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[**Data Sets:**](#_2mujm1b21nf) **1**

[Notes: Each datset contains: id, Time, age, sex, bdi\_total, safe, biological measurements. See outcome variable definitions.](#_kpqcs91bcull) 1

[19 and 34 ate before first time point. Must remove their T1. For any before after analyses MUST exclude them entirely. If looking at e.g. depression vs. metabolite can remove their T1 but include their later timepoints.](#_tlcz7sygvffv) 1

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[Cytokines Panel 1](#_ef26o7t347l2) 2

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# We also have a metabolic panel and cardiovascular risk panel

# Study Design

# 

Participants attended a 9-day “wellness” retreat where they performed ~100 hours of cognitive reframing

**Study Timepoints:**

T1: Baseline

T2: Day 6

T3: Day 9

T4: One month after the retreat

T5: Three months after the retreat

T6: Six months after the retreat

T7: 1 year after the retreat (surveys only)

**Study questions:**

Characterize the Biology of Depression and Depression Recovery

Characterize the Biology of Perceived Safety and changes in this metric

# Data Sets:

## Notes: Each datset contains: id, Time, age, sex, bdi\_totalx , safe, biological measurements. See outcome variable definitions.

## 19 and 34 ate before first time point. Must remove their T1. For any before after analyses MUST exclude them. If looking at e.g. depression vs. metabolite can remove their T1 but include their later timepoints.

40, 43, and 50 were on antidepressant medications. It would make sense to do the analysis both including and excluding them to see if it makes a difference. We have full health histories if you need more information.

## Cytokines

### Cytokines Panel 1

### Cytokines Panel 2

### Cytokines Panel 3

**Cytokine Housekeeping:**

plate, order, CHEX1, CHEX2, CHEX3, CHEX4,

### Notes:

Data not normalized or adjusted by plate. Plate 1 for Panel 1 is a different plate than plate 1 for Panel 2. Instructions from HIMC: Per plate can do a z-score normalization (by median for each cytokine)

Split Group name. Order is AG- order – id – Time - DX3

CHEX 1 — instrument

CHEX 2 — step of strepadvidan (last step of the assay)

CHEX3 — antibody addition

CHEX4 — non specific binding

\*method from HIMC on their website (r script) for non specific binding only applies to replicates…they are working on a new method that applies for multiple timepoints

We have some amount of non specific binding—one thing that we can do is plot each cytokine in the plate as a function of CHEX4—if we can see that there IS a correlation—it means that we need to normalize / standardize them to CHEX4. Want to lend stability and normalization using all values in the plate when you normalize.

## Metabolomics

### Notes:

We have provided metabolite identifiers. We also have a key that matches the metabolite identifier to metabolite name if desired.

Data normalized and adjusted according to lab standards.

## Lipidomics

### Notes:

Data normalized and adjusted according to lab standards.

## Psychometrics

We have included only bdi\_total (depression) and safe. We have more data available, including more surveys (anxiety, stress, meaning, satisfaction with life, etc) and including for participants that did NOT have blood (psychometrics and microbiome only).

# Variable Definitions

All of the data sets contain in addition to the cytokines, metabolites, and lipids, id, age, sex, depression, anxiety, stress, variable names are bolded below.

**id**: ID number that corresponds to each individual in the study.

**Time:** Study time point

* Levels
  + T1: Baseline
  + T2: Mid-Retreat
  + T3: End of Retreat
  + T4: One Month
  + T5: Three Months
  + T6: Six Months

**Depression**

* **bdi\_total:** Total depression score, as measured by the [Beck Depression Inventory II](https://www.kdheks.gov/c-f/integration_toolkits/Beck_Depression_Inventory_II.pdf)
* Range: 0-63
* Scoring:
  + 0-13: Minimal Depression
  + 14-19: Mild Depression
  + 20-28: Moderate Depression
  + 29-63: Severe Depression
* Note that in a discrete analysis 0-13 would be considered “Not Depressed” and 14-63 would be considered “Depressed”

**Perceived safety**

* **safe**: as measured by the [Primal World Beliefs Index](https://ppc.sas.upenn.edu/sites/default/files/primalworldbeliefsclifton.pdf) (PI-18 short form version)
* Range: 0-5

**Anxiety**

* **gad7\_total**: as measured by the Generalized Anxiety Disorder scale
* Range: 0-21
* Scoring
  + 5-9: mild anxiety
  + 10-14: moderate anxiety
  + 15-21: severe anxiety

**Stress**

* **pss\_total**: as measured by the The [Perceived Stress Scale-10](http://www.ucdenver.edu/academics/colleges/medicalschool/departments/Anesthesiology/Wellness/Documents/PerceivedStressScale.pdf)
* Range: 0-40
* Cutoffs
  + 0-13: Low Stress
  + 14-26: Moderate Stress
  + 27-40: High Stress

Preliminary results:







