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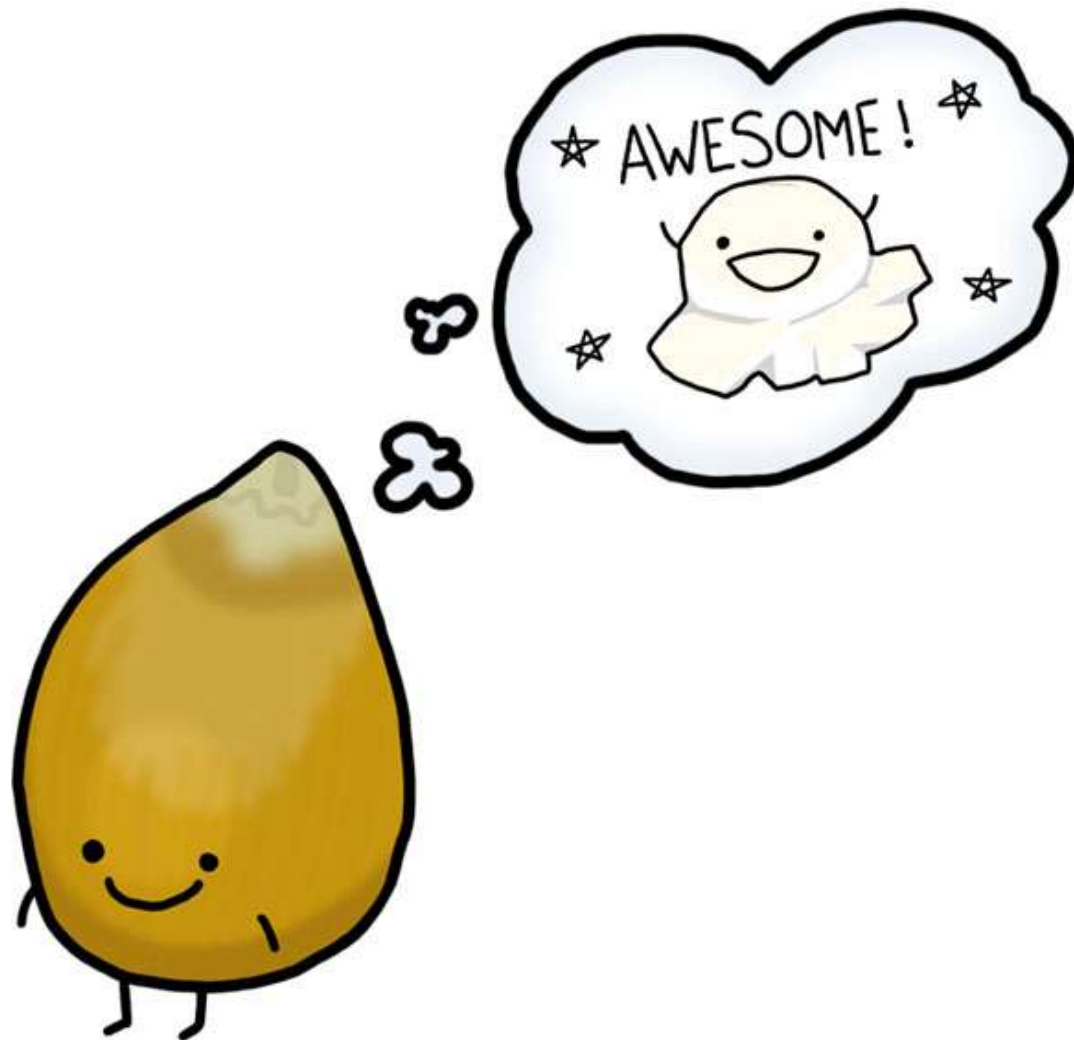
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(For Professionals)
www.glendon.org



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Pop into the Present!






Uncovering Happiness

The New Science of an
Anti-Depressant Brain

PsychAlive
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Seminar/Retreat

- ▶ What Makes Us Resilient
- ▶ What Gets in the Way
- ▶ Understanding the Depressed Brain
- ▶ How the Brain Changes
- ▶ Igniting Our Natural Anti-Depressants

What Makes Us Resilient



Let's Take a Walk Down the Street



Benefits of Positive Feelings

- ▶ Most of our decisions are made from the emotional center of the brain, positive emotions have a big impact:
- ▶ More open and approaching in life
- ▶ Increase hope and optimism
- ▶ Mediate depressive thinking
- ▶ Bolster Immune functioning
- ▶ Increase resiliency

One Major Problem:



Try this Little Experiment



Research

Photo Credit: Jeff Miller / Shutterstock University Communications







Reactions

Thoughts?
Feelings?




