



# The Brain Project

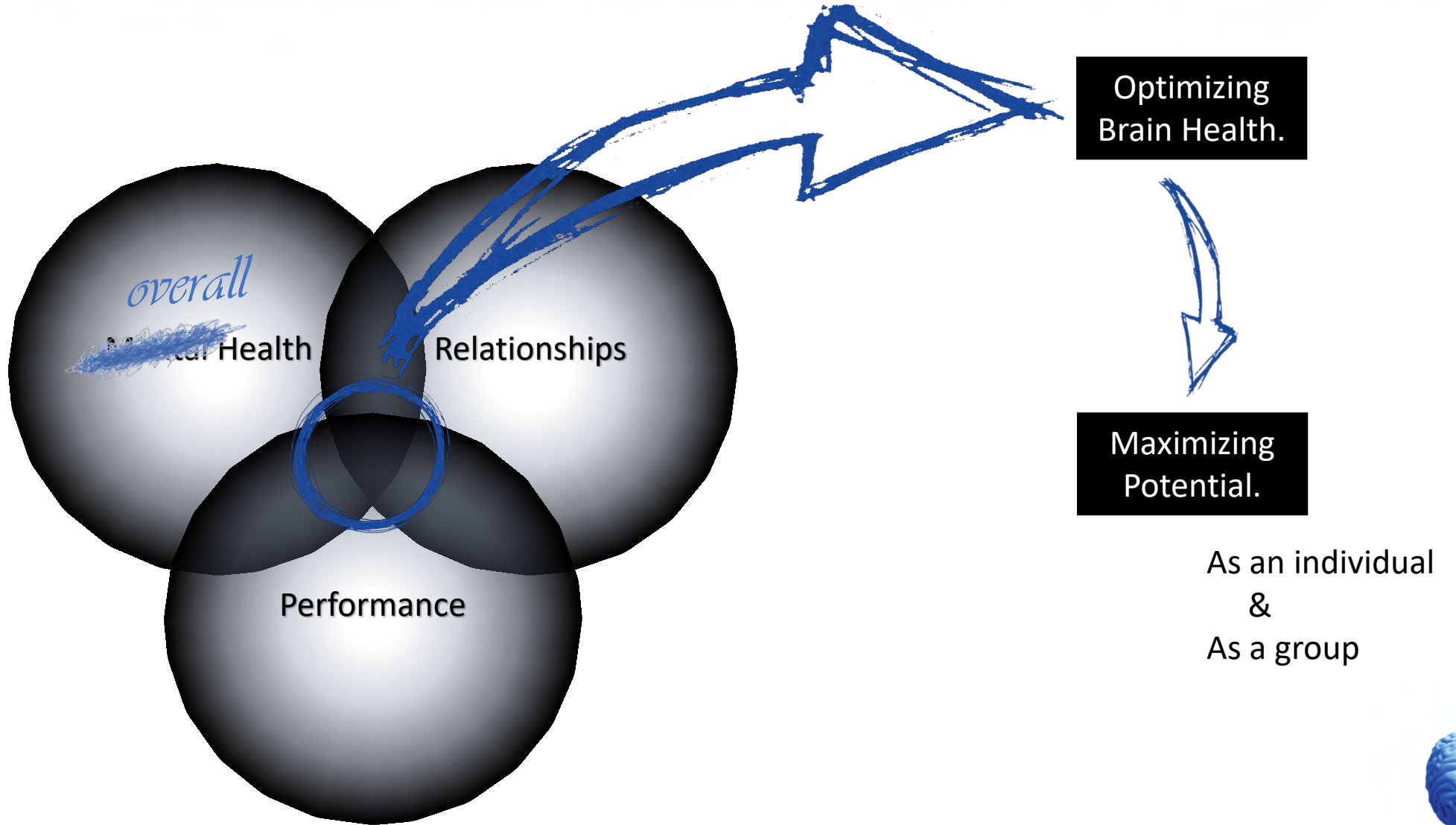
Optimizing Brain Health. Maximizing Potential.

“There is an emerging mental health crisis. We have to respond. This program is the most effective and prescriptive program solution there is. In order to maximize our potential in moods, diseases and behaviors we must optimize our brain health.

Why? Because it is the core, it is your hard drive.”

Dr. Joel Robertson





## Why Did We Try This Program?

- Impacts of COVID on staff – stress, mental fatigue, anxiety, etc.
- Assist staff with behavior changes and relationships both at home and at work
- Wellness benefit with potential to reduce healthcare costs over time



- Staff were tired and burned out
- Stress was impacting their performance at work but also choices they made in private...people were starting to “snap”
- Joy was gone and had been replaced with “government”



- Give employees strategies to assist with home challenges/work challenges to reduce the negative impact in both areas
- Bring awareness to and possibly reduce risky or “self-medicating” behaviors
- Provide a way to deal with stress/anxiety/depression/etc. more constructively



# Wellness Benefit & Cost Saver!

- Employees are people first....If we want to keep them we need to treat them well
- Identify health risk factors and provide ways to improve the “odds”
- Change behaviors over time and save individuals and taxpayers money!





Understanding the impact of  
this cultural moment on  
physical, mental,  
spiritual, and brain health



# Trends since March 2020

## RBH Aggs (Study of 1753 individuals)

Finding/Factor	Increase since March 2020
Feelings of stress	1.45
Use of substances to relax (self-medicate)	2.57
Use of substances to pick me up (self-medicate)	1.52
Medication for anxiety	1.66
Medication for depression	2.06
Poor or deteriorating memory	1.37
Experience fearfulness or insecurity	2.59
May avoid people because of insecurity	1.77
Defensiveness	1.24
Resistance to change	1.51
Negative thoughts	1.37
Harmonizing behavior	1.71



# Trends since March 2020 Government Executives Compared to RBH Aggs (pre)

Finding/Factor	Compared to pre 2020 RBH
Feelings of stress	1.15
Use of substances to relax (self-medicate)	2.23
Use of substances to pick me up (self-medicate)	1.68
Medication for depression	1.61
Medication for anxiety	1.27
Frequent changes in mood	1.32
Poor or deteriorating memory	1.44
Feel angry	1.33
May avoid people because of insecurity	1.52
Indecision	1.65
Tend to procrastinate	1.51
Harmonizing Behavior	1.85



# Trends since March 2020 Government Employees Compared to RBH Aggs (pre)

Finding/Factor	Compared to pre 2020 RBH
Feelings of stress	1.17
Medication for anxiety	2.00
Medication for depression	2.54
Experience fear that is probably unfounded	2.54
Significant mood swings	1.46
Feel disliked	1.41
Poor or deteriorating memory	1.18
Tend to overreact when stressed	1.42
May avoid people because of insecurity	2.09
Detailed driven	1.64
Harmonizing Behavior	2.01



# Trends since March 2020

## Law Enforcement (Study of 818 LE Patrol)

Finding/Factor	Increase since March 2020
Feelings of stress	1.22
Use of substances to relax (self-medicate)	1.84
Use of substances to pick me up (self-medicate)	1.32
Medication for anxiety	1.24
Medication for depression	0.99
Experience fear that is probably unfounded	2.31
Poor or deteriorating memory	1.45
Feel angry	1.39
Defensiveness	1.20
Perfectionism	1.17
May avoid people because of insecurity	1.76
Compulsive work	1.72



# Trends since March 2020 Correction Deputies (Study of 185)

Finding/Factor	Increase since March 2020
Feelings of stress	1.79
Use of alcohol to relax (self-medicate)	1.28
Use of alcohol to pick me up (self-medicate)	1.68
Medication for anxiety	1.34
Medication for depression	1.30
Experience fear that is probably unfounded	3.17
Significant mood swings	1.46
Feel disliked	1.79
Poor or deteriorating memory	1.38
Frequent changes in mood	2.30
Resistance to change	1.02



# Trends since March 2020

## Fire Fighters

Finding/Factor	Increase since March 2020
Feelings of stress	1.50
Use of alcohol to relax (self-medicate)	1.20
Use of alcohol to pick me up (self-medicate)	1.00
Medication for depression	2.43
Medication for anxiety	1.52
Trouble sleeping through the night	1.32
Poor or deteriorating memory	1.57
Aggressive behavior	1.12
Feel angry	1.18
Overcontrolling when stressed	1.10
Procrastination	1.11



# Trends since March 2020

## ECO/Dispatch

Finding/Factor	Increase since March 2020
Feelings of stress	1.28
Use of alcohol to relax (self-medicate)	1.52
Use of alcohol to pick me up (self-medicate)	1.67
Medication for depression	1.85
Medication for anxiety	1.23
Frequent changes in mood	1.59
Poor or deteriorating memory	1.70
Significant mood swings	1.22
Feel angry	1.44
Overcontrolling when stressed	1.70
Resistance to change	2.65





# Robertson Brain Health

Optimizing Brain Health. Maximizing Potential.

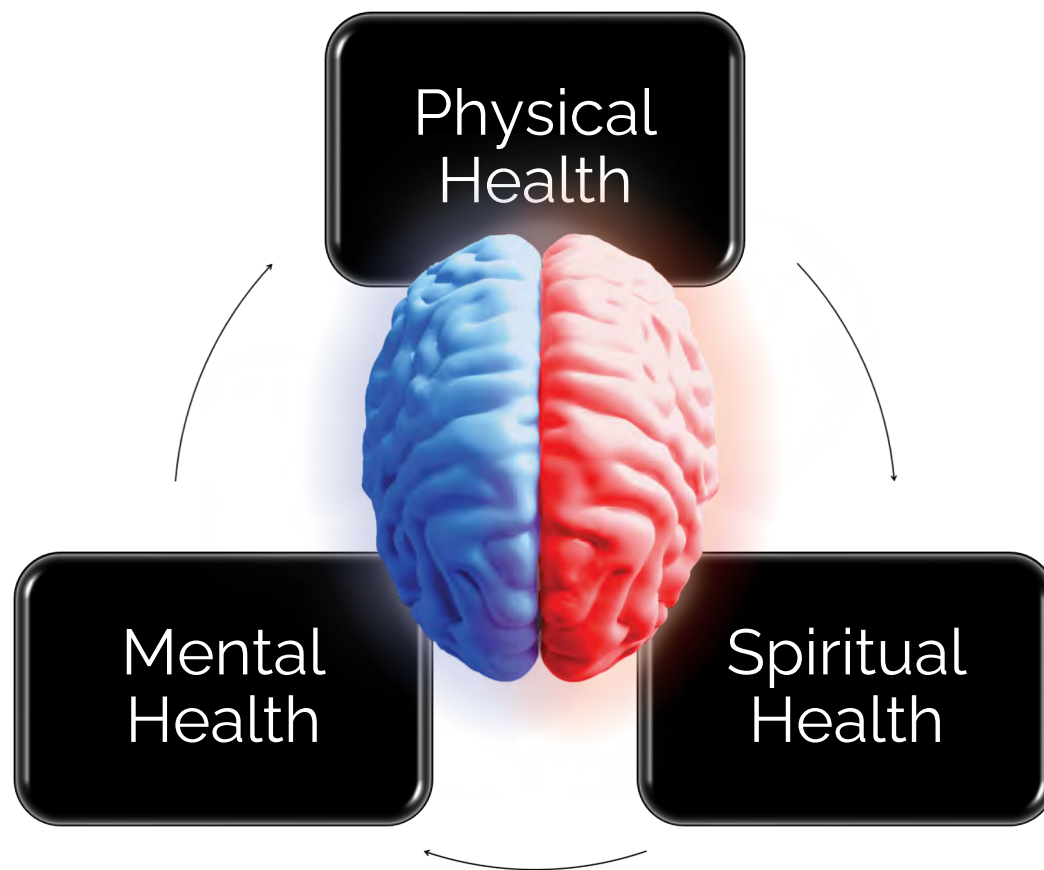
Dr. Joel Robertson  
CEO and Founder



# What Do You Need to Think About?

- Is Robertson Health trustworthy?
- Is Robertson Health research based?
- Is there value for you, your employees and/or your agency to participate?





# What does Robertson Brain Health do?

We use artificial intelligence, predictive analytics, population grouping, and inference logic;

To **predict** the diseases, moods, and behaviors you are likely to develop or have developed;

And **prevent** them or reduce their impact on your health, performance, and relationships:

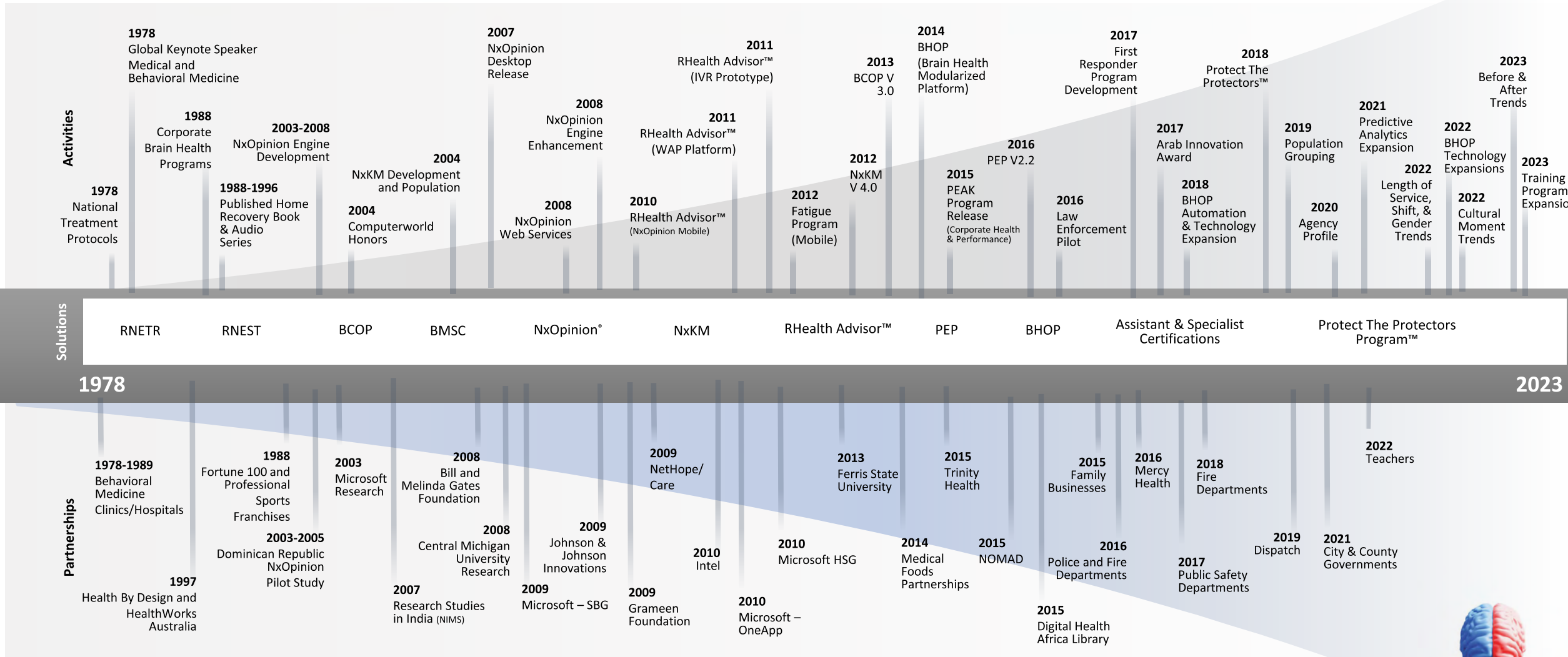
By creating a **personalized** program that you WILL do.



