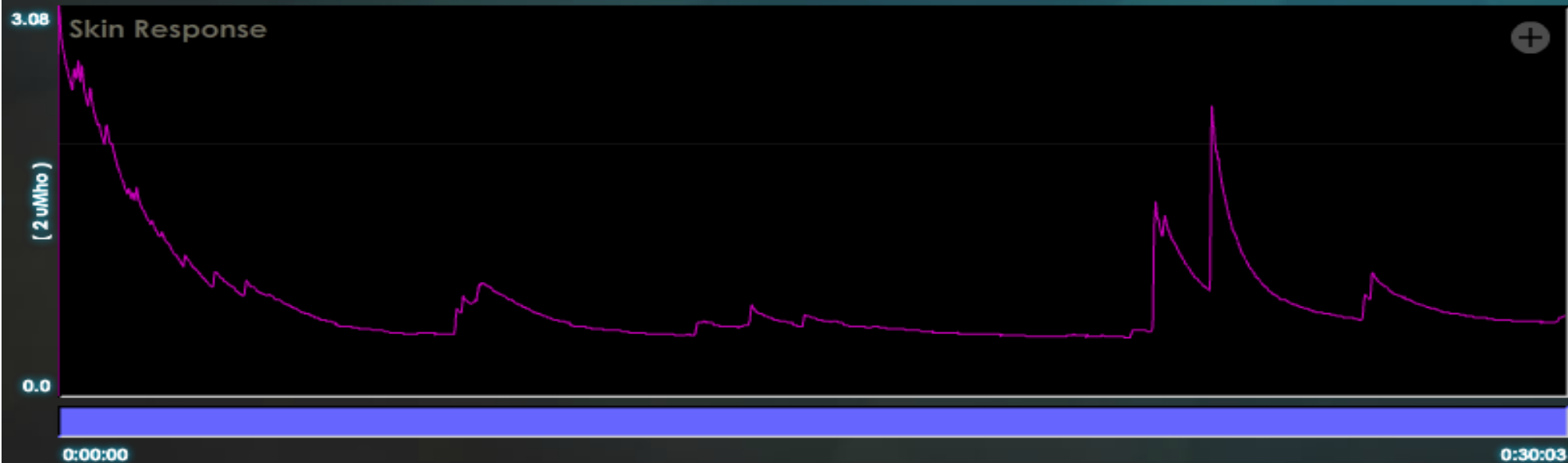
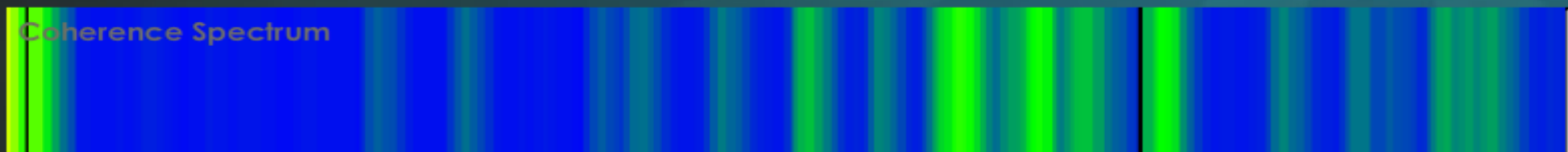
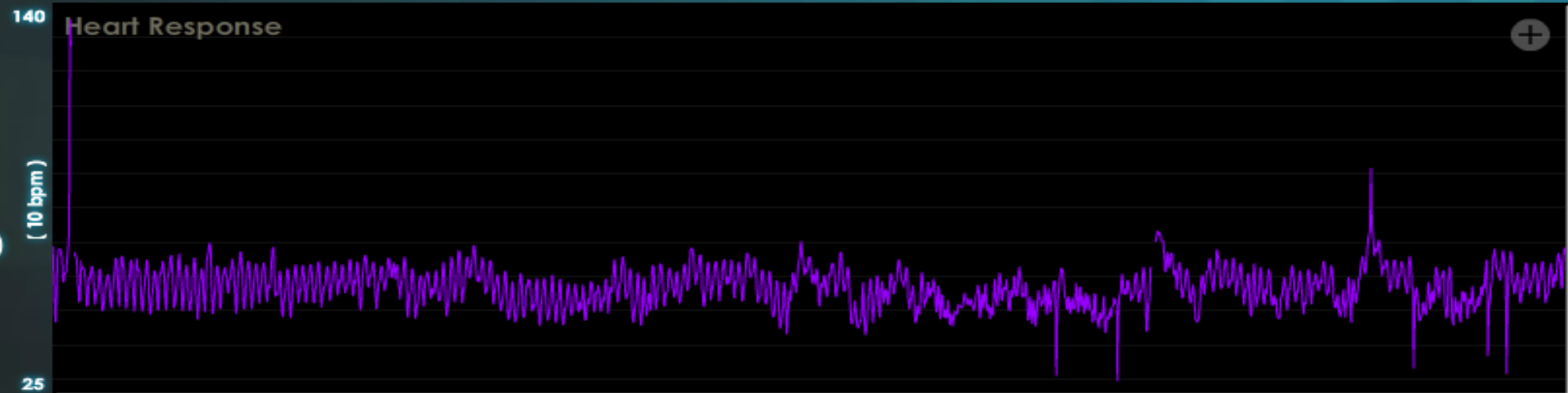
Anterior cingulate cortex

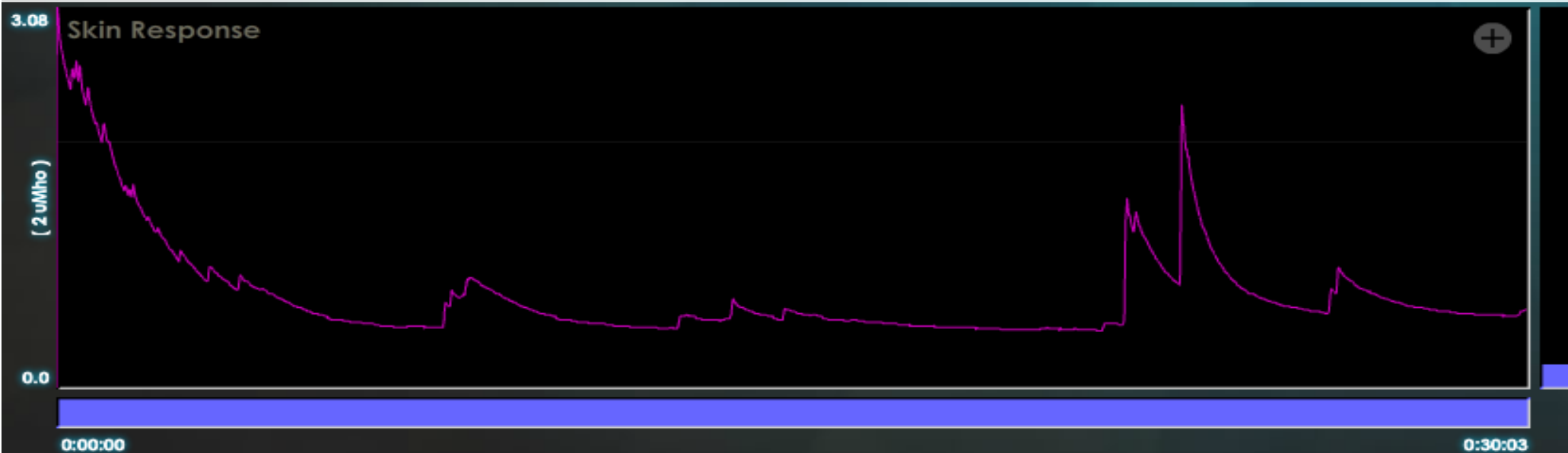
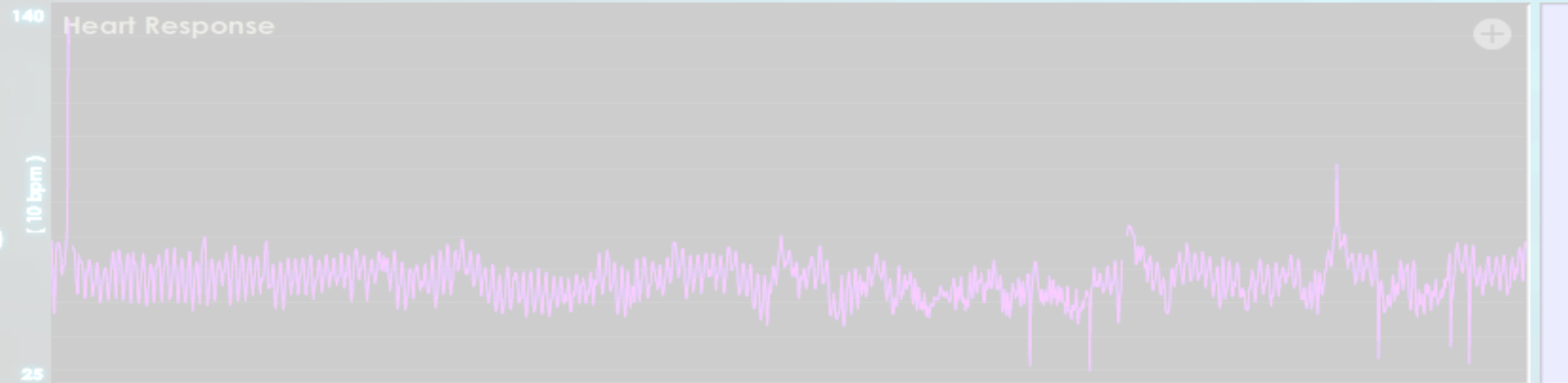
Prefrontal cortex