Automatic Negativity Bias



- ▶ Evolutionary reason
- ▶ John Cacioppo - Brain More Sensitive to Negative Information
 - Brain lights up more with negative information than positive
- ▶ Want a Good Relationship?
 - John Gottman - 5 Positive Interactions to 1 Negative Interaction
- ▶ Want a Good Life?
 - Barbara Frederickson – 3:1 to feel happy.

Ito, T. A., Larsen, J. T., Smith, N. K., & Cacioppo, J. T. (1998). Negative information weighs more heavily on the brain: The negativity bias in evaluative categorizations. *Journal of Personality and Social Psychology*, 75, 887-900



Understanding the Depressed Brain

What is Depression?

A dryness of the heart that sometimes made me want to run away from the world.”

~Ghandi

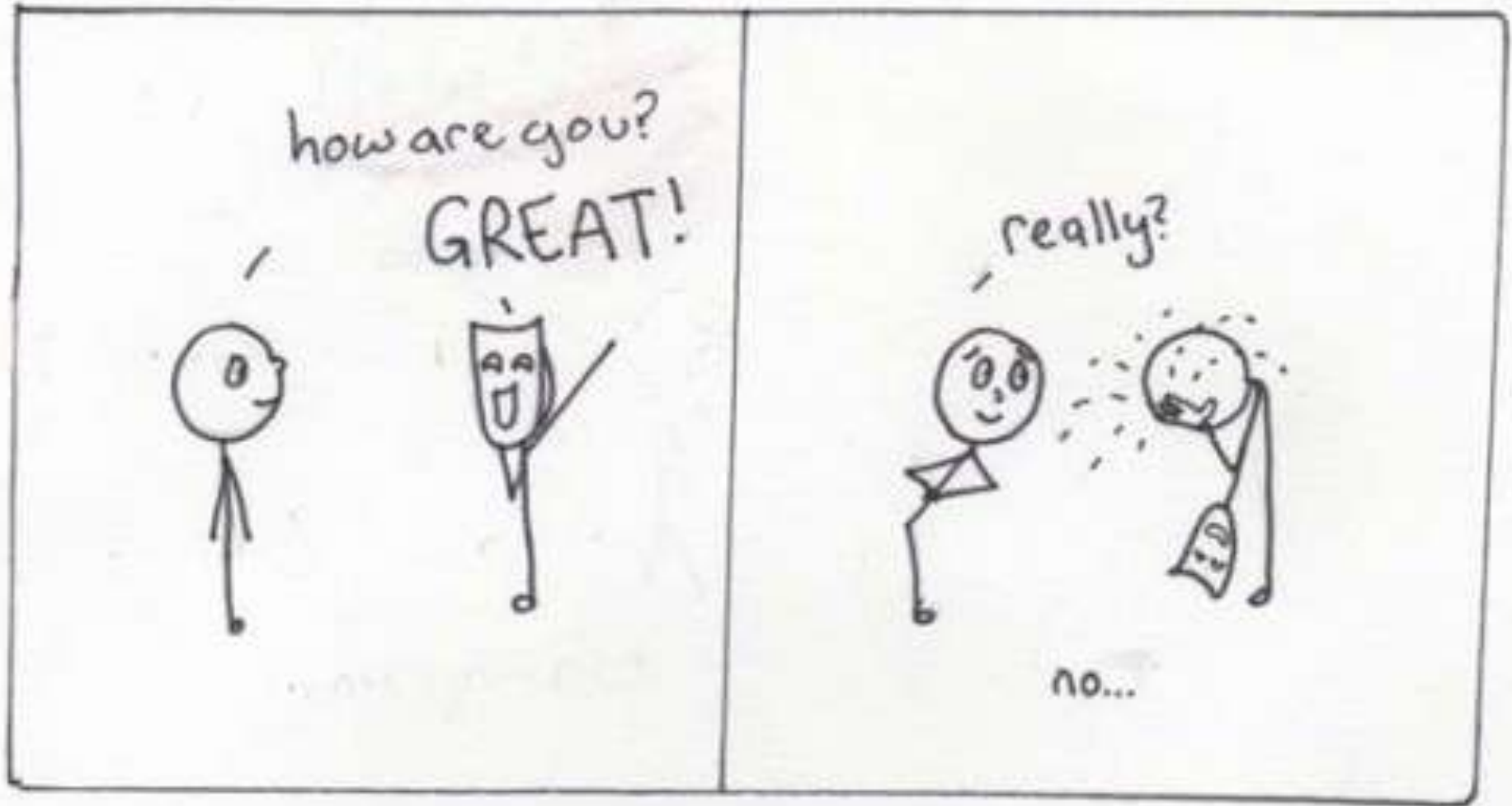
“Thoughts and emotions that undermine inner peace.”