- Robertson Brain Health:
  - Provides the Brain Project for professional athletes, corporations, governmental agencies, education institutions, mental and public health professionals
  - Provides leadership training for executives desiring to understand implicit bias, generational leadership, and improved decision-making capabilities
- Robertson Research Institute (501(c) 3 public charity)
  - Provides the Protect the Protector™ program for first responders
  - Performs Research and Development for Robertson Health companies
- Robertson Institute
  - Provides concierge behavioral medicine to executives and their families
- Robertson Family Foundation (private charity)
  - Involved in addressing challenges of underserved populations



# Robertson Health – a rich history



# Robertson Health – a global reach



<sup>(1)</sup>Top 5 in the world “whose visionary use of information technology produces and promotes positive social, economic, and educational change

<sup>(2)</sup> Best use of predictive analytics and artificial intelligence in behavioral medicine in 34 countries

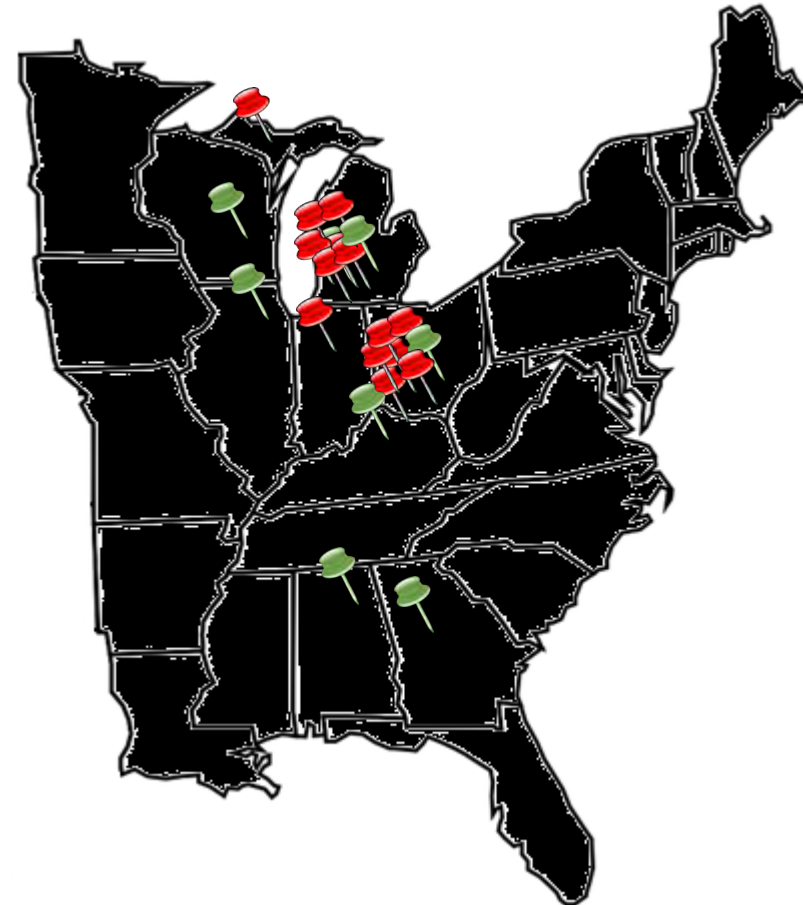
- City and County Governments
- Educational Institutions
- Professional Athletes
- Corporations

**More than 17,000 individuals in the database from twenty-five countries**



# Protect the Protectors™

The story since 2016



## Fall of 2016 Pilot Program



## 2017 – 2023 Program Expansion

- Over 50 Partners
- Over 2,000 First Responders
  - Police
  - Public Safety
  - Corrections
  - Fire
  - Dispatch
- Servicing 9 states







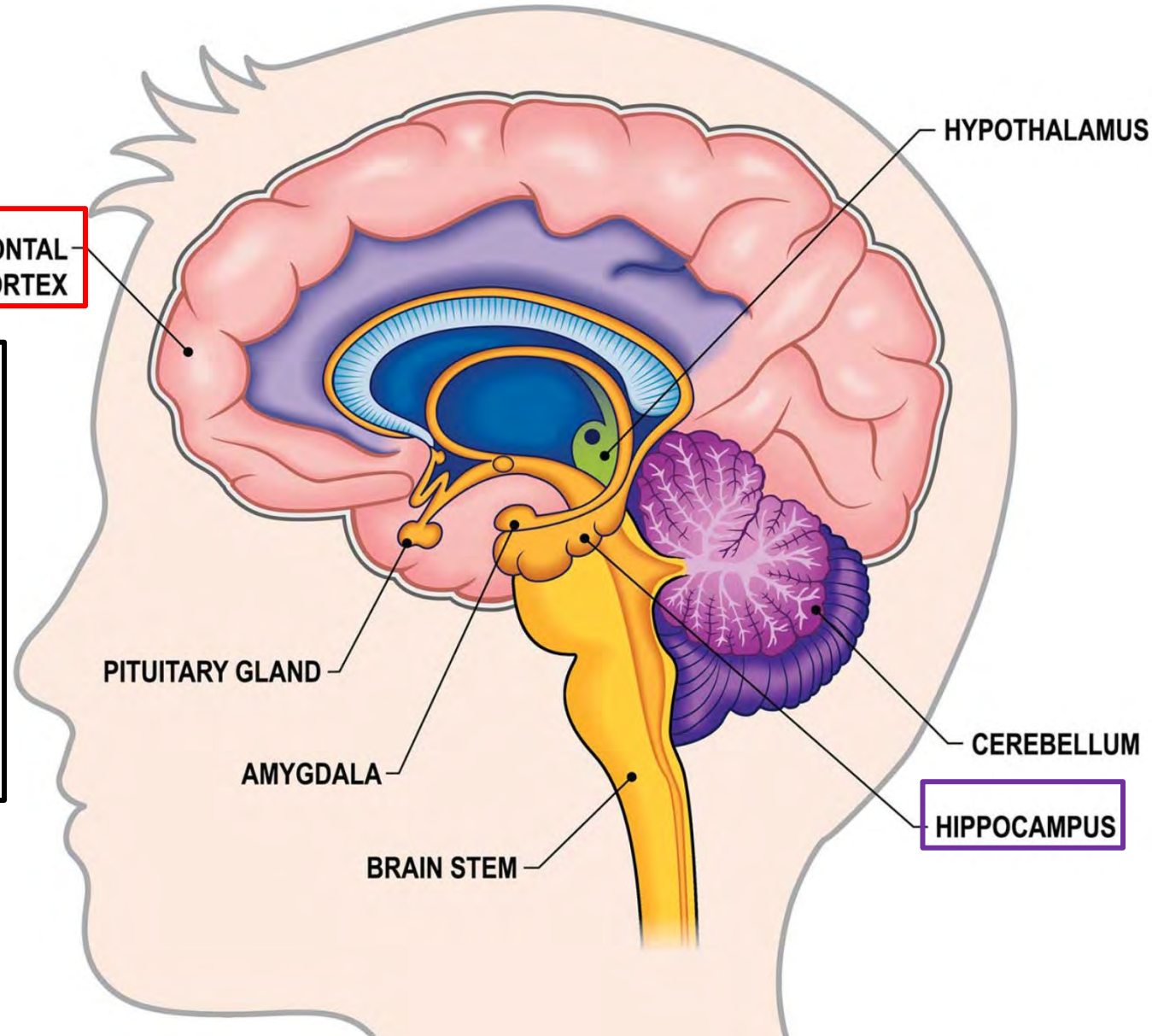
**Take Control of Your Brain or  
It Will Take Control of You**

# Step One: Pre-Frontal Cortex Development: The formation of truth, perception and expectations



Stories, memories  
Evidence  
Situations Define  
Your Perceptions  
and Expectations

Trust (who and when)  
Love (who, when, how deep,  
boundaries)  
Good (what is definition,  
criteria)  
Respect (what does that  
mean)  
Identity (Power, money, sex,  
accomplishments)  
Fear (when do I feel safe)

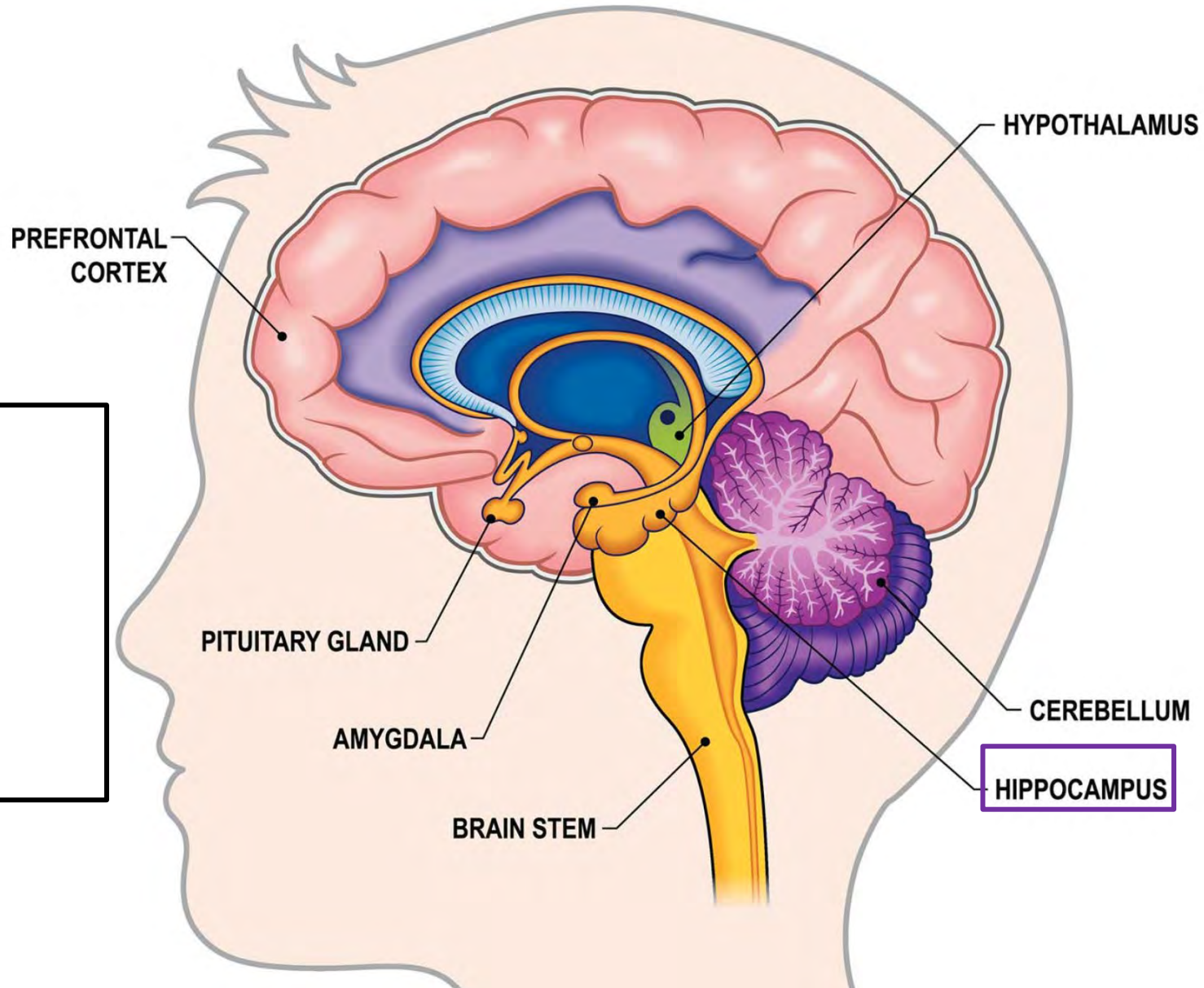


## Step Two: Hippocampus: The Memory Manager



- Creates Memories
- Sorts Memories
- Attaches Emotions to Memories

Creates themes while sorting:  
Fear of failure  
Fear of safety  
Fear of significance  
Fear of closeness  
Fear of control  
ETC.



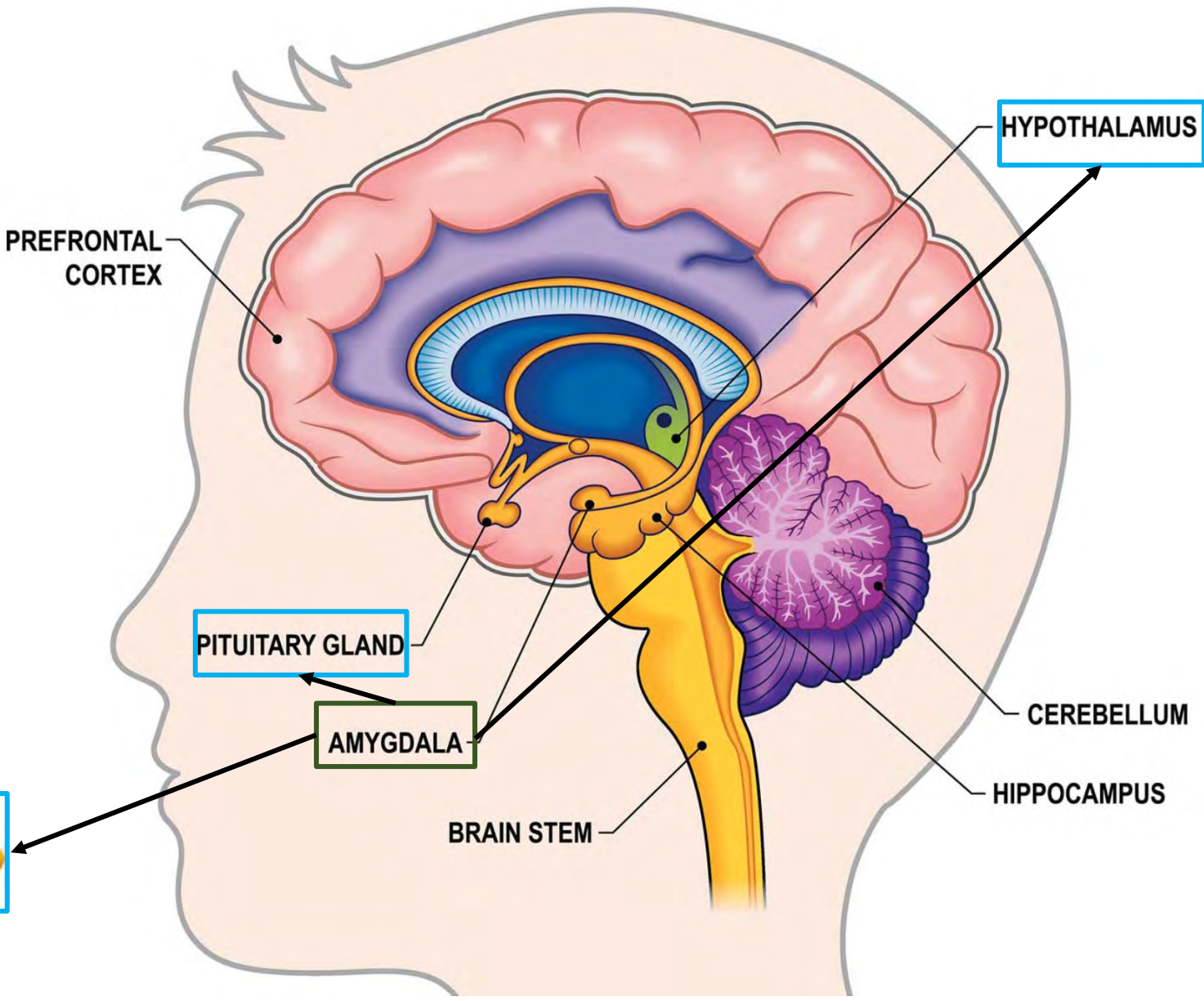
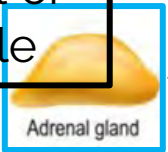
# Step Three: Amygdala: Interpretation of event or situation