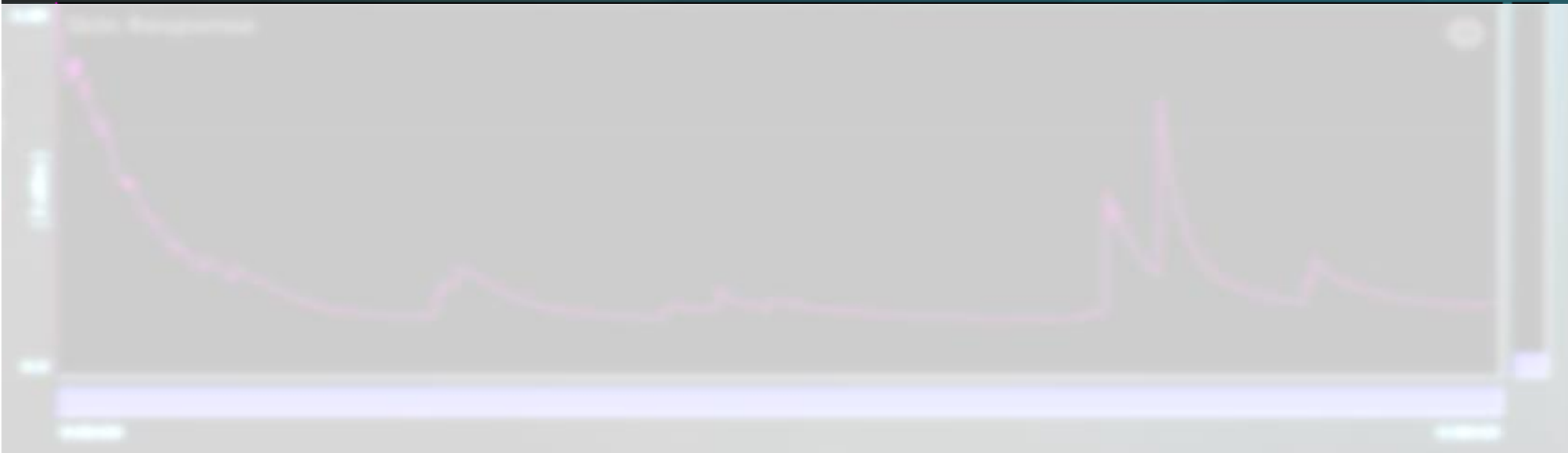
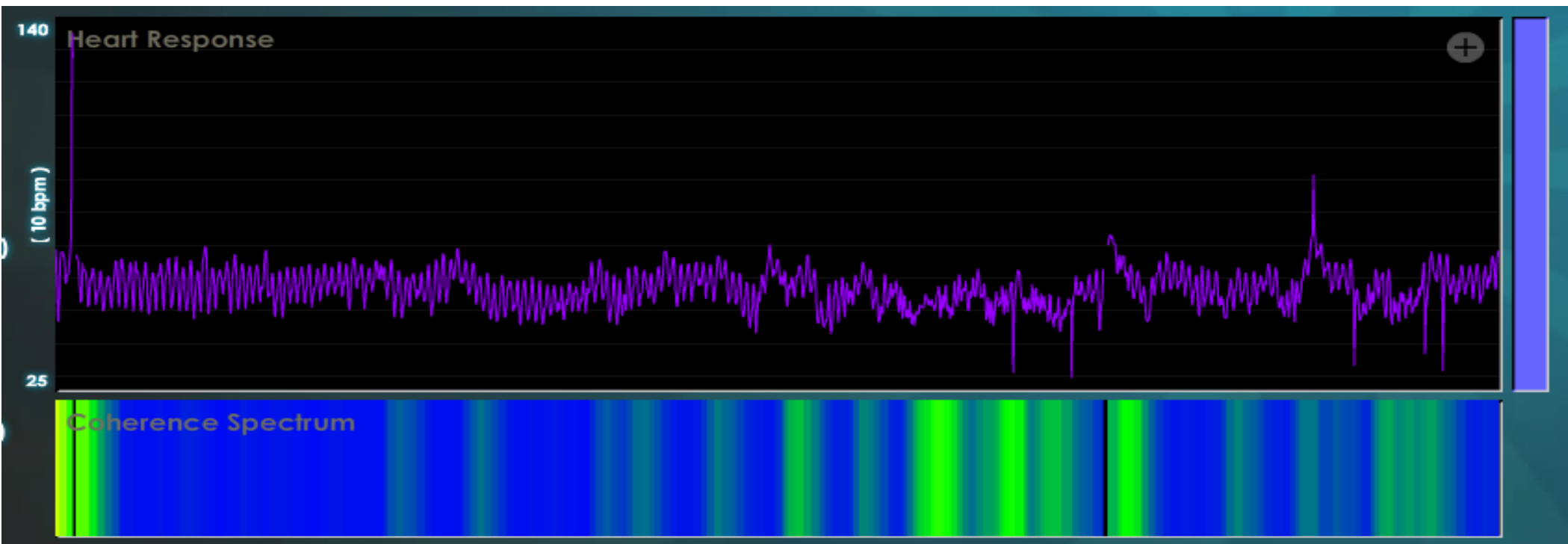
Hippocampus

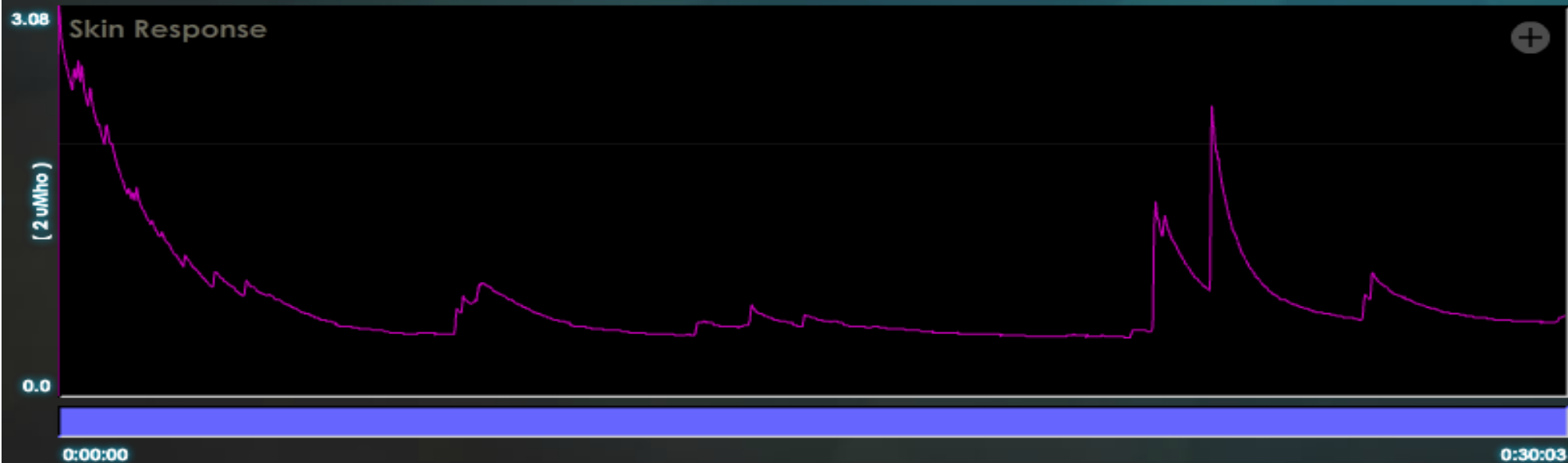
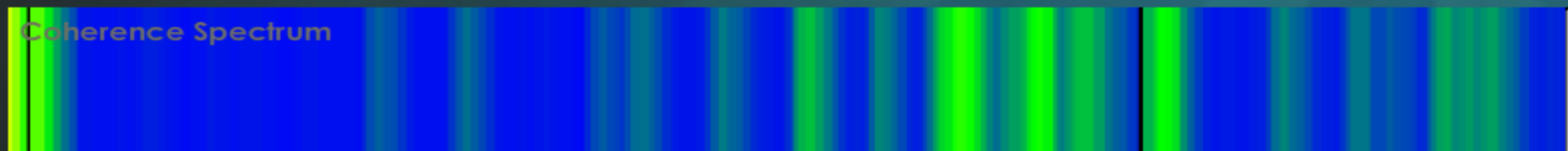
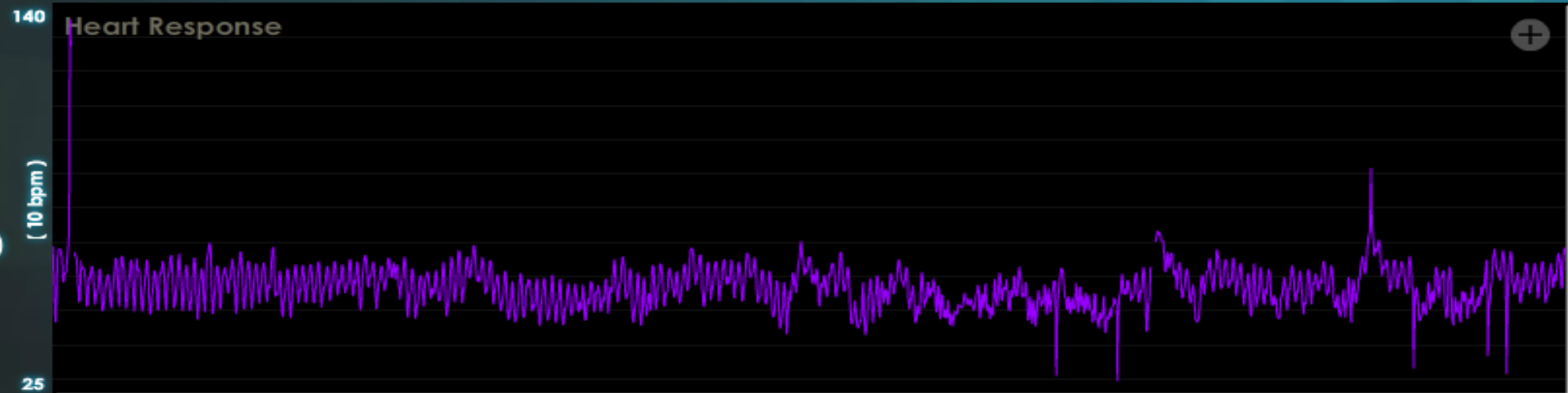
Insula