~ The Dalai Lama

“If I were under water I would scarcely kick to come to the top.”

~ John Keats

Ultimate Avoidance Strategy



A Medical Illness

Pneumonia – Strikes at the lungs.

▶ Major Depression strikes at the brain

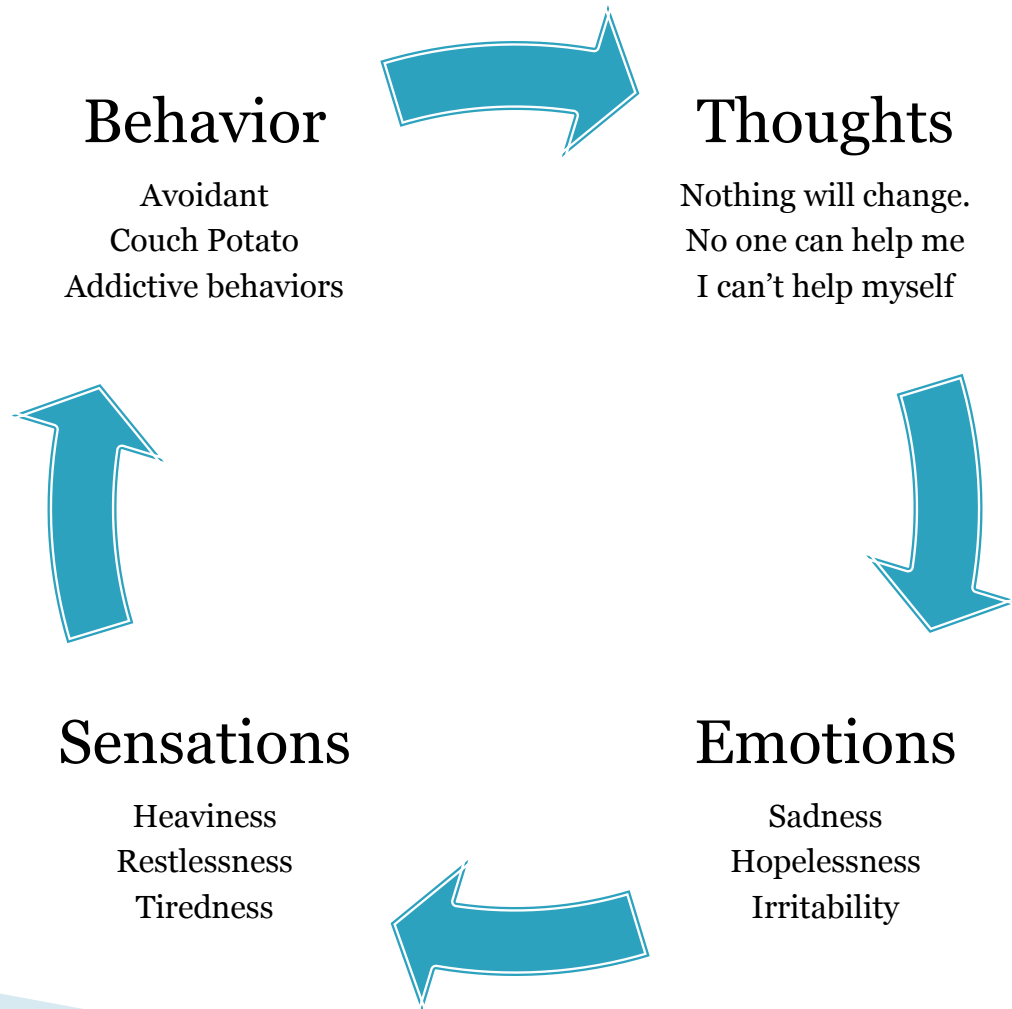
“Death was now a daily presence, blowing over me in cold gusts. Mysteriously and in ways that are totally remote from normal experience, the gray drizzle of horror induced by depression takes on the quality of physical pain... [the] despair, owing to some evil trick played upon the sick brain by the inhabiting psyche, comes to resemble the diabolical discomfort of being imprisoned in a fiercely overheated room.”