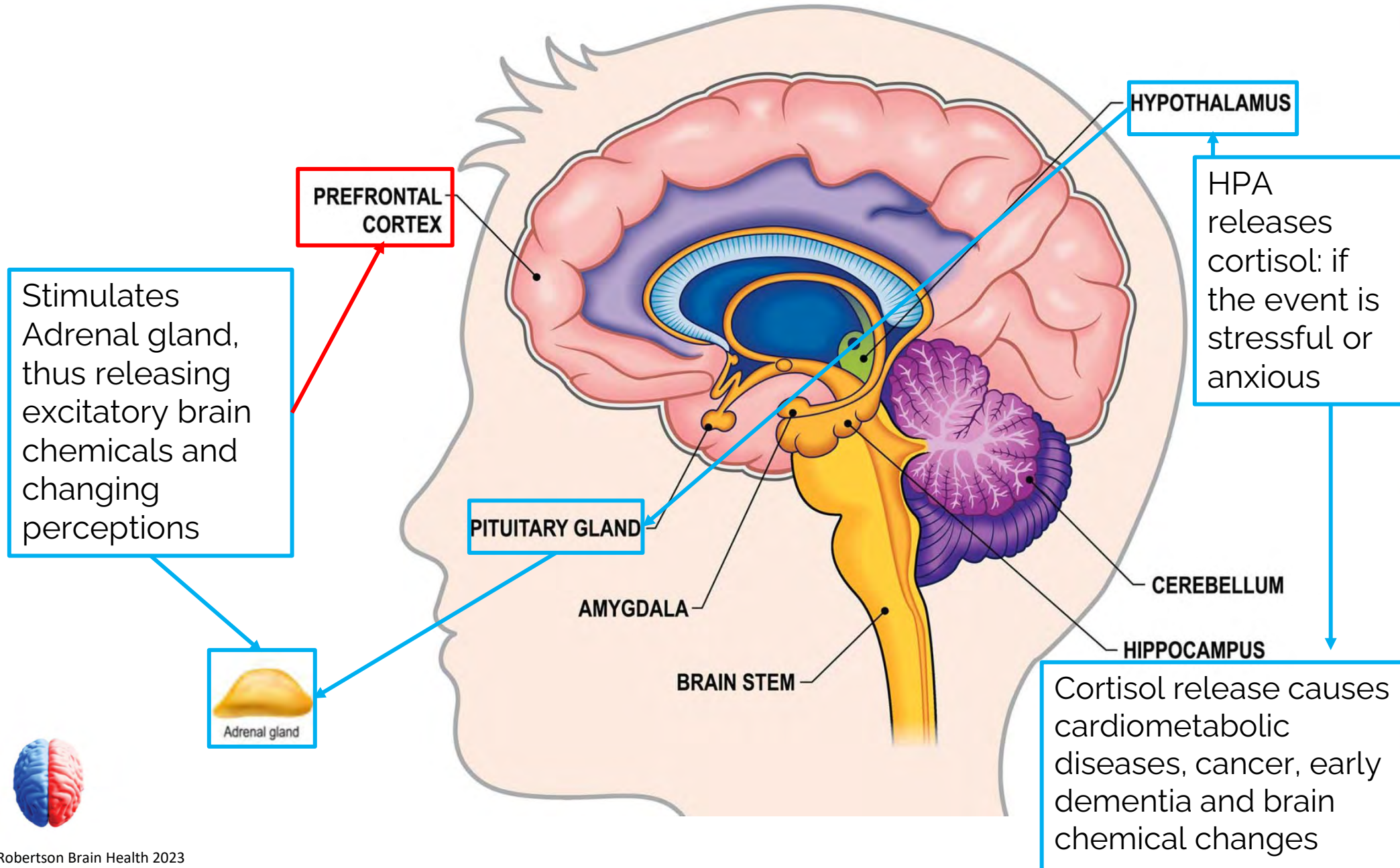
Amygdala uses memory and perceptions to define event as positive or negative

When Amygdala fires it activates the Hypothalamus-Pituitary-Adrenal Axes

Amygdala fires when you feel out of control or uncomfortable



# Step Four: HPA Axes: Impacts on the brain and body



## Step Five: Cerebellum: Consolidates and forwards to Cerebrum



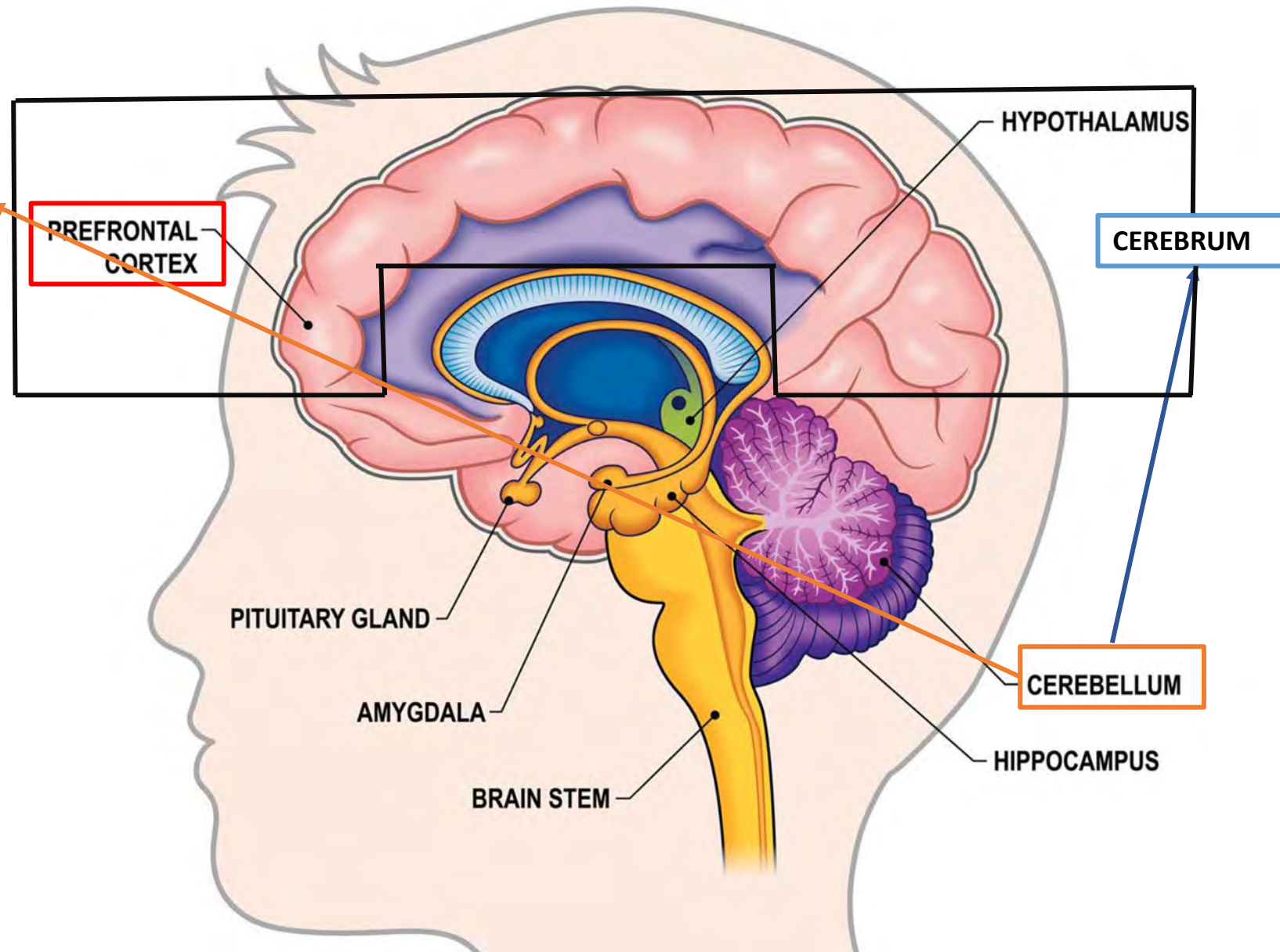
Incorporates

- Perception of the event
- Interpretation of the event

Sends the event

- Cerebrum and (Critical for thinking that simulates)
- Prefrontal Cortex
- Attachment to the event

Cerebrum takes emotional message from cerebellum and adds logic to come to a conclusions



# Example

- Struggled to say my line in a school play
- Amygdala fires as you felt out of control
- The Hippocampus stores this perception of “I can’t speak in public” as truth
- The Hippocampus themes this situation as a “Fear of failure”
- When asked to speak in public again your response is “I can’t” remembering your fear of failure
- Cerebellum tells cerebrum “Don’t try new things as you will fail”
- This response is reinforced since you didn’t experience discomfort by avoiding the attempt
- Now you have a fear of trying new things



# Why is this important to me?

All anxiety, depression, unwanted behaviors and performance are created by this system

If you want to reprogram your brain for optimal health and maximum potential, you must know how it is programmed.

The Robertson Brain Health Assessment helps you understand how your brain is programmed and how to reprogram it.





# Understanding How Your Brain Health Assessment Works

The brain messaging system

Senses, emotions, and perceptions come in...

Data In

And are filtered, processed, and interpreted by two key areas of the brain...

Neurotransmission

Major Brain Networks

Which determines our health, performance, relationships, moods, perceptions, expectations, values, definitions, and behavior

Health, Performance, Relationship Risks

Physical Brain Responses

The lens through which we see

Impacts response to future data coming in



Areas we can change using Brain Health Techniques



# National Institutes of Health: Causes of Diseases, Moods, and Behaviors

## Genetics

Best identified through family history (demonstrates expression of genes)

## Environment

### Childhood Development (Pre-12 Years)

Developmental history including adverse childhood experiences  
Oppression and the brain  
Frontal lobe development (Reward Centers)

### Present Environment

Culture  
Stress  
Environmental factors  
Health factors  
Relationship factors

## Lifestyle

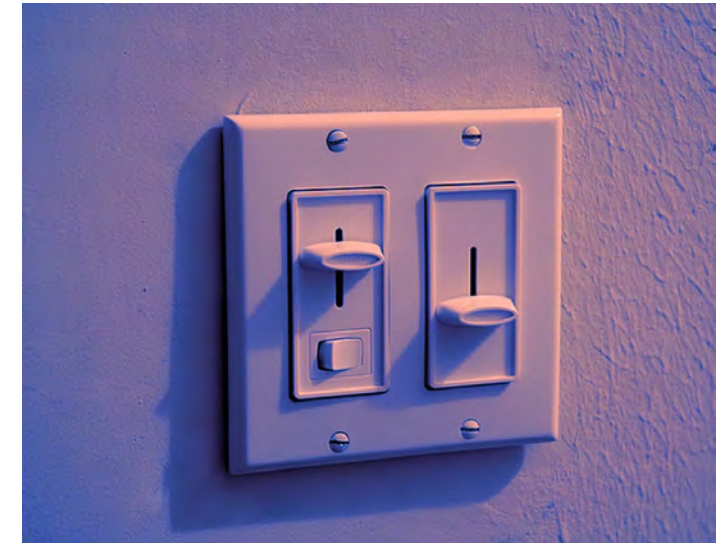
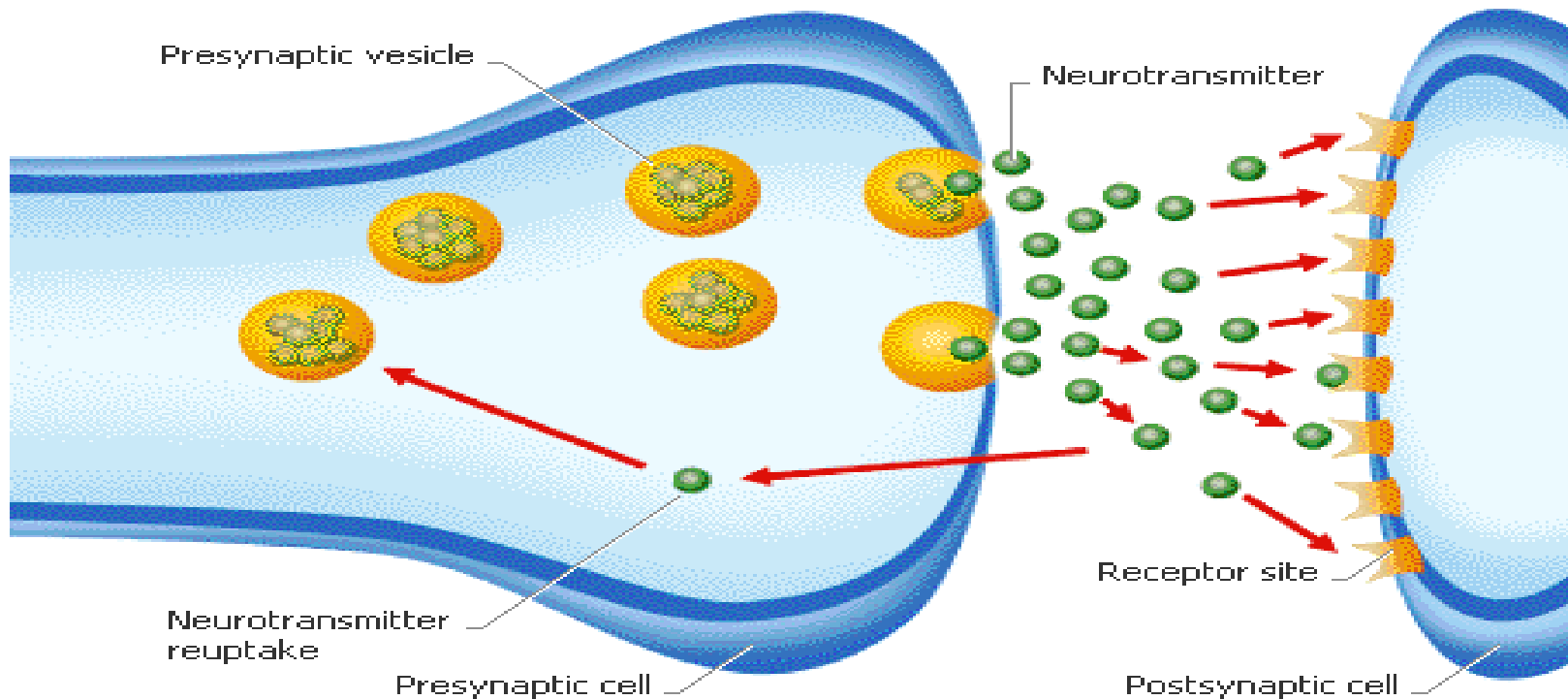
Food (What type and when)  
Exercise (What type, how much, how often)  
Self-Medication (Food and alcohol as self-medication)  
Default Mode Network Factors  
Music  
Hobbies  
Passion