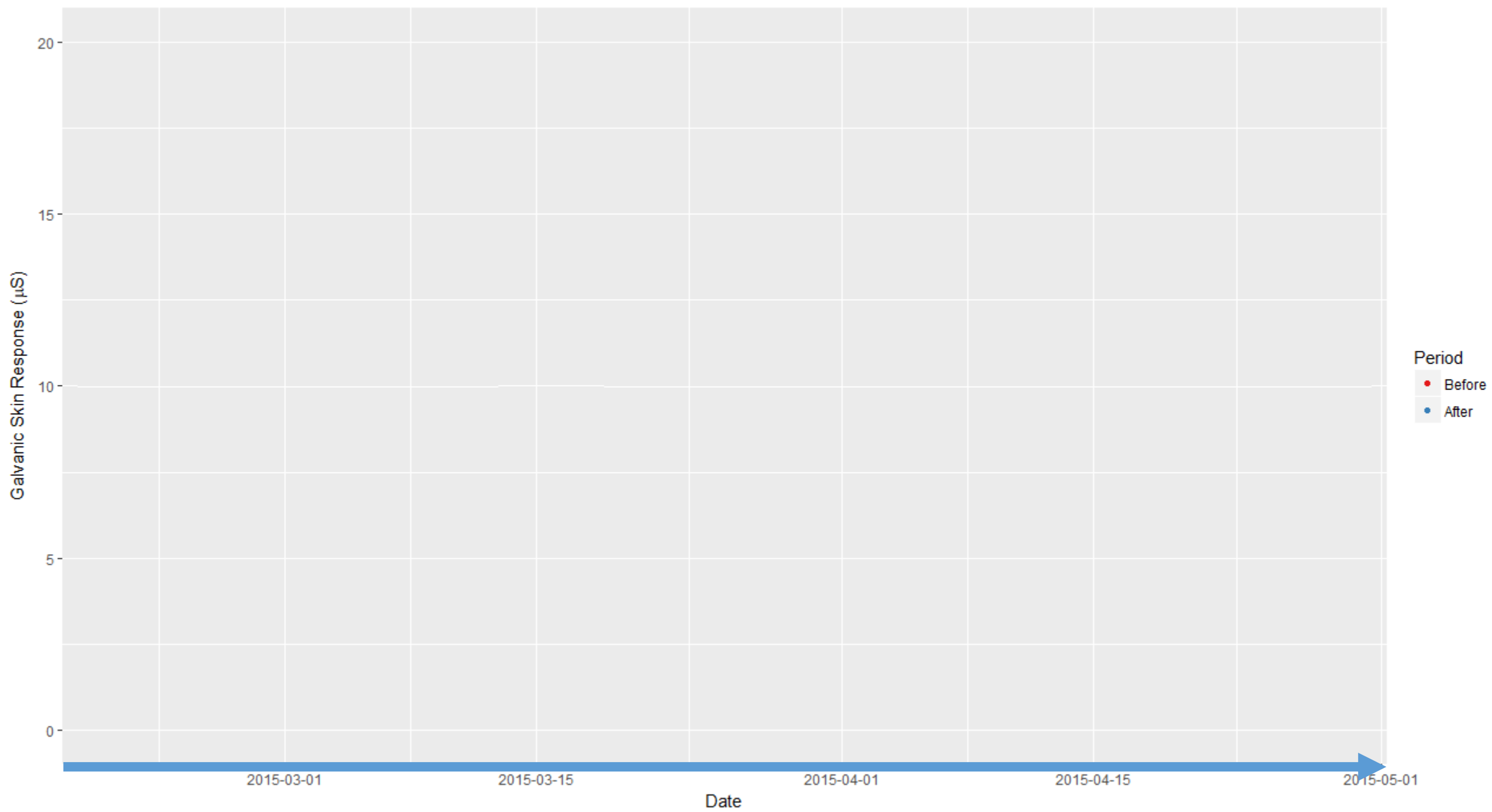




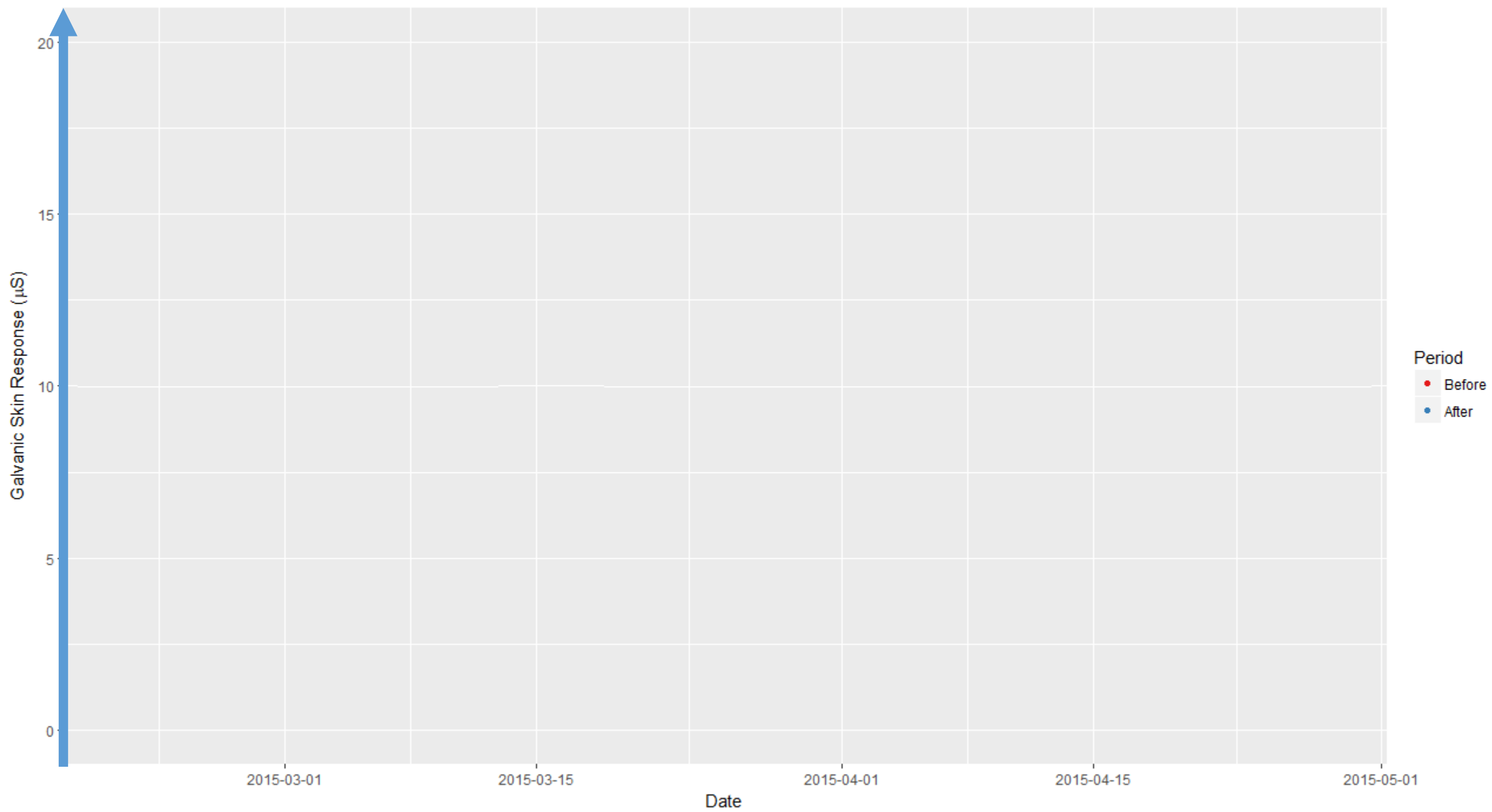




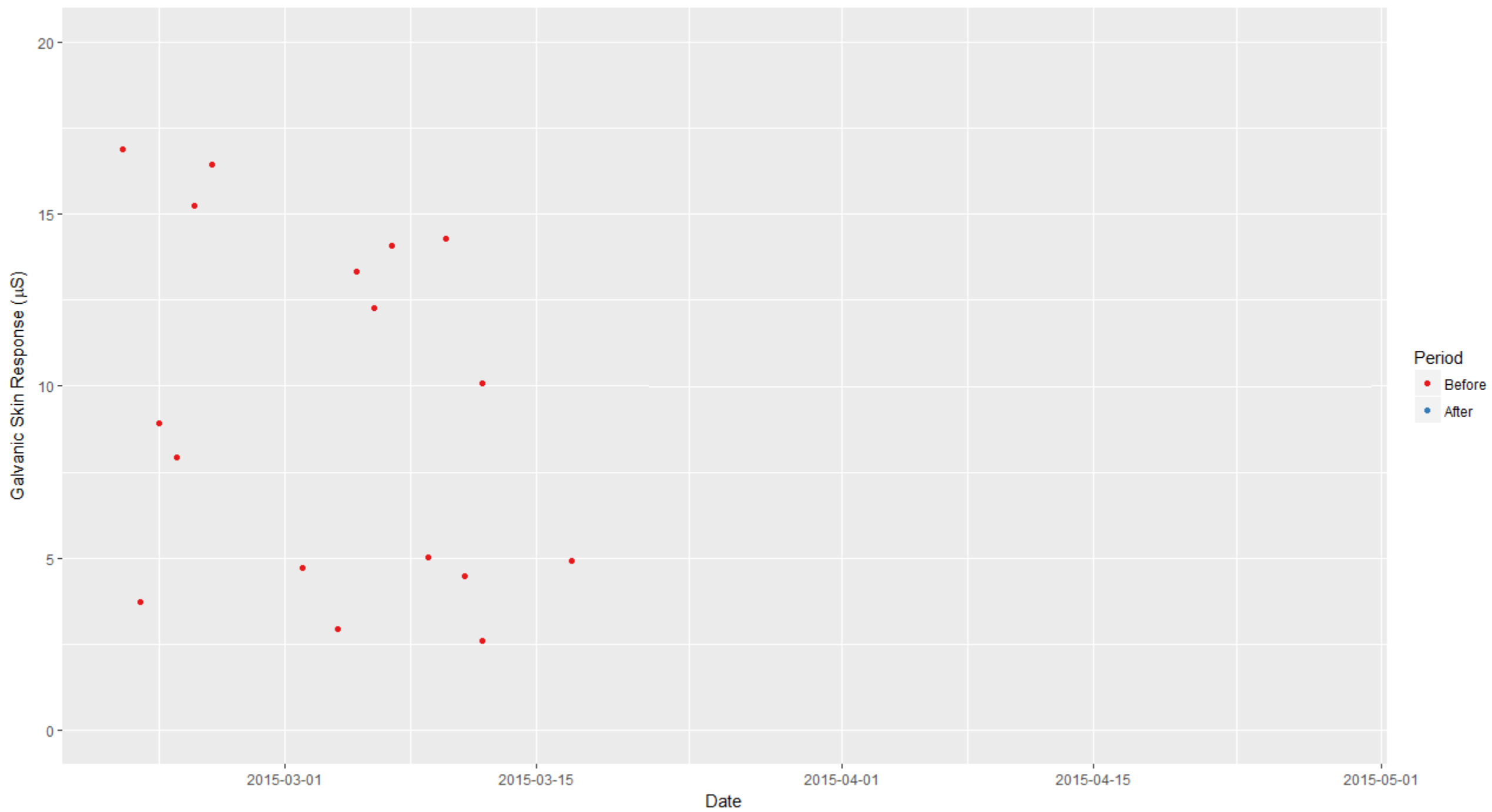