~ William Styron, *Darkness Visible*

Allergies – Aggravate our mind and body

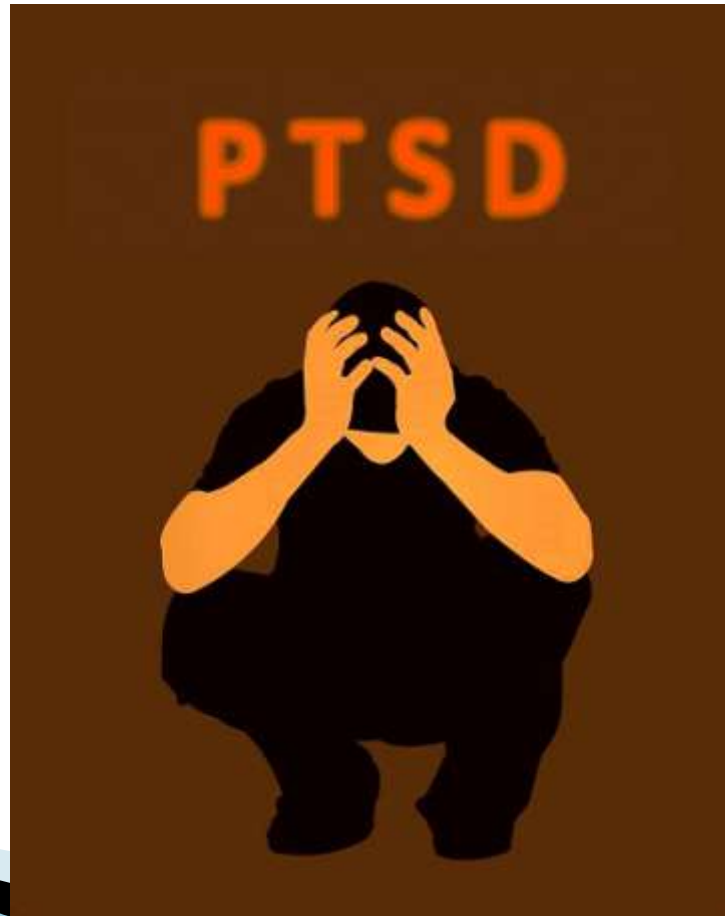
▶ Dysthymia regularly affects our mind and body

A Trauma: The Depression Loop



Jeopardy Question:

The PFC, Amygdala and Hippocampus are associated with what disorder?