**Cards You Have Been Dealt**

**Choices You Make**

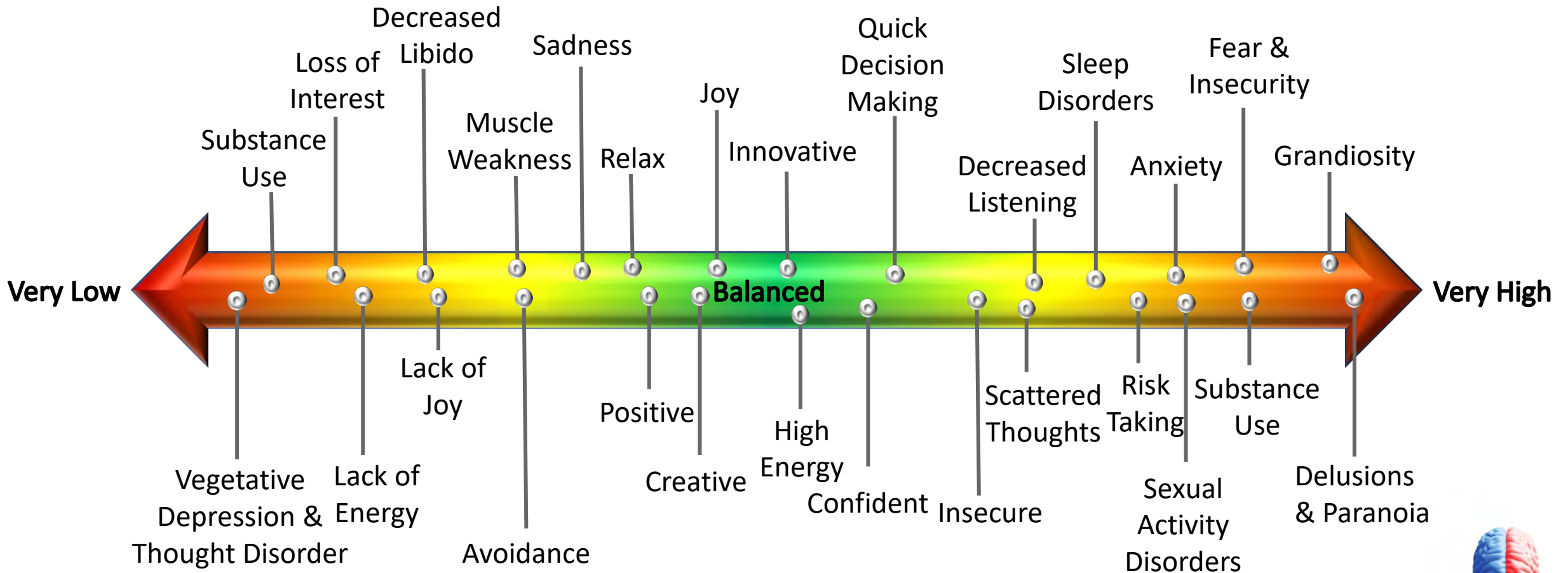


# Brain Chemistry: The Messaging System



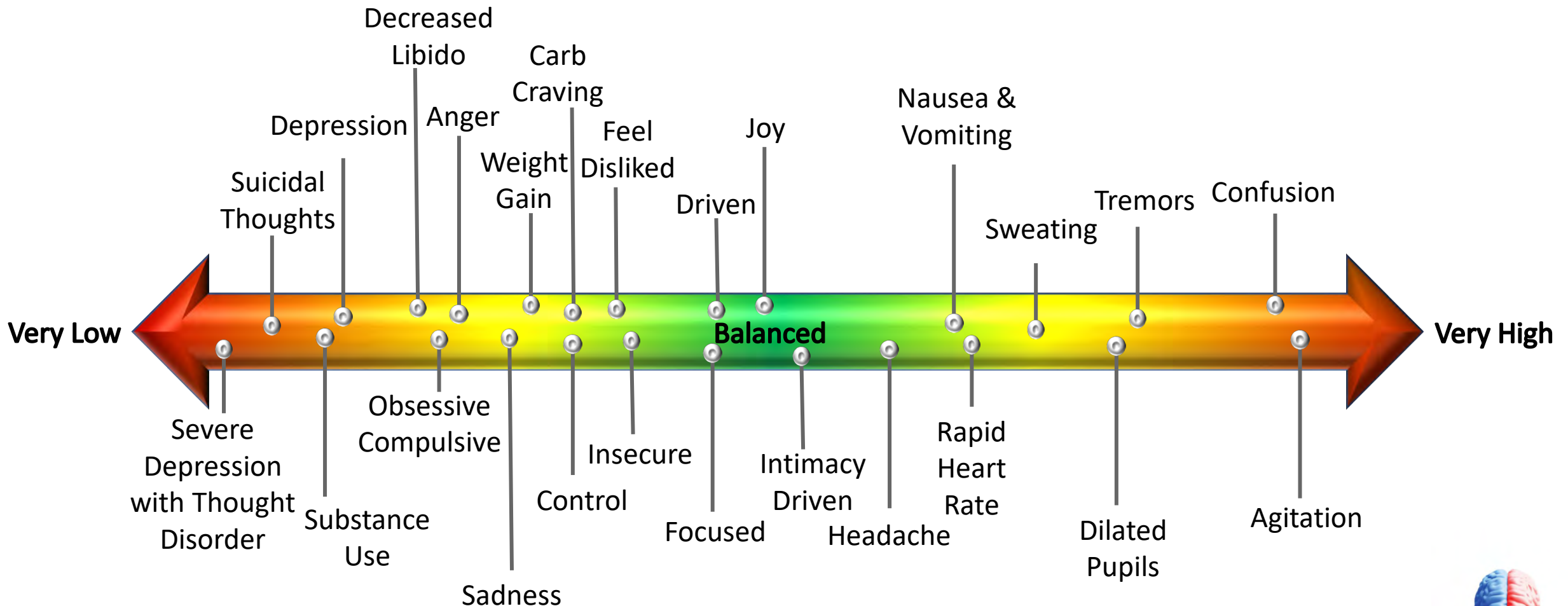
# The Impact of DOPAMINE on Behaviors

## Dopamine symptom continuum



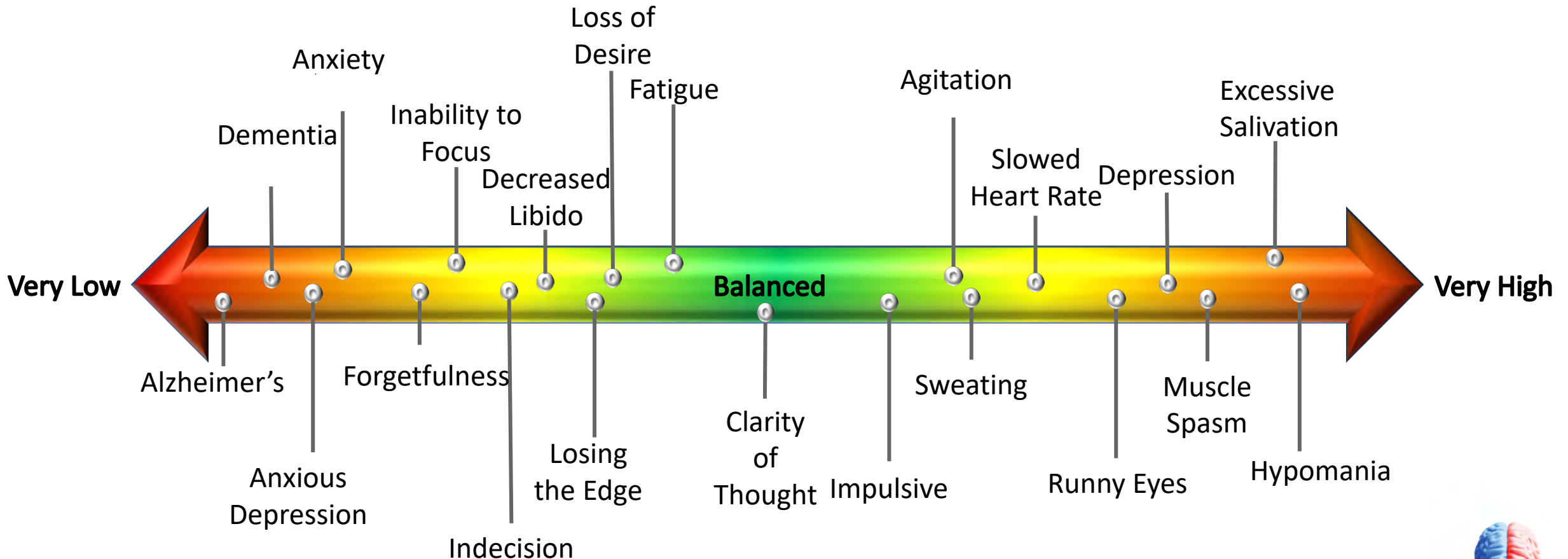
# The Impact of SEROTONIN on Behaviors

## Serotonin symptom continuum



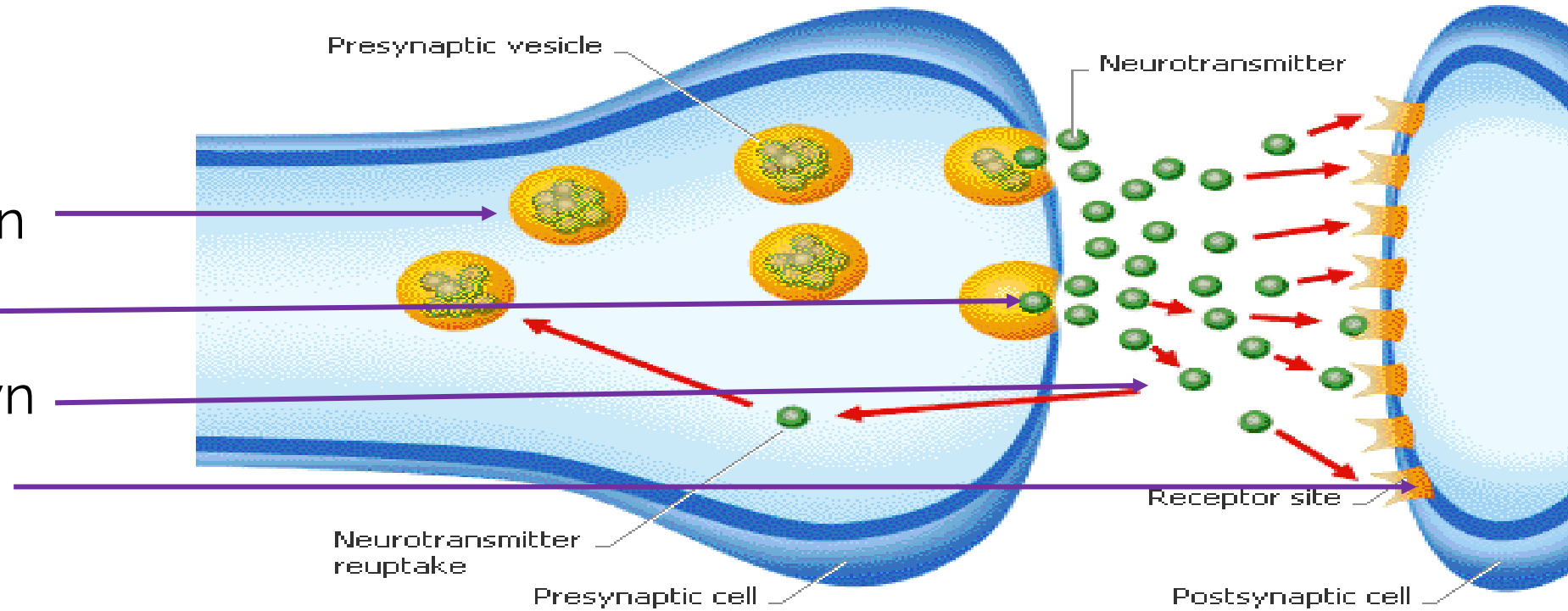
# The Impact of ACETYLCHOLINE on Behaviors

## Acetylcholine symptom continuum



## FOUR WAYS TO BALANCE BRAIN CHEMISTRY:

- Change production
- Change release
- Change breakdown
- Change efficiency



# Changing the Brain Messaging System

	Increase or Decrease Production	Increase or Decrease Release	Increase or Decrease Breakdown	Increase Efficiency
Food	✓			
Nutritional Supplements	✓			
Exercise		✓	✓	✓
Hobbies/Activities		✓		✓
Thought Change/Perception		✓	✓	✓
Behavior/Lifestyle Change		✓		
Music		✓		
Life Identity				✓







# The Program

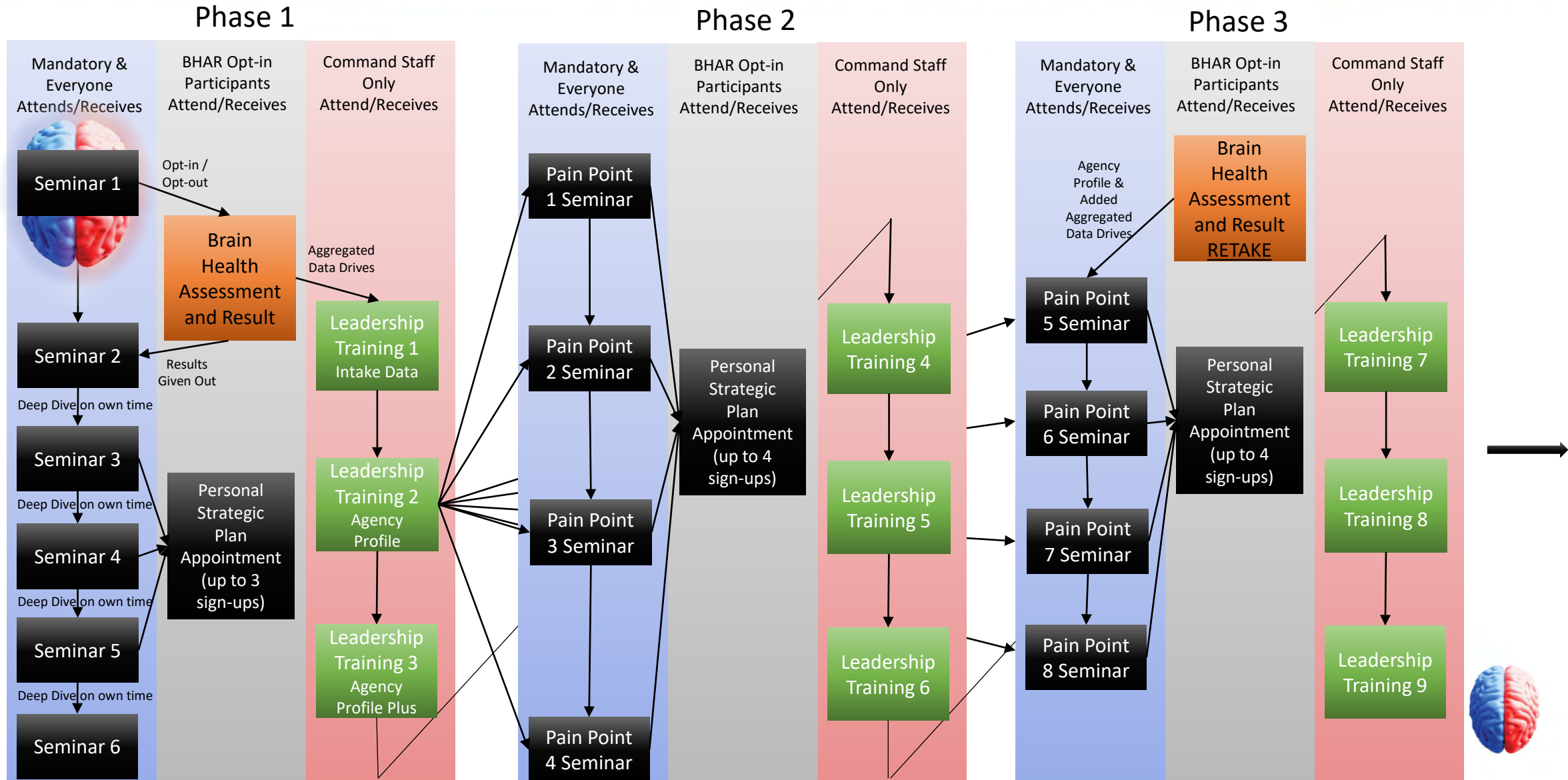
# What do I get?