Average GSR Before and After Meditation Retreat



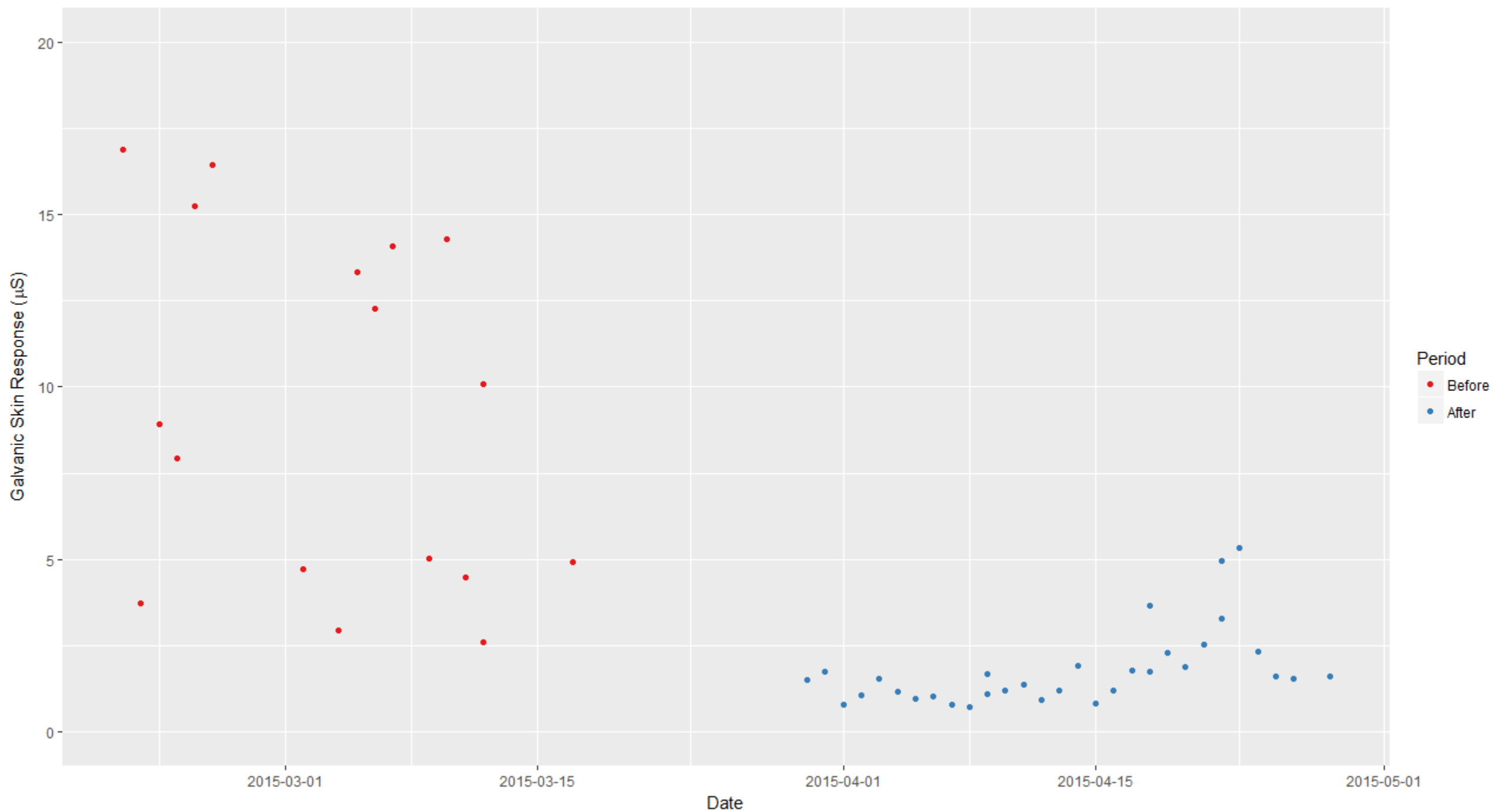
Average GSR Before and After Meditation Retreat