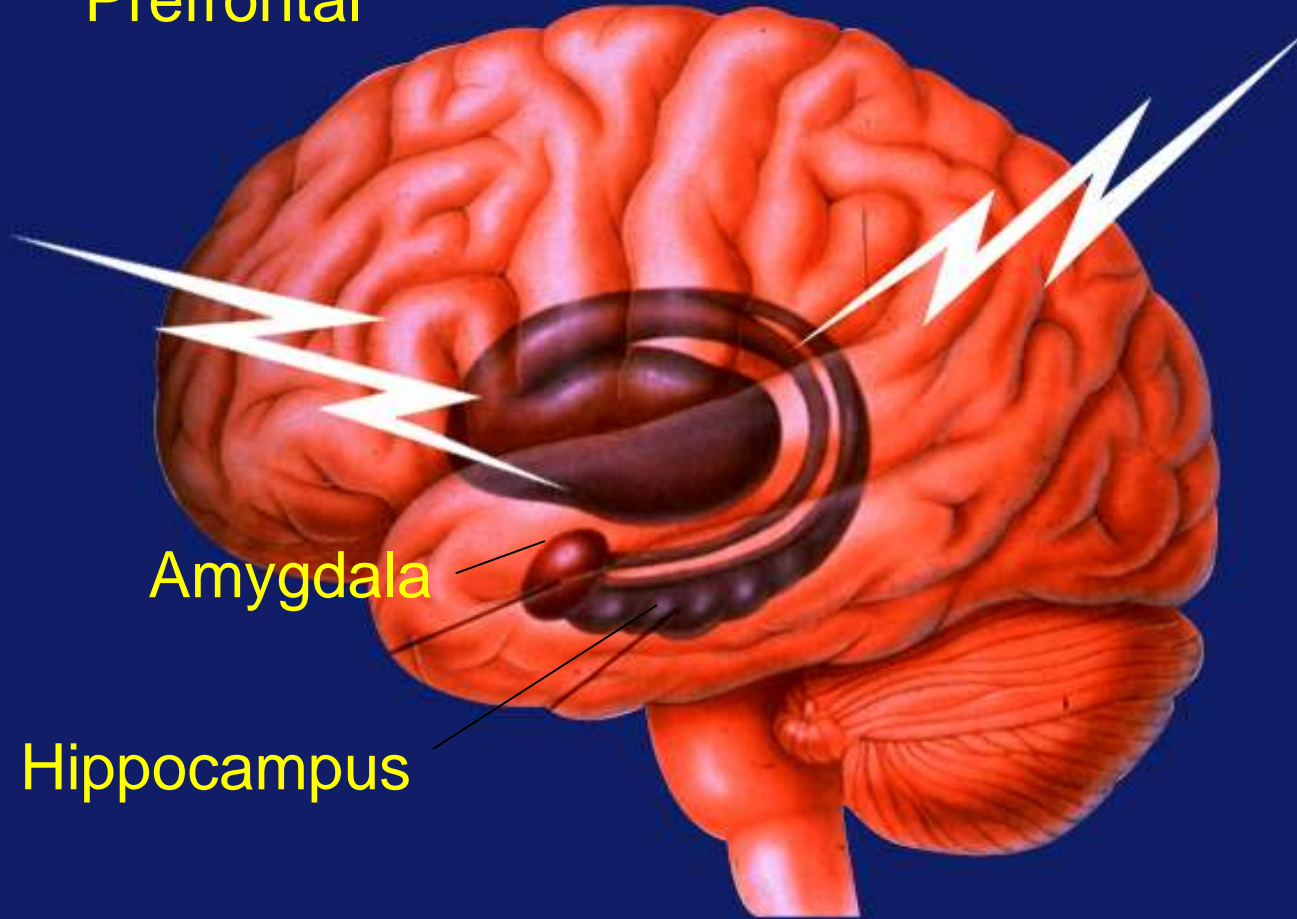


Depression Affects Three Key Areas

Prefrontal

Amygdala

Hippocampus



One Thing We Know for Sure

Depression is Trauma and is shrouded in



Shame Affects the Brain

Physiologically shame is similar to stress

- Sweating, body awareness, shaking, uncoordinated activity, cognitive impairment, gaze aversion (Allan Schore)

Shame triggers the avoidance system of the brain (Right prefrontal)

What part of the brain is triggered in someone with depression?

The right prefrontal cortex

Vagus Nerve

High Vagal Tone

Slows heart rate, regulates internal systems,
Calm, rest, relaxation, contentment