Online Assessment (HIPPA Compliant) of family and personal history, environment, symptoms, and “what you are doing now”

- Series of true and false questions based upon NIH issues and signs and symptoms you may be having
- 287,000 variables to be determined
- Generates a BHAR (Brain Health Assessment and Recommendations)
  - 50+ pages of findings and recommendations
  - 4 Risk factor charts (health, performance, relationships, “big three”)
  - Causes and responses chart (NIH comparisons with your factors)
  - 4 “Lens you see through” comparison charts
- BHAR Report Provides
  - What is broken? Causes and Responses
  - What are my risk factors? Health, Performance, and Relationships
  - How do you fix it? Research and Population Grouping
  - What will you do to fix it? Artificial Intelligence and Predictive Analytics
  - How do you measure it is working? Follow up assessments on interventions and symptoms



# Roadmap - Leaders





Thank You

[contactus@robertsonhealth.com](mailto:contactus@robertsonhealth.com)

# Did You Get All That???

It's ok if you don't understand everything – this is complicated!

Tons of research has been done trying to understand our brains and how they impact our lives – nearly 18,000 people worldwide have been assessed so far

Can we change the brain?

- Need to get at the core of brain health
- Moods
- Relationships
- Diseases
- Performance
- Know how the brain is programmed and how to reprogram it

Unfortunately this is very hard for us to do without help

- We know what we should do but we don't do it
- Yell at our kids, snap at co-workers, eat poorly, don't exercise, annoy our spouse, self-medicate, etc.

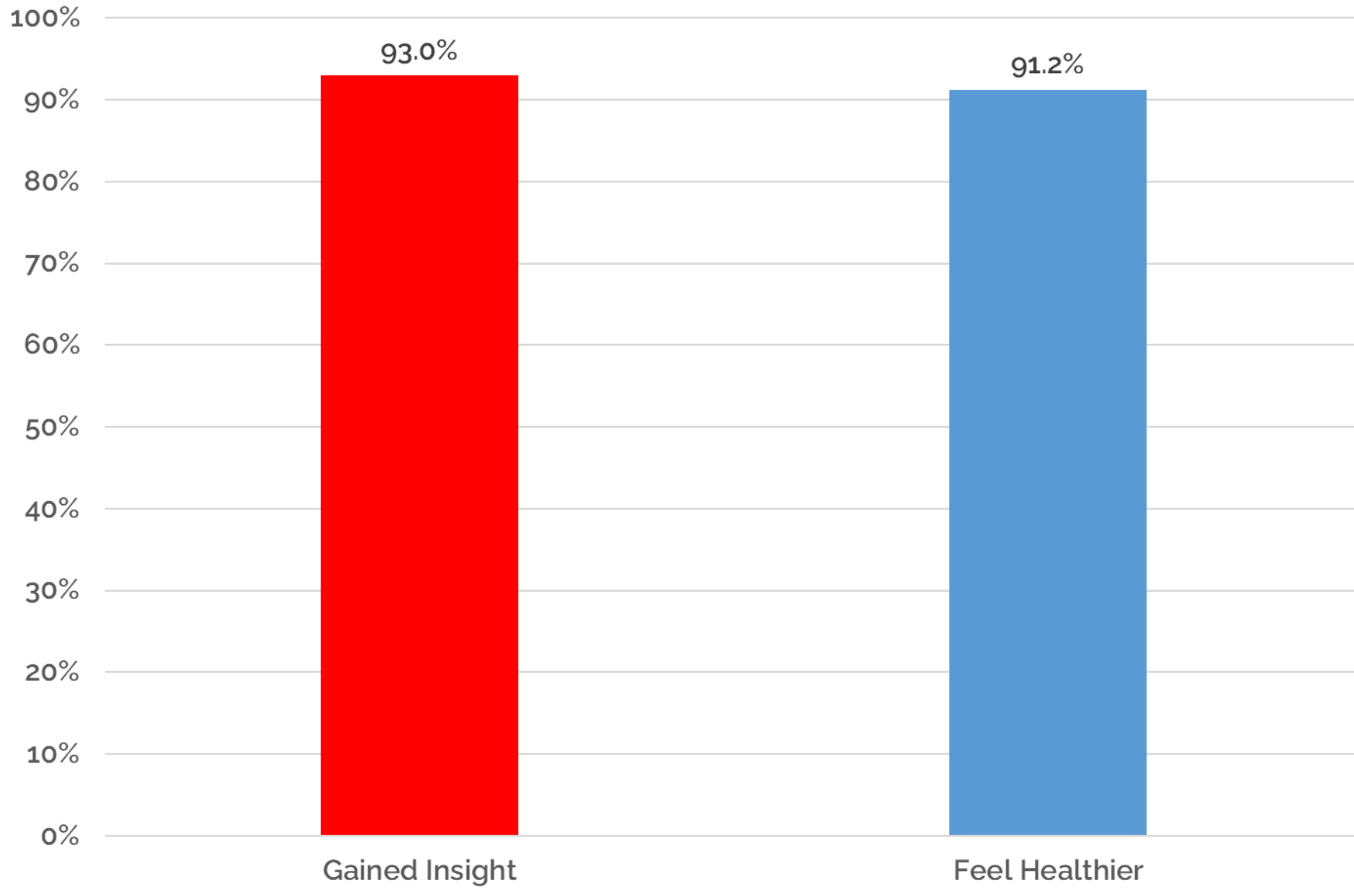
This creates a sense of hopelessness and we tend to give up  
but what if there was a better way





# Miami County Outcomes at Midterm

## Midpoint of First Year Response to Program Miami County Employees Combined





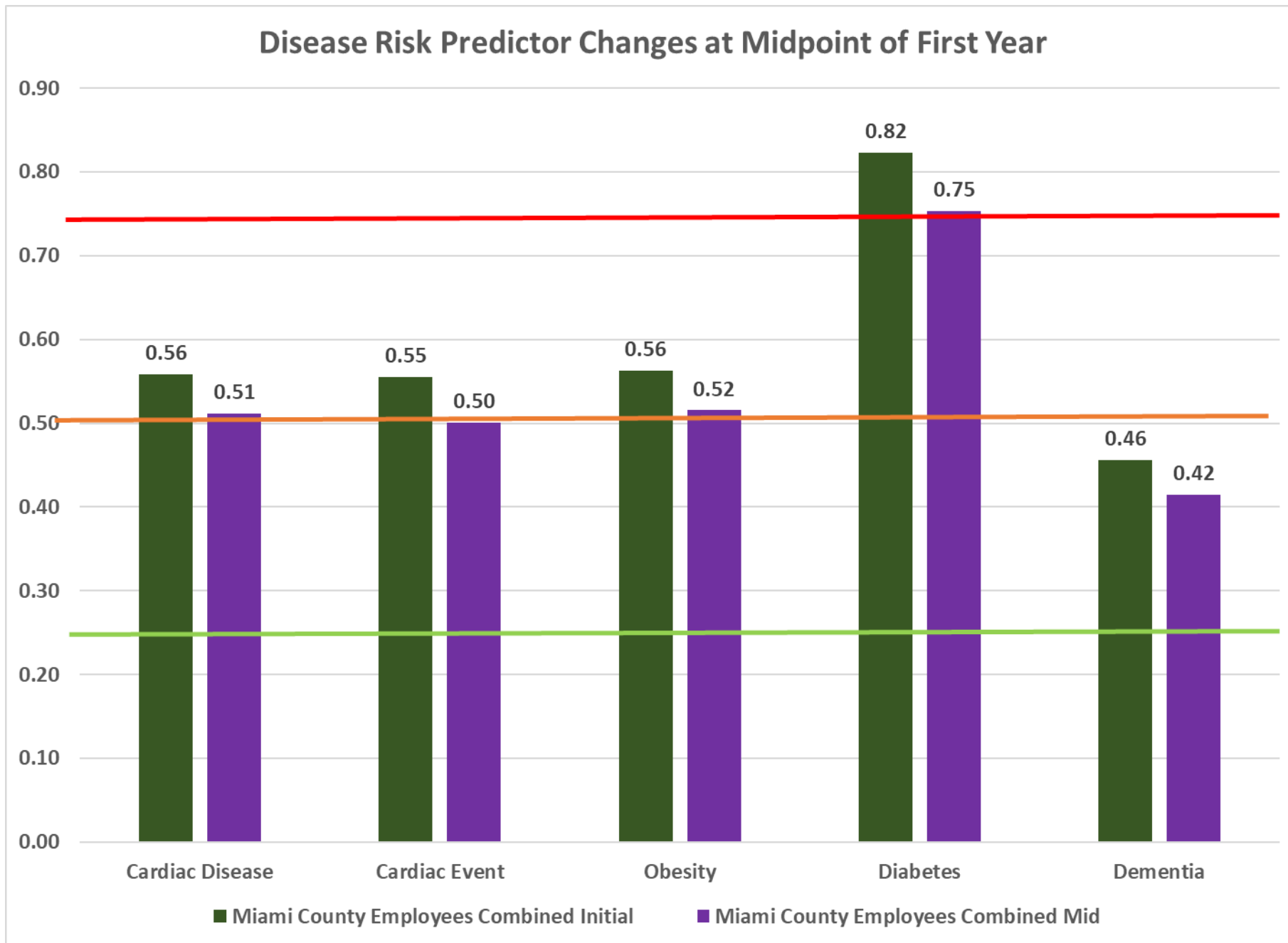
## Disease Risk Predictor Changes at Midpoint of First Year