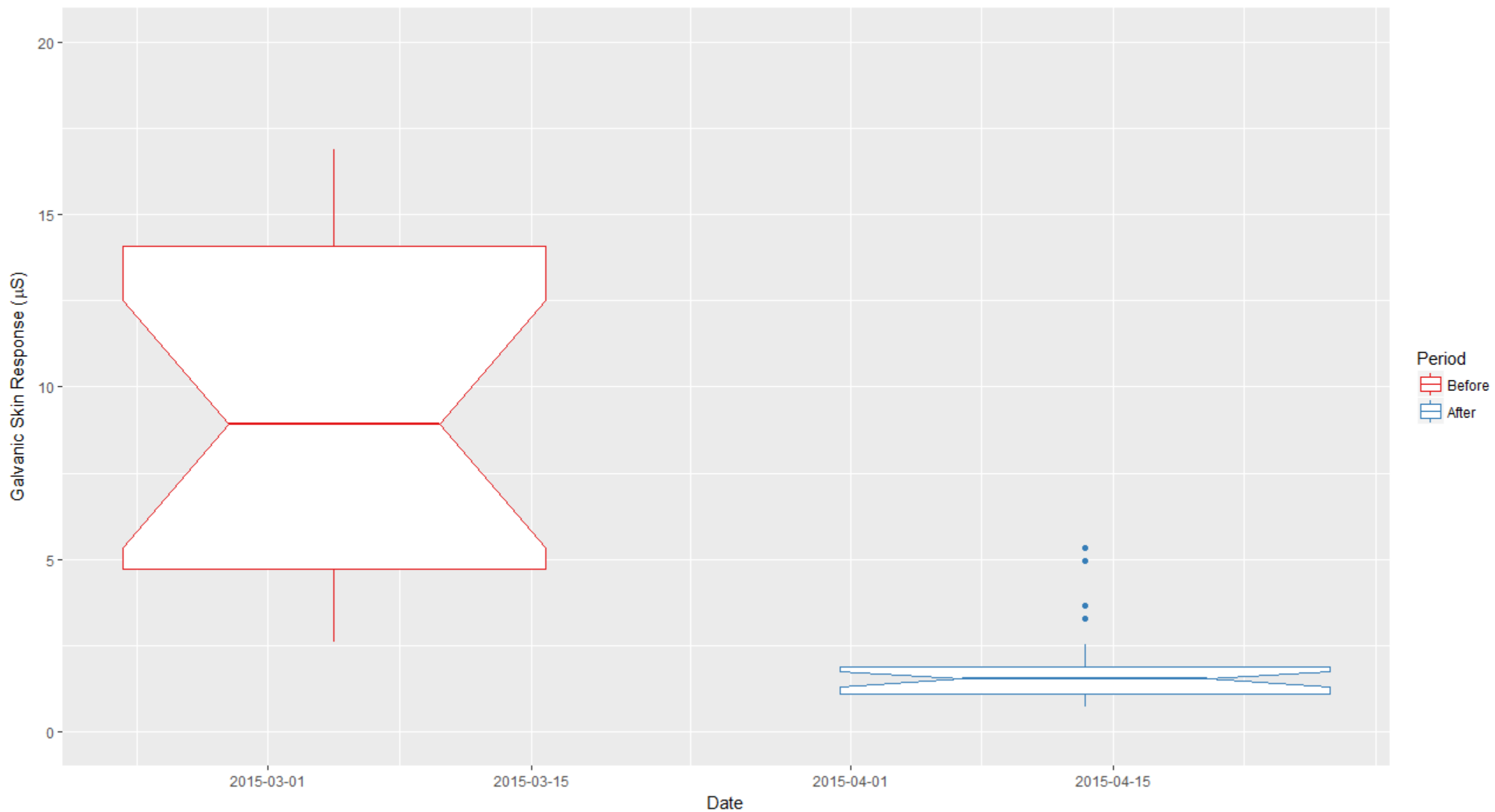
Average GSR Before and After Meditation Retreat



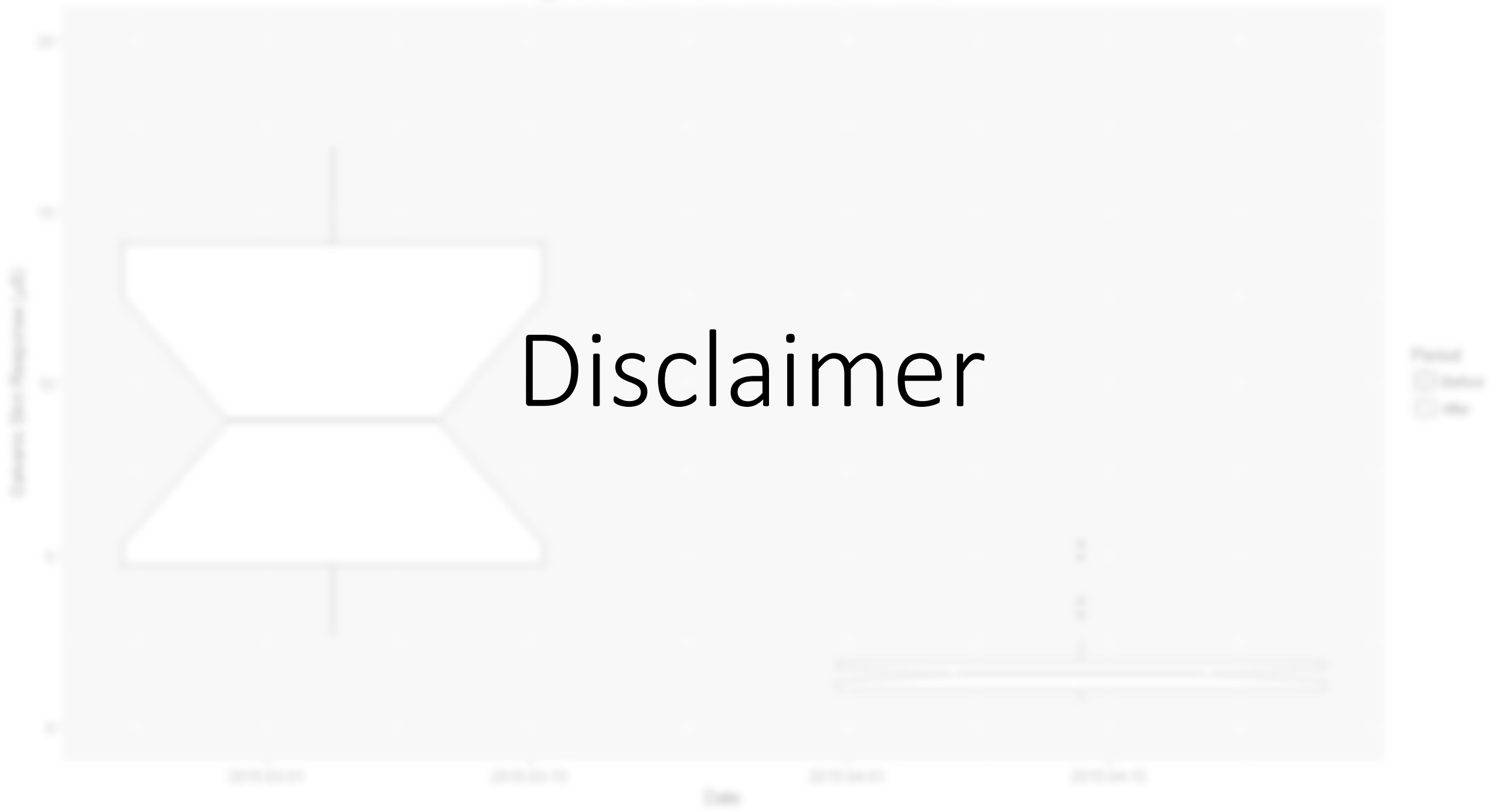
Average GSR Before and After Meditation Retreat