Low Vagal Tone

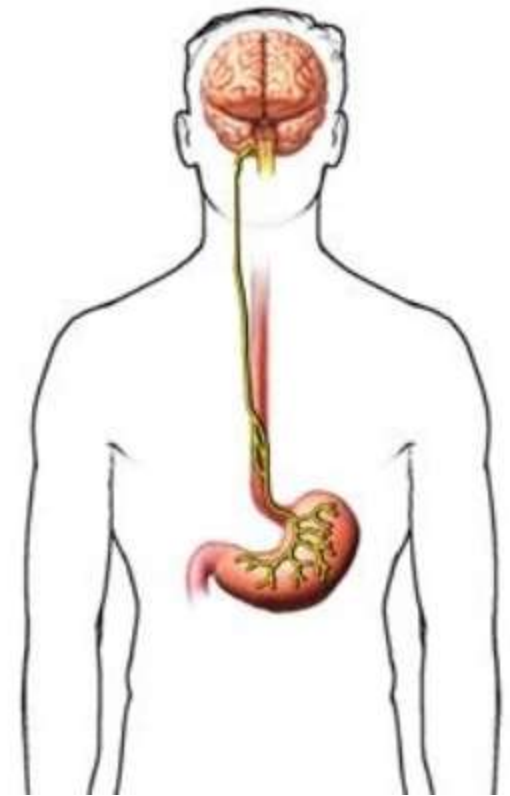
Difficulty regulating emotions

Flat affect

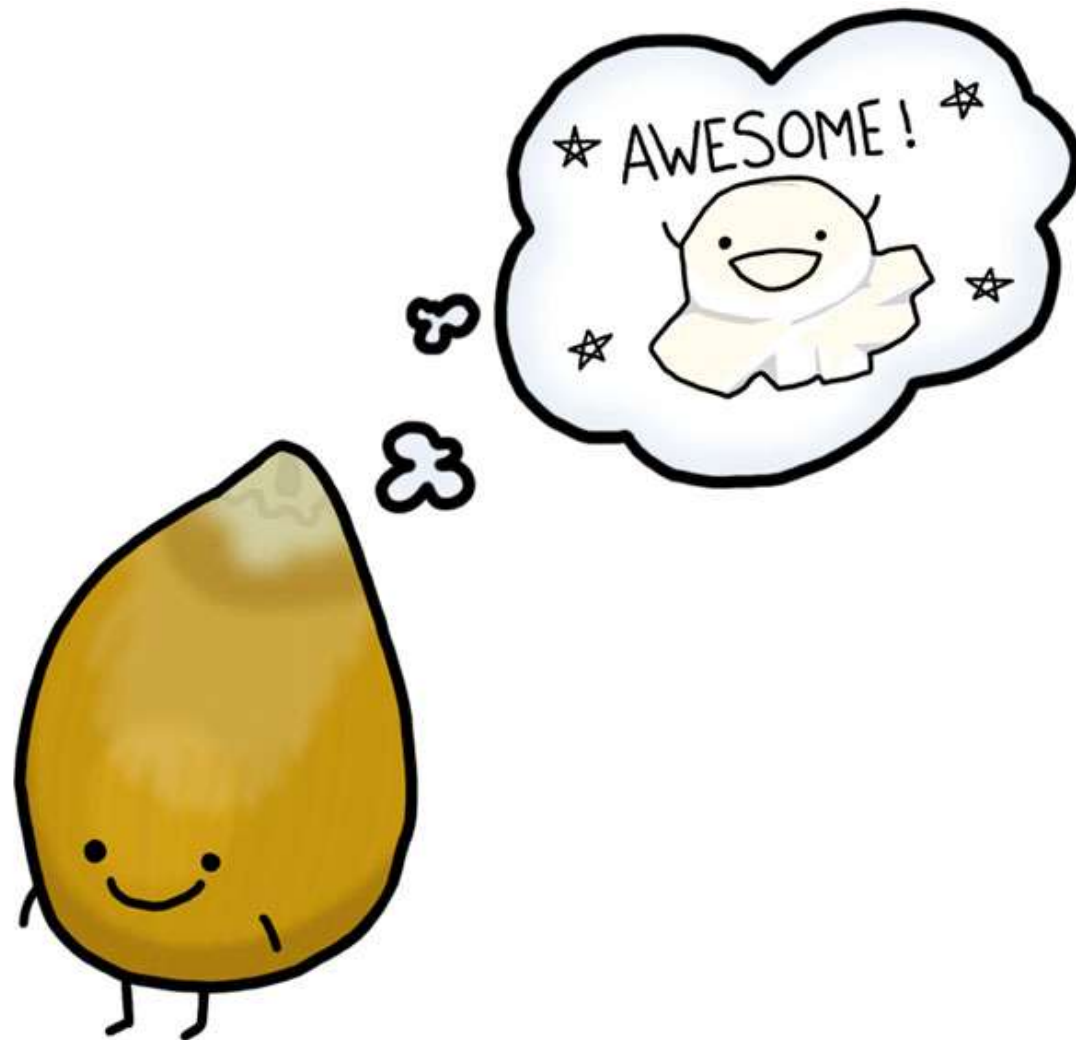
Low voice tone

Tied in with Oxytocin network (Connection)

Associated with Trauma and Depression



Pop into the Present



What We Need to Impact for an Anti-Depressant Brain

- ▶ Increase Left Prefrontal Activation
- ▶ Lower Amygdala Activation
- ▶ Strengthen the Hippocampus
- ▶ Increase vagal tone
- ▶ Extra credit: Reduce Cellular Inflammation, Increase Dopamine, Gaba and Oxytocin

One Last Question: Is it Nature or Nurture?

Does it really matter?



How the Brain Changes



Three Ways

- ▶ Brain Change Influences Mental Perception
- ▶ The Mind Influences Brain Change
 - State-Dependent Activity
 - Trait-Dependent Neuroplasticity
- ▶ With intention, effort, repetition and strategy we can use the mind to change the brain for the better.

What Kind of Learning?

- ▶ Explicit Memory – Memorizing events, facts, dates, names, general knowledge
- ▶