Critical Risk

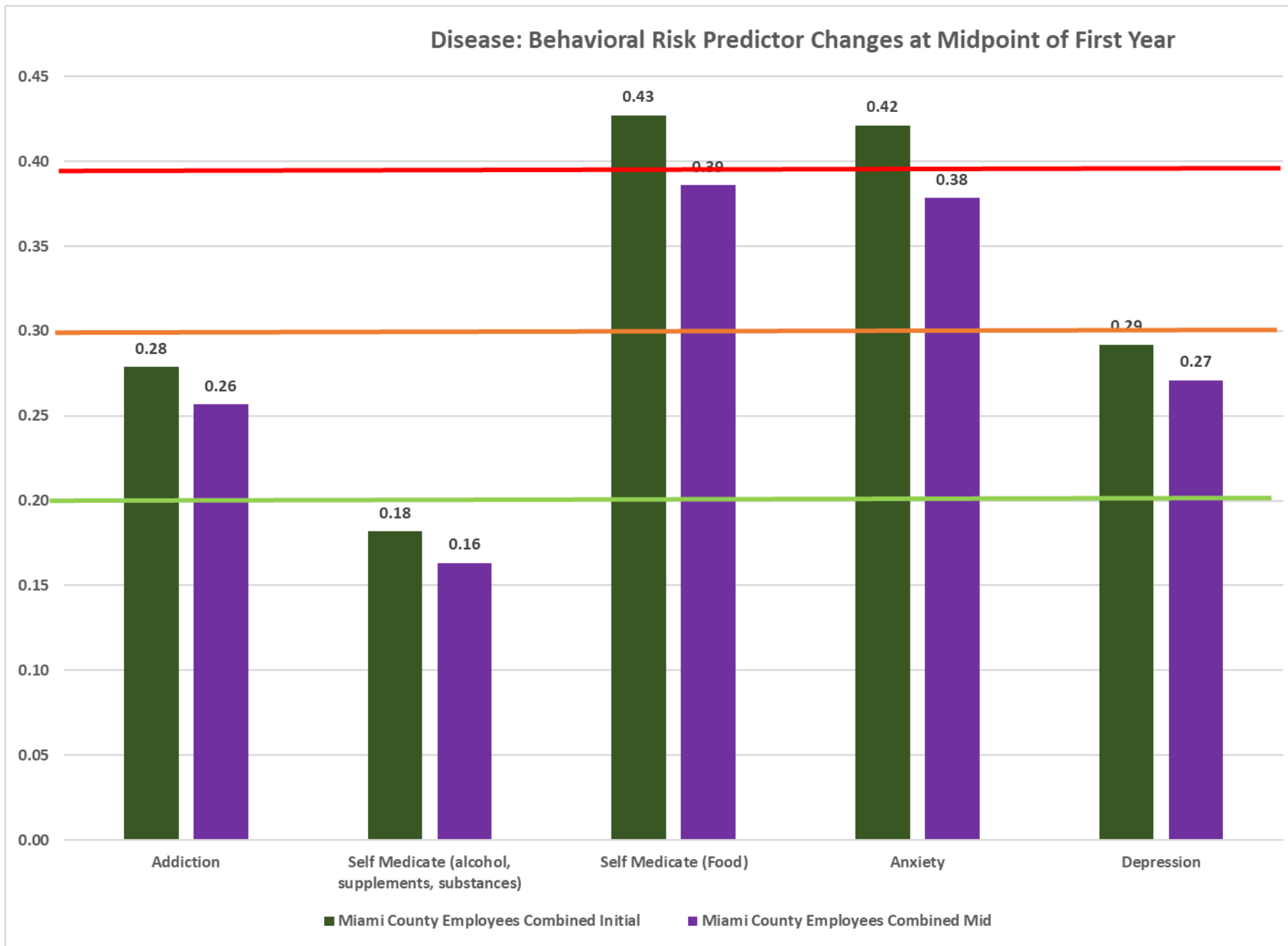
Moderate to High Risk

At Risk

Low Risk







Critical Risk

Moderate to High Risk

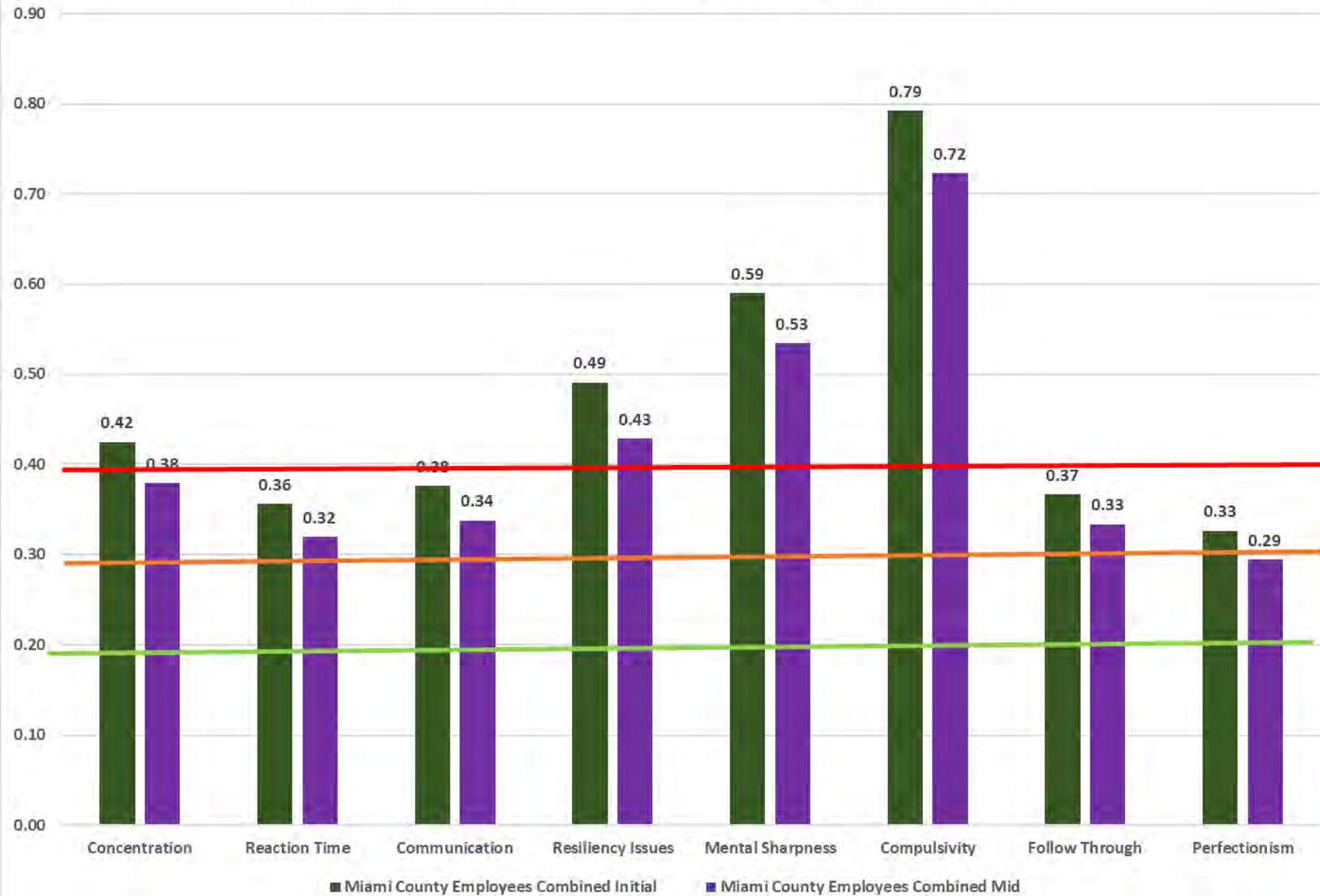
At Risk

Low Risk





### Performance Risk Predictor Changes at Midpoint of First Year



Critical Risk

Moderate to High Risk

At Risk

Low Risk





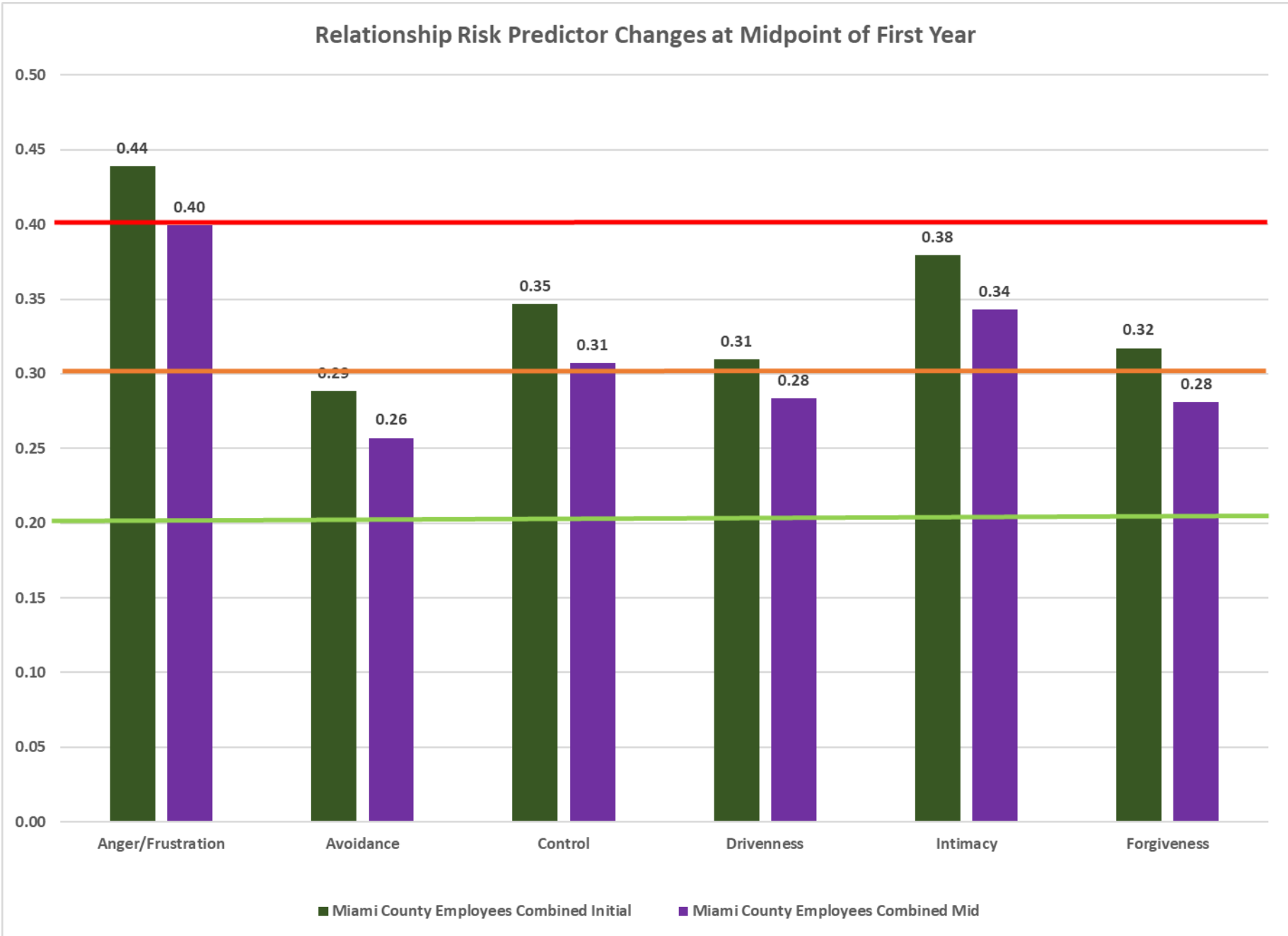
### Relationship Risk Predictor Changes at Midpoint of First Year

Critical Risk

Moderate to High Risk

At Risk

Low Risk





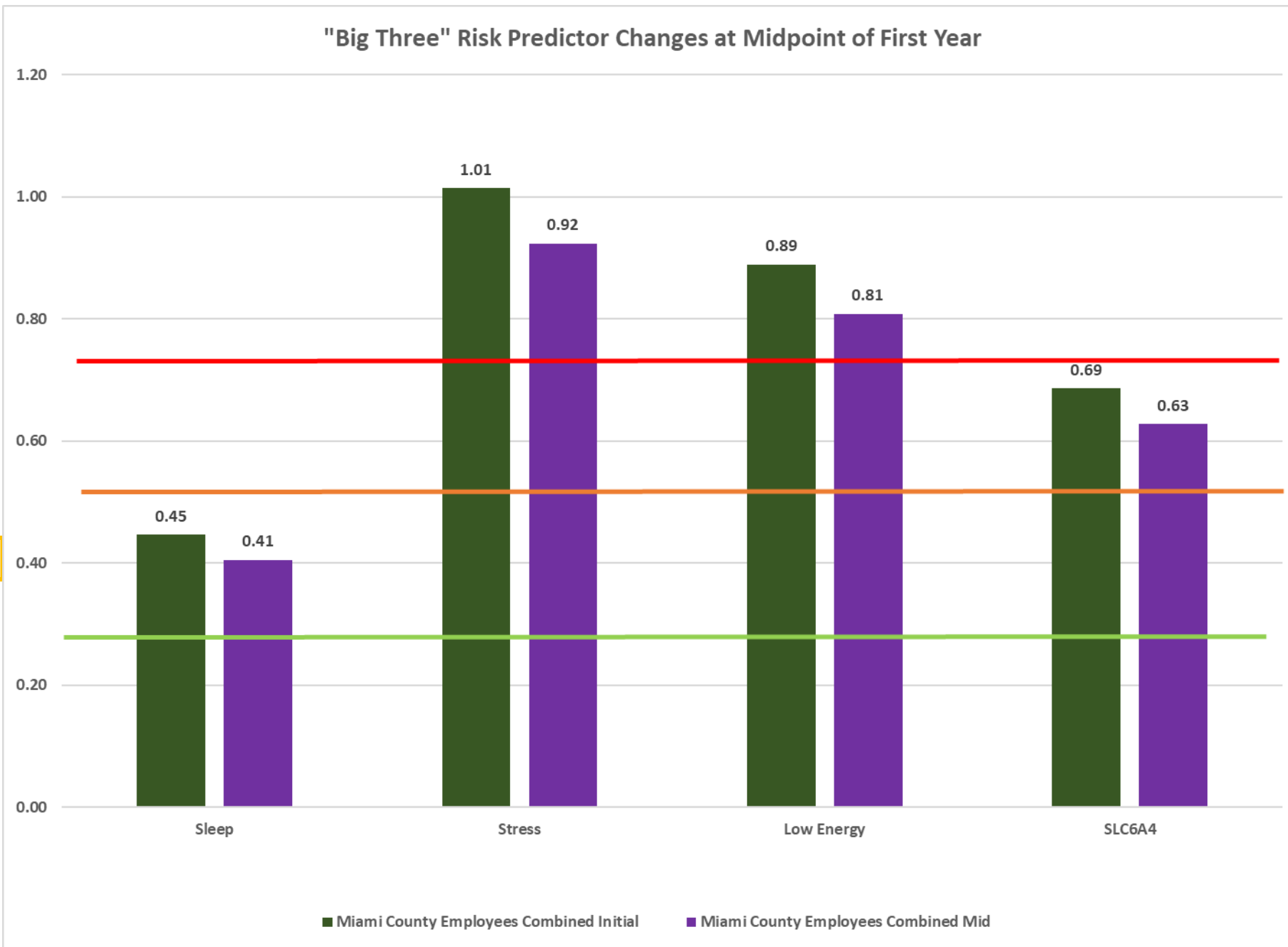
### "Big Three" Risk Predictor Changes at Midpoint of First Year

Critical Risk

Moderate to High Risk

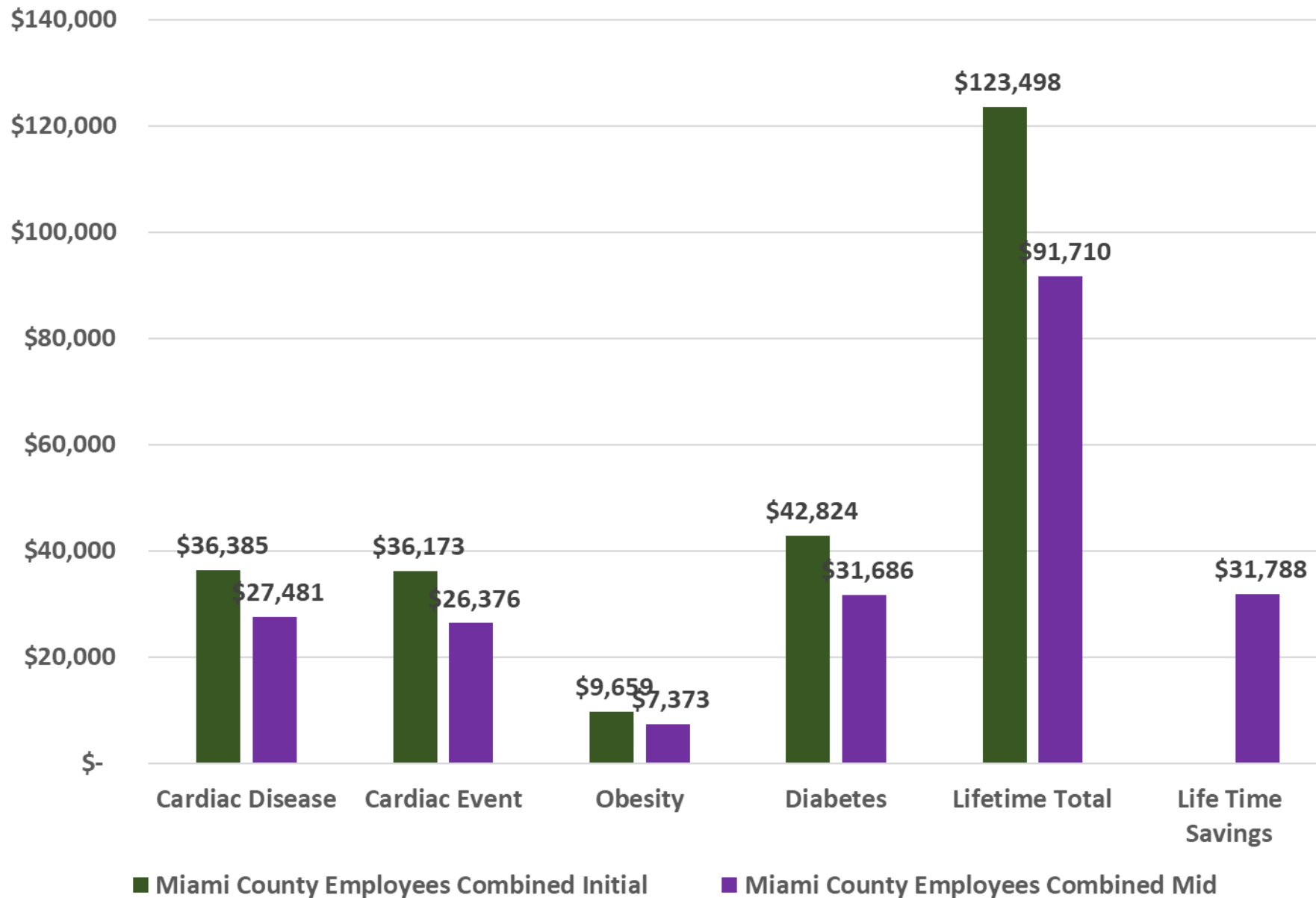
At Risk

Low Risk





### Individual Financial Impact (per person lifetime)



# Financial Impact to Miami County and Miami County Employees

Annual cost savings to Miami County (based upon CDC's estimates of lost productivity and healthcare costs) and midterm results