Average GSR Before and After Meditation Retreat



Average GDP Before and After Vaccination Retreat





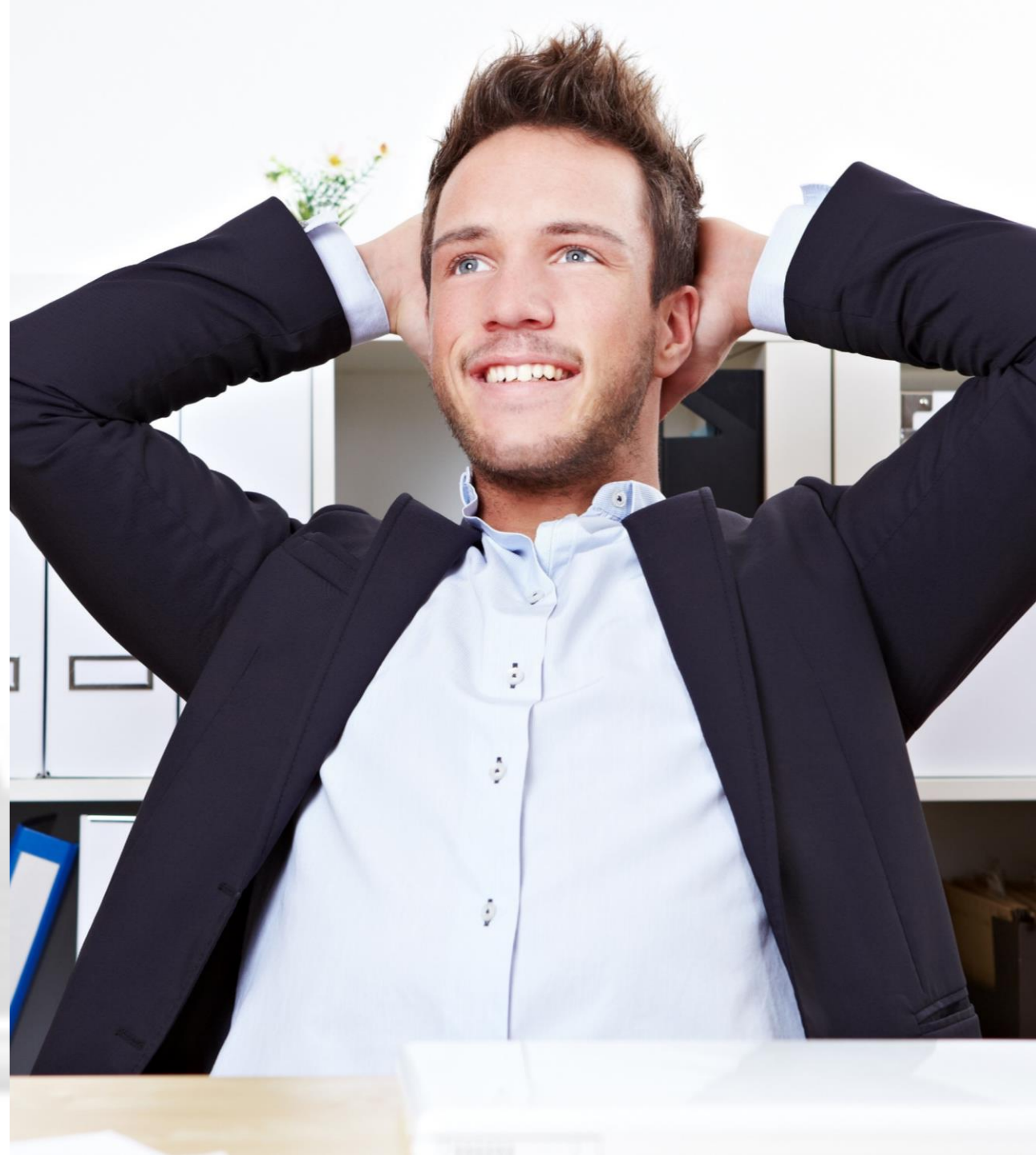


While I still have to *deal*
with my symptoms...

... I am no longer
suffering from them





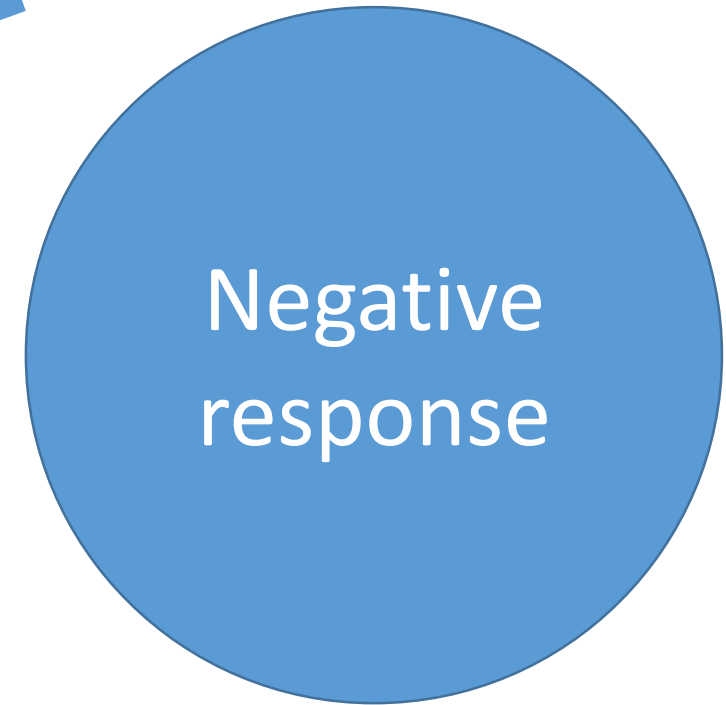


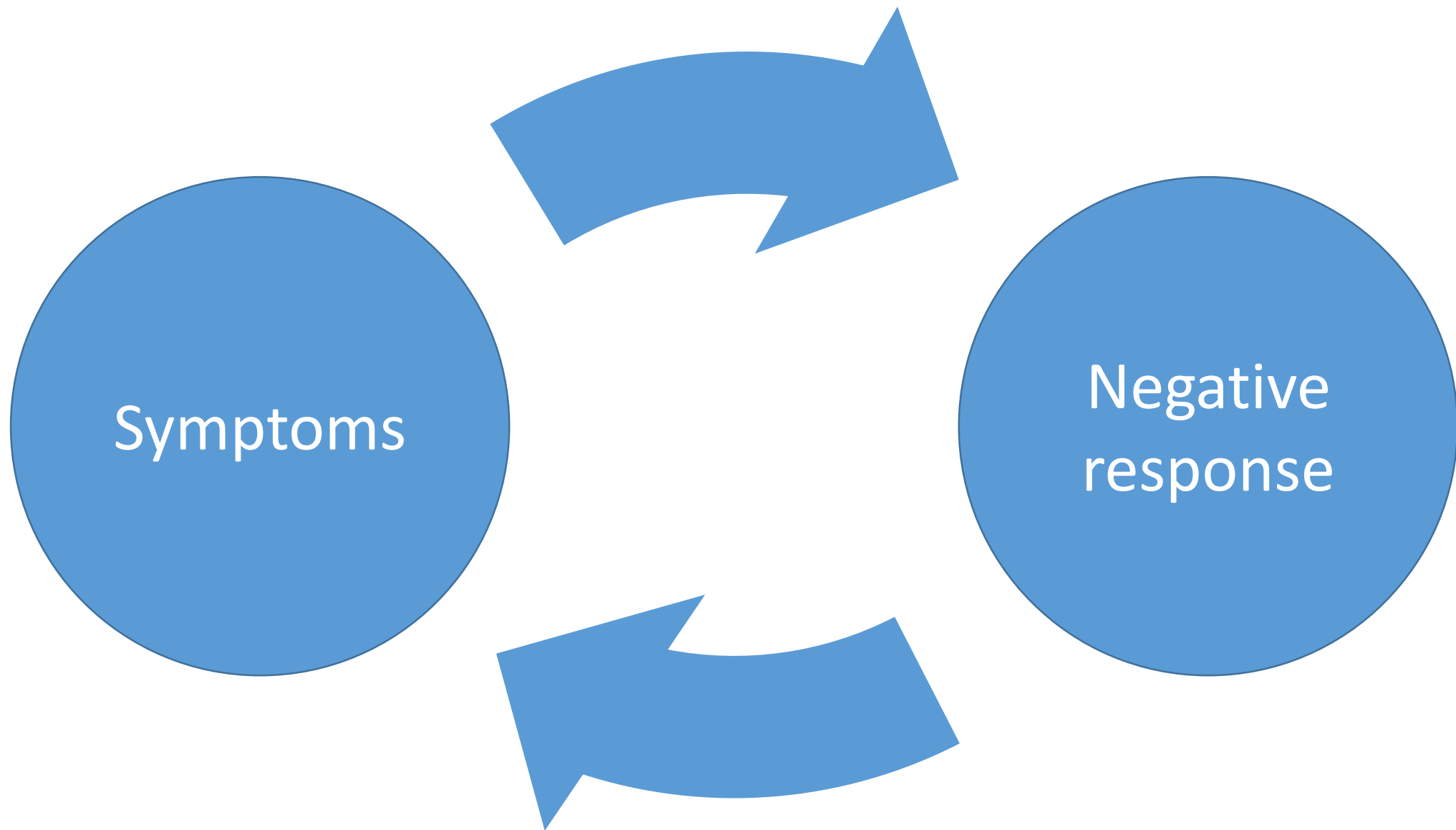


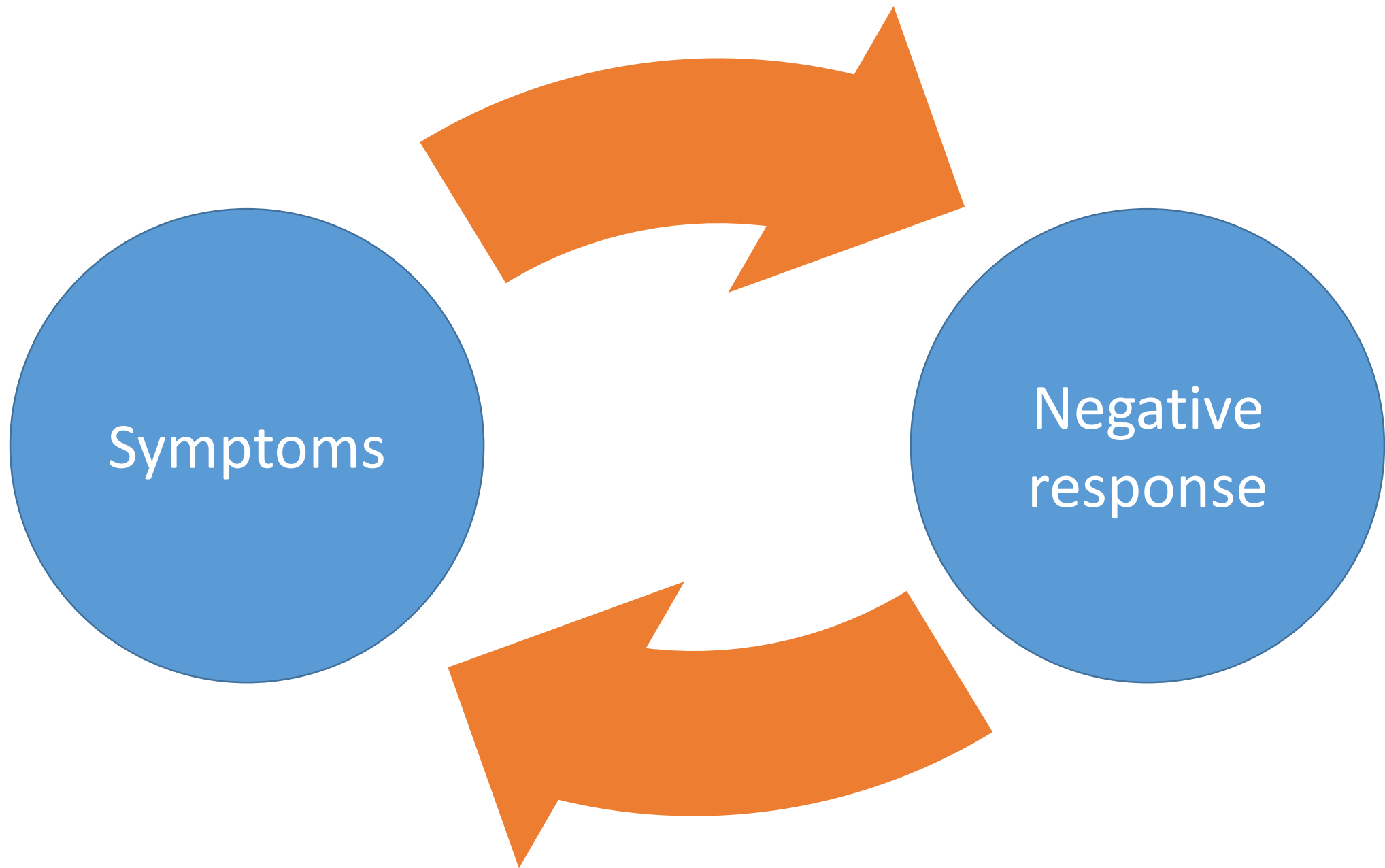
Symptoms

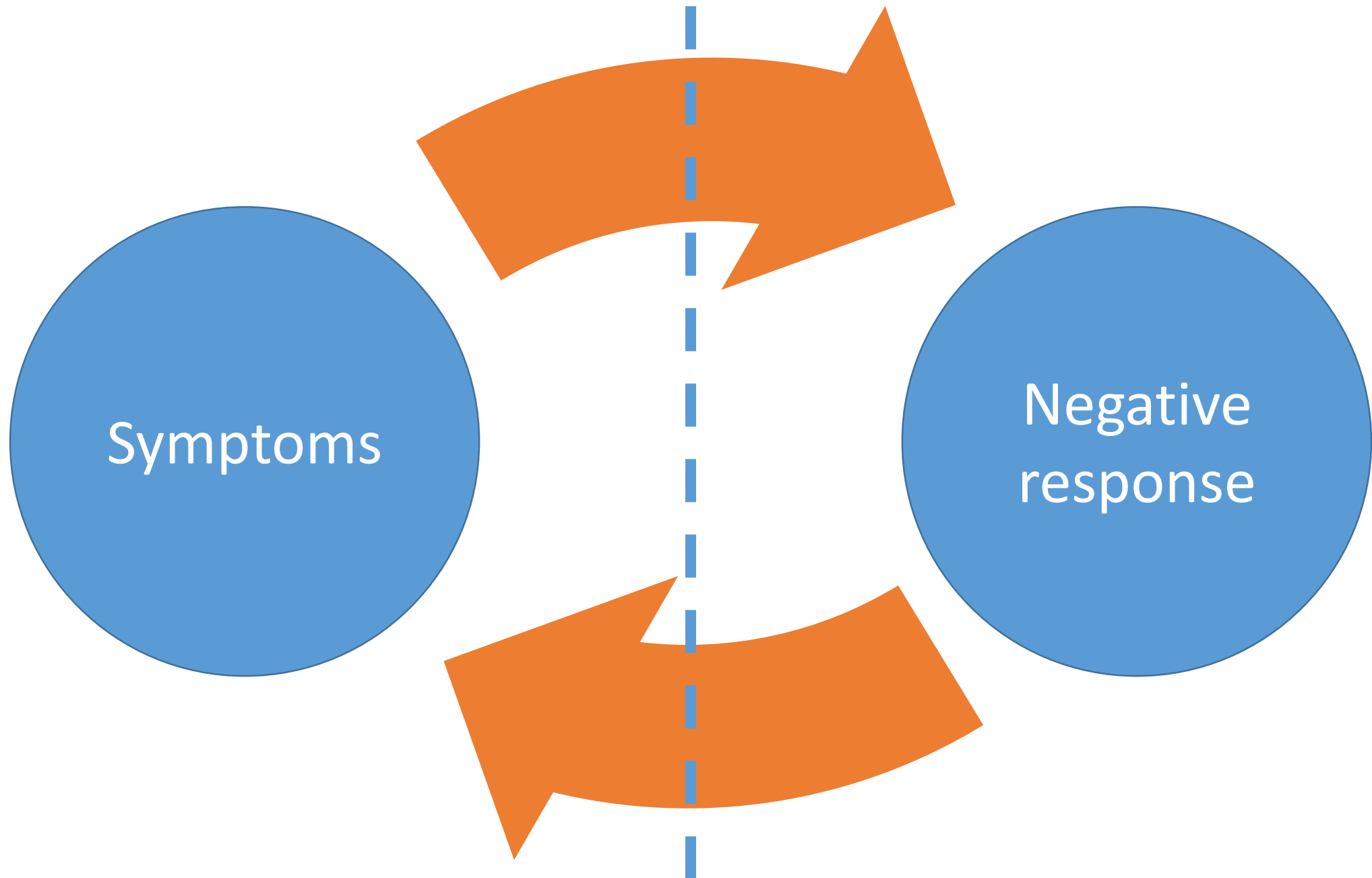


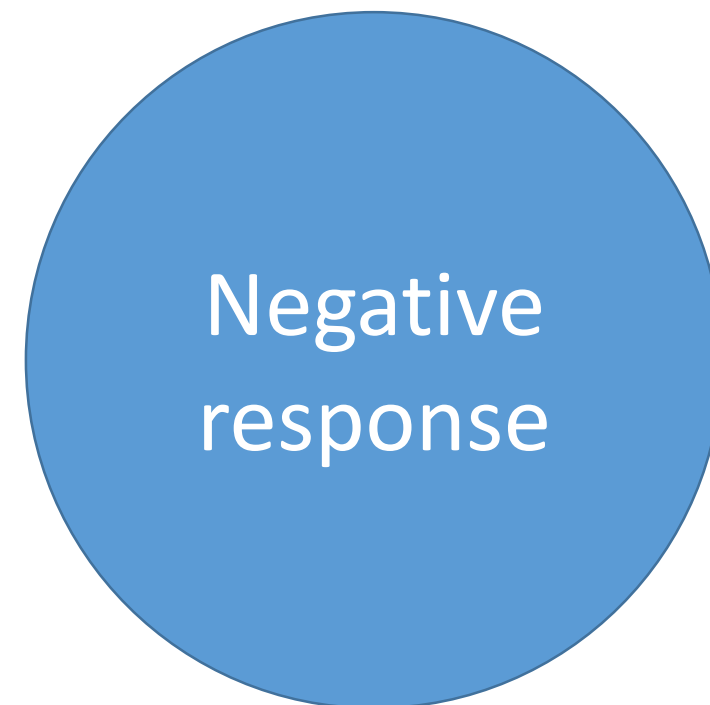
Negative
response













Easier said than done.









To those of you
who still struggle:

1. There is hope.

1. There is hope.

2. Don't give up.

1. There is hope.

2. Don't give up.

3. Try to reframe.

Enjoy life

Be empathetic

Be mindful

Where to Go Next?