Disease	Cost savings per person/per year
Heart	\$314
Diabetes	\$121
Obesity	\$93
Mental Health (addiction, depression, anxiety)	\$160
TOTAL	\$688



# Financial Impact to Miami County and Miami County Employees

Lifetime cost savings to Miami County (based upon CDC's estimates of lost productivity and healthcare costs) and annual per person savings of \$688

Average age of participant	45 years
Years to retirement	20 years
Number of participants	106
Total projected lifetime cost savings	\$1,459,177



# Survey of Employees: Would You Continue Brain Program for Year 2?

52% of total respondents said they would continue the program in year 2

- Had no information on what the program would entail

We did not ask those who said "No" why

- Could have been that they didn't want to commit to more meetings

As a leader you must make the decision on what is best for your organization







# Robertson Brain Health Aggregated Program Outcomes

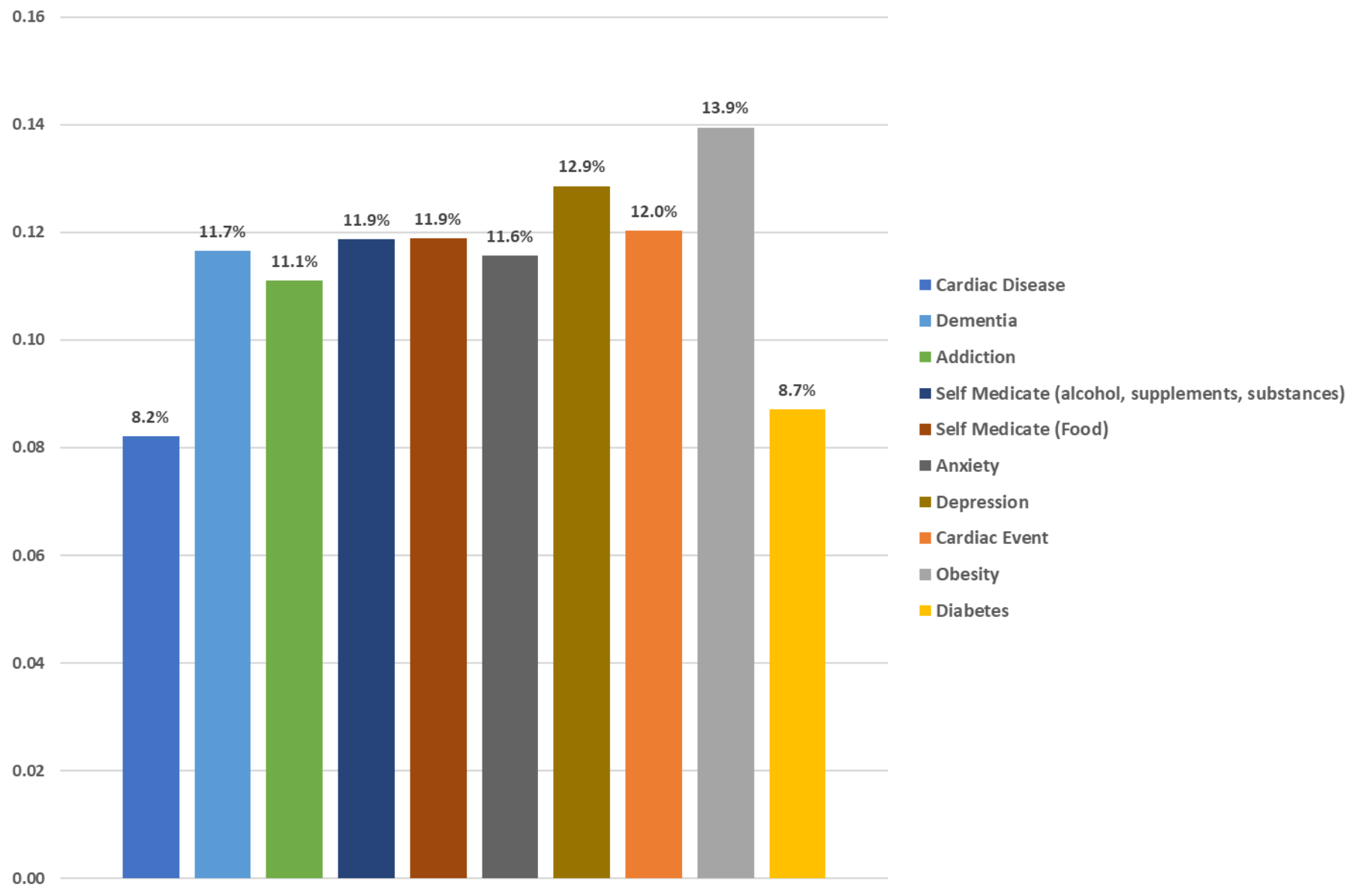
# How well do participants respond to this program?

- Robertson Brain Health Programs reduce inhibitors (those findings that contribute to diseases, moods, and behaviors) by an average of 61% after the first year.
  - 81% of our participants that are asked, re-take the assessment after 2 years.
- This indicates a feeling of value, involvement, and willingness to continue by the participant.





### Percentage Improvement at One Year January 1, 2023 Data





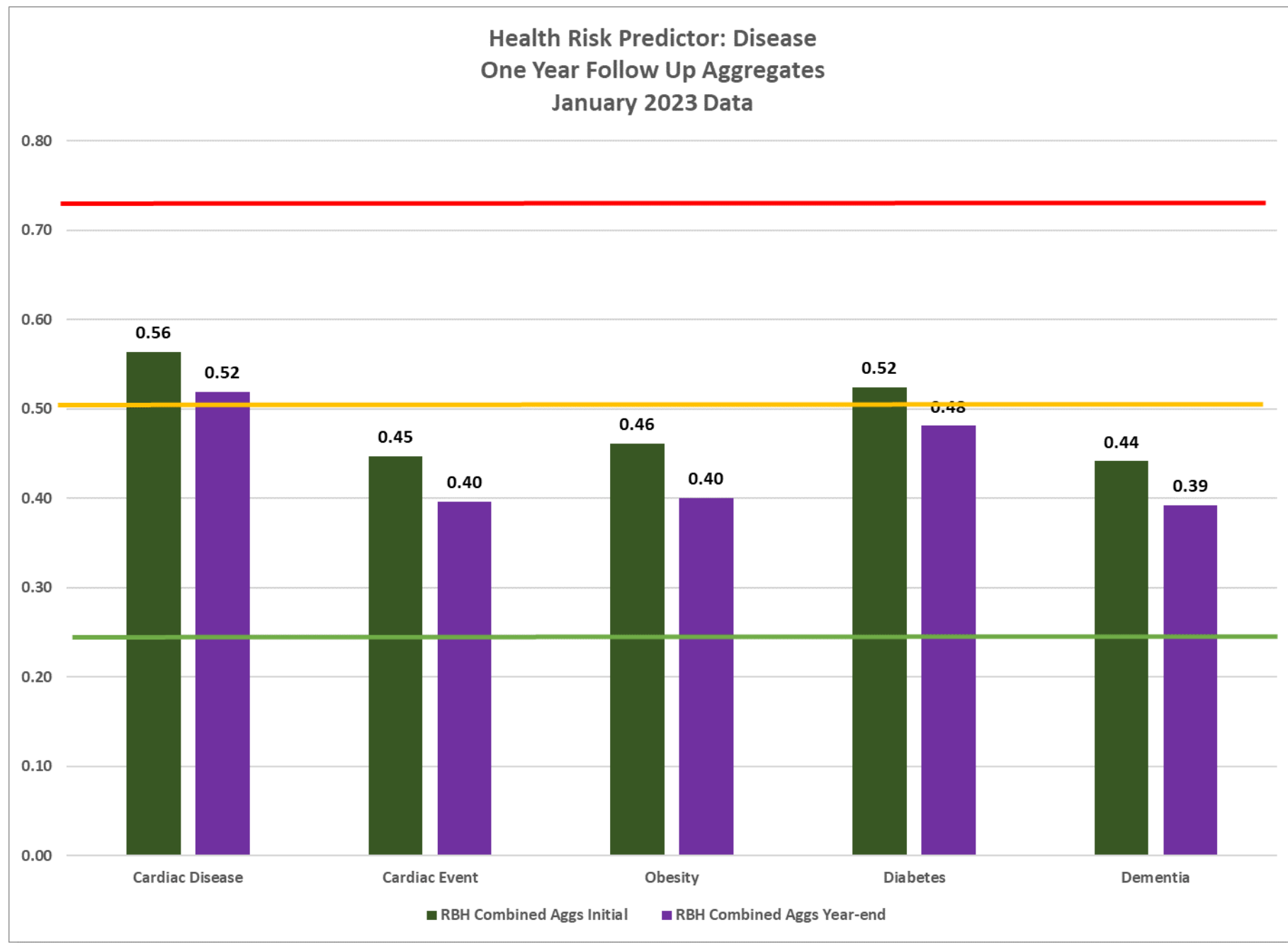
### Health Risk Predictor: Disease One Year Follow Up Aggregates January 2023 Data

Critical Risk

Moderate to High Risk

At Risk

Low Risk





Critical Risk

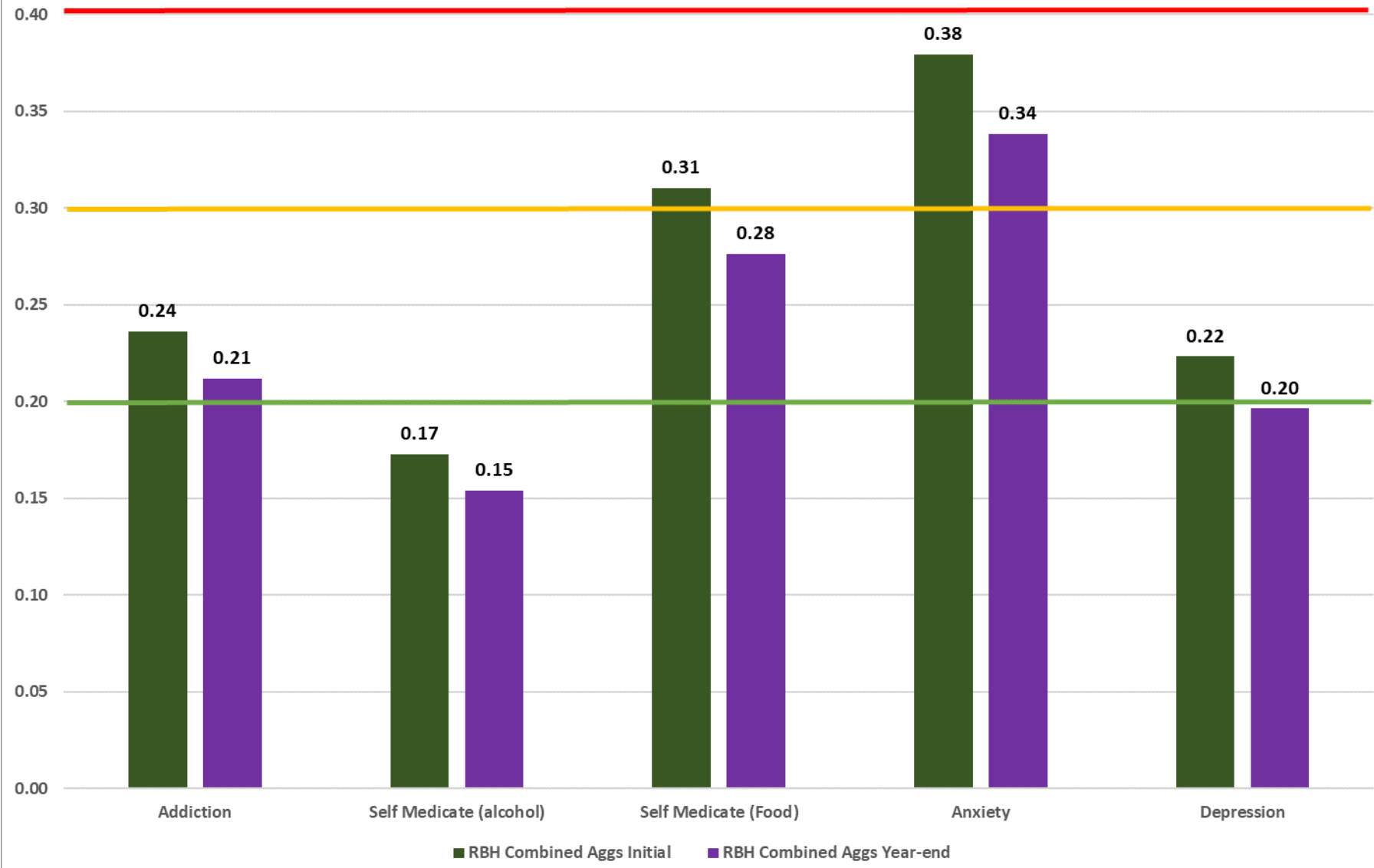
Moderate to High Risk

At Risk

Low Risk



### Health Risk Predictor: Behavioral Factors One Year Follow Up Aggregates January 2023 Data





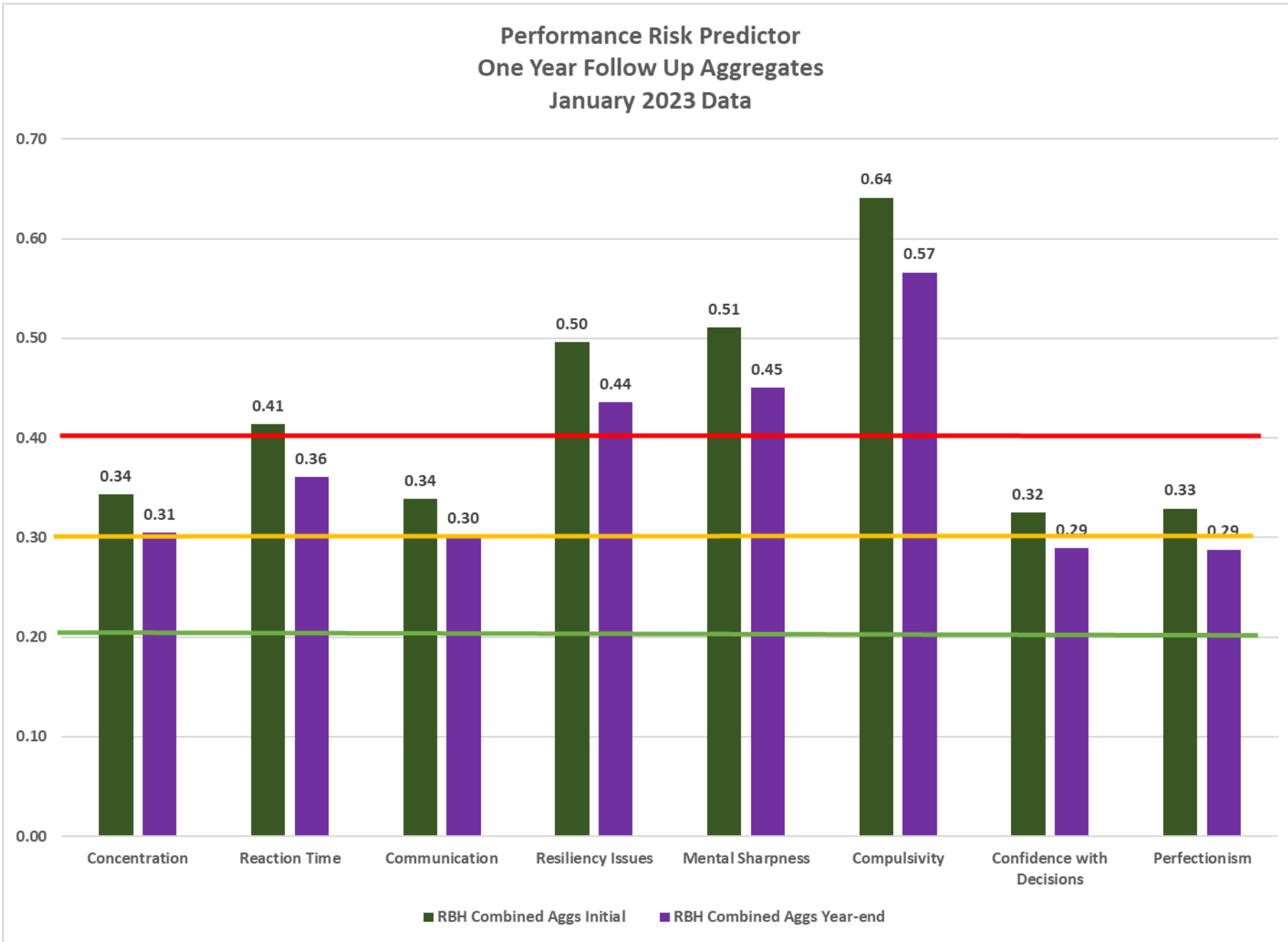
### Performance Risk Predictor One Year Follow Up Aggregates January 2023 Data

Critical Risk

Moderate to High Risk

At Risk

Low Risk





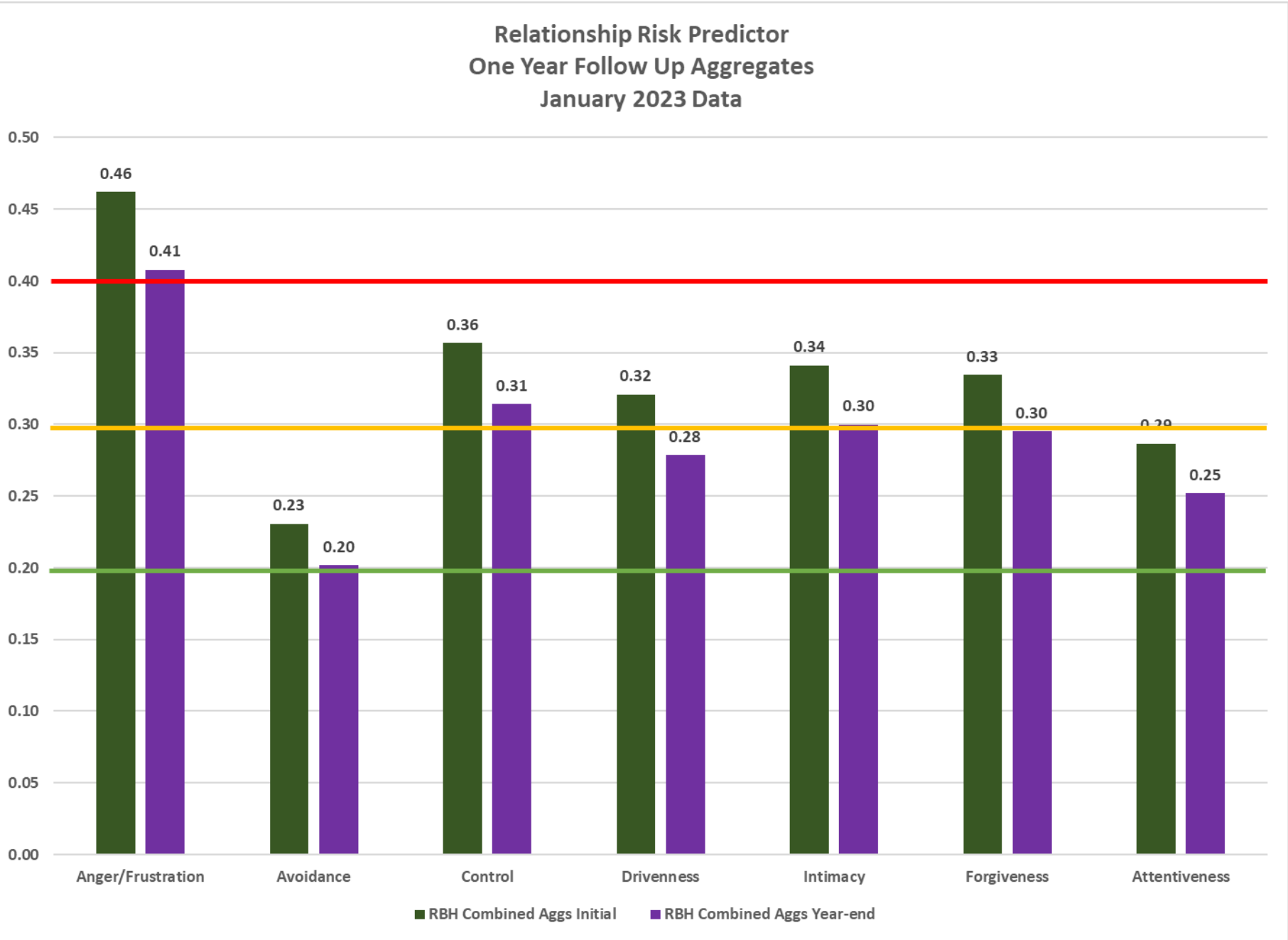
### Relationship Risk Predictor One Year Follow Up Aggregates January 2023 Data

Critical Risk

Moderate to High Risk

At Risk

Low Risk



# "Big Three" Risk Predictor One Year Follow Up Aggregates January 2023 Data

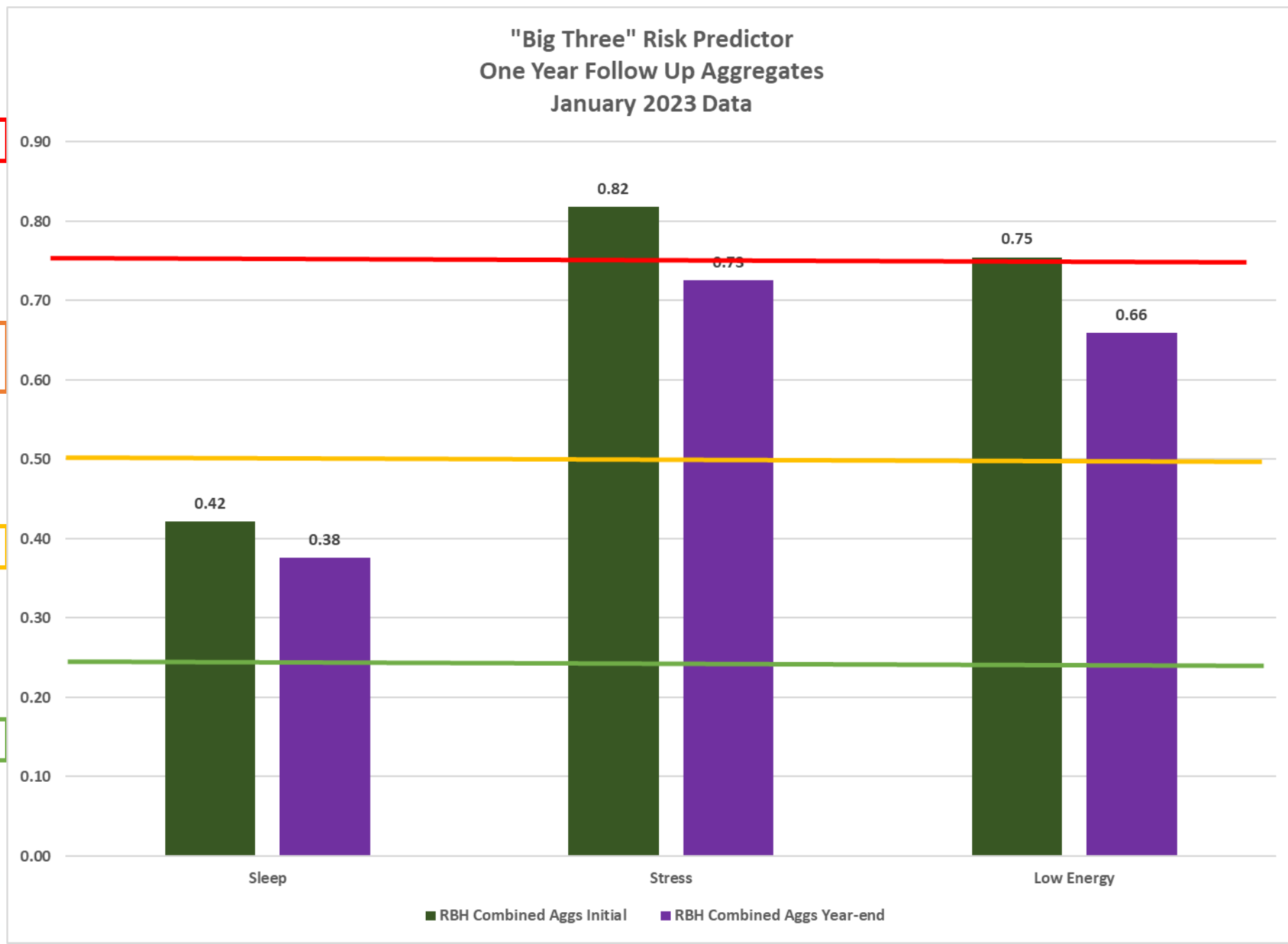


Critical Risk

Moderate to High Risk

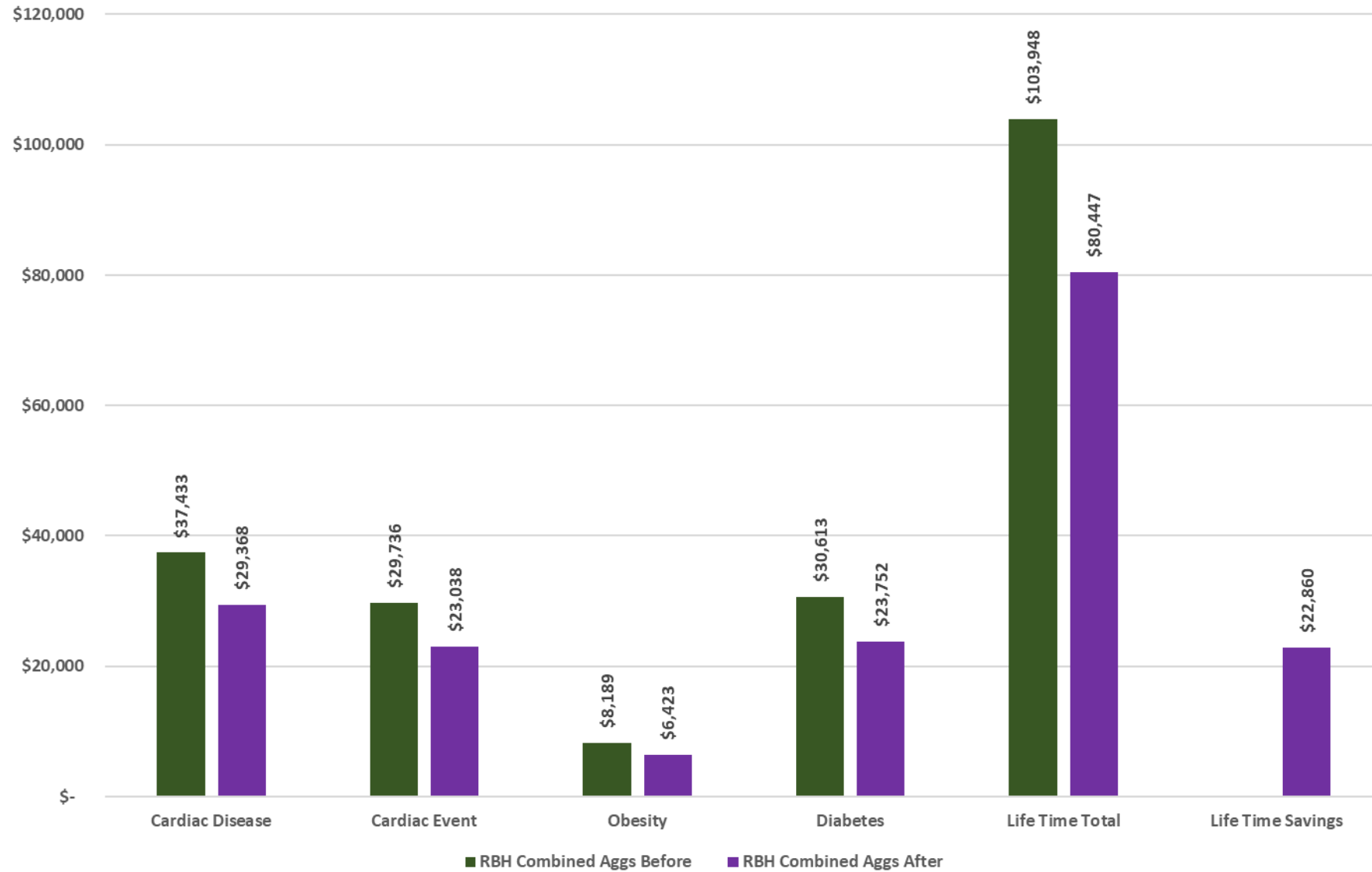
At Risk

Low Risk





# Financial Impact on Individuals Participating in the Program One Year Followup Aggregates January 2023 Data



# RBH Average per Person Projected Cost Savings

Disease	Prevalence per 100 per CDC	Average CDC	Agency Prevalence Compared to RBH Aggregates and CDC	Health care costs and lost Productivity per Year per CDC	Average per year per person per CDC	Robertson Reduction Rates (post COVID)	RBH Weighting (53/53)(4)	Savings/person/year (7)
Heart Disease	8-11 (11)	0.10	1.0	\$363B	\$22,270	10% (1)	10.0%	\$205
Diabetes	7-11 (11)	0.09	1.0	\$327B	\$9,600	8.7%	8.7%	\$71
Obesity	35	.35	1.0	\$147B	\$1470	13.9%	13.9%	\$42
Mental Health Disorders (2)	19.9	.20	1.0	\$300B	\$5000	12% (3)	12%	\$110
<b>Total Annual Cost Savings per person</b>								\$328
<b>Total Annual Cost Savings Participants</b>								\$10,099 (5)
<b>Agency Cost Savings based upon 65 years retirement (6)</b>								\$10,099
<b>Average Individual Cost Savings (out of pocket expenses)</b>								\$22,860

Effectiveness of  
Agency Savings  
disease

- (1) Average of cardiac disease and cardiac event
- (2) Mental Health Disorders includes anxiety, depression, substance use
- (3) RBH average of anxiety, depression, addiction and substance misuse
- (4) Ratio of % HPR improvement of 48% versus average of RBH of 48% post COVID
- (5) Based upon 1 RBH Employees
- (6) Average of 23.5 years until retirement
- (7) Normalized for age (RBH 42.5 vs 42.5 RBH) (0.98)

Total Agency Savings per Person Participant Savings Lifetime



# Questions?

**Robertson Brain Health**

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