Topic
Better Living

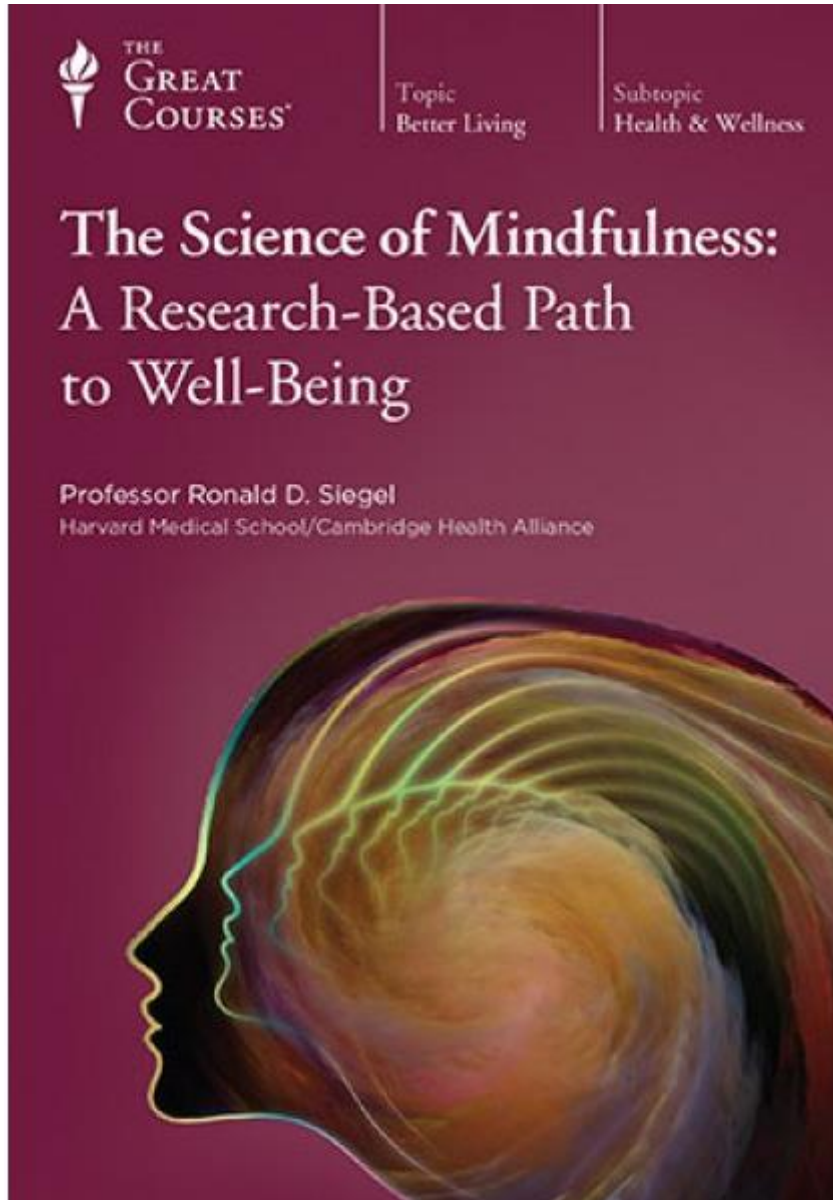
Subtopic
Health & Wellness

The Science of Mindfulness: A Research-Based Path to Well-Being

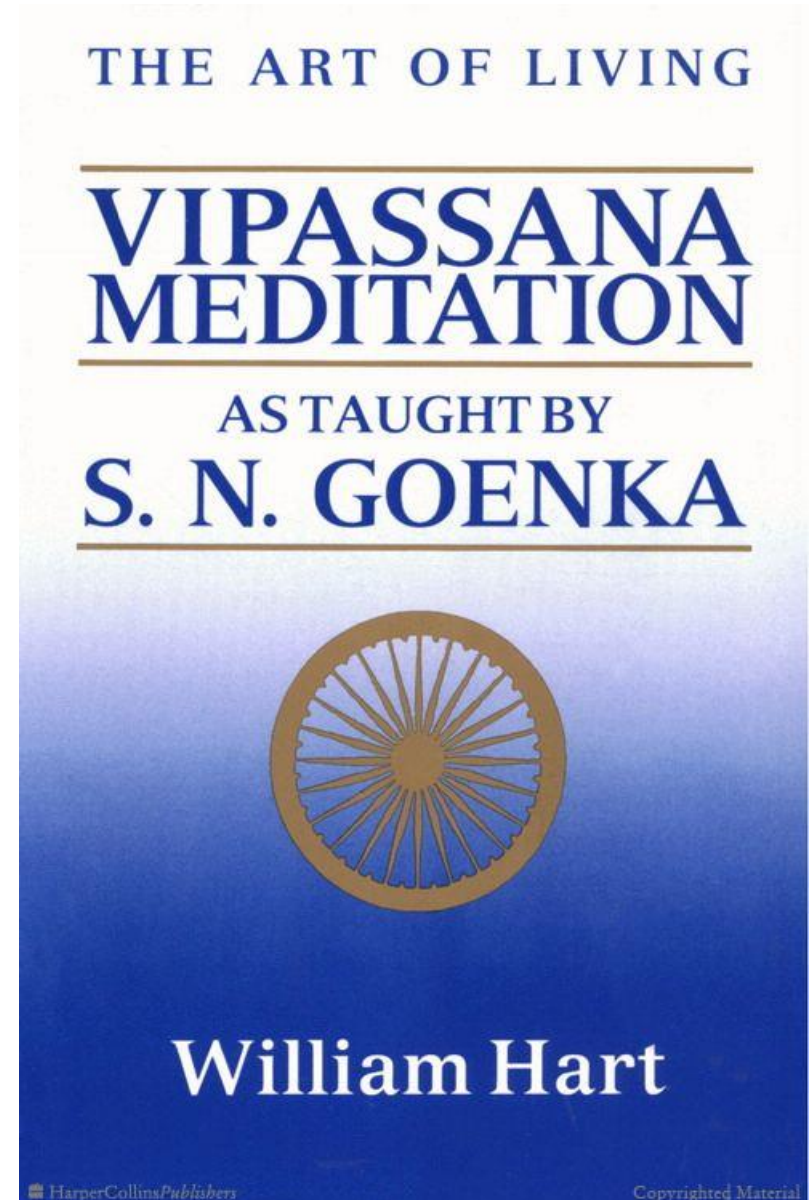
Professor Ronald D. Siegel
Harvard Medical School/Cambridge Health Alliance



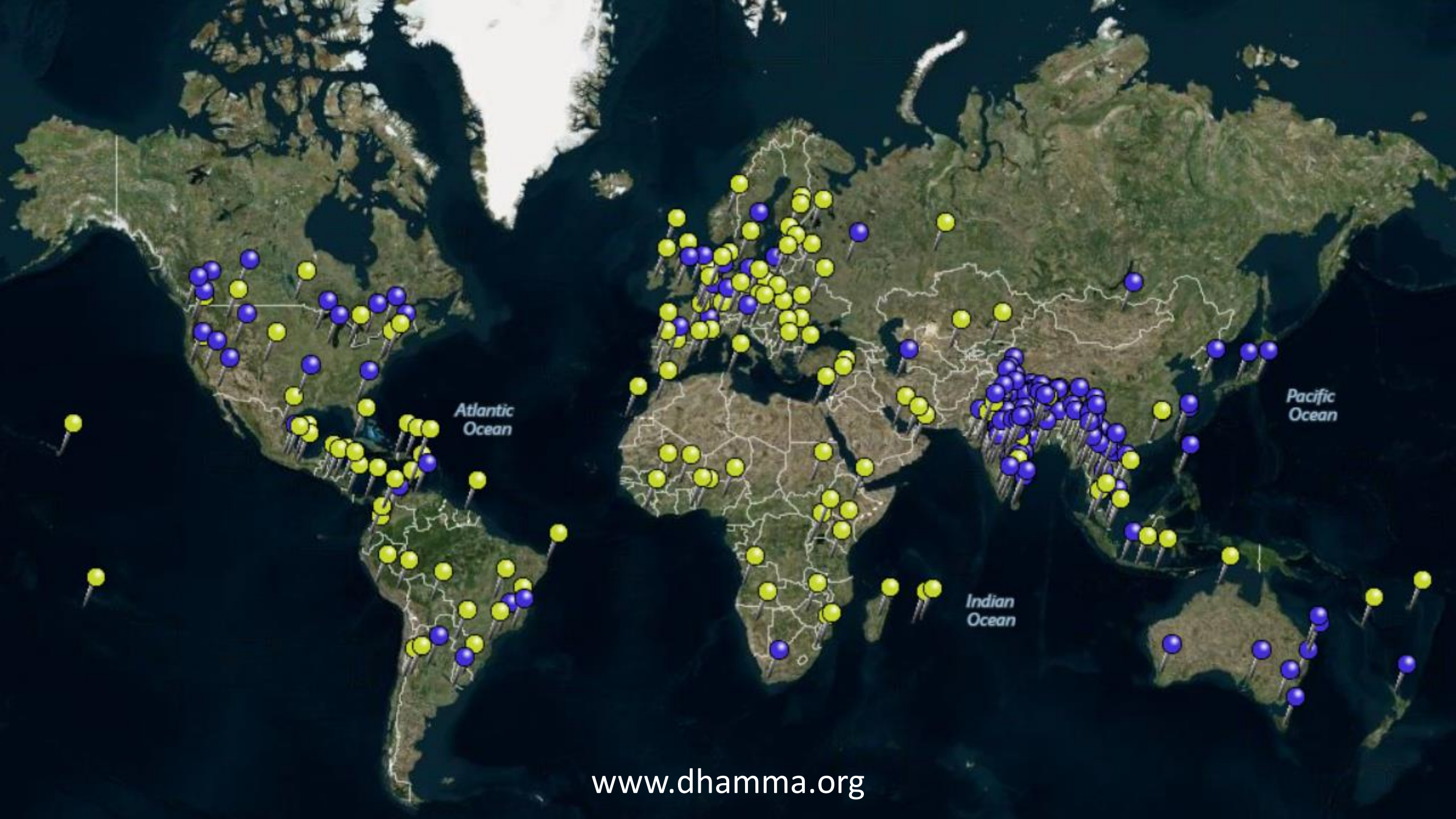
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It is possible to be in mental,
physical, or emotional pain but
to not be suffering.

Suffering is how we
respond to pain.

Thank You!

Matthew Renze

Data Science Consultant

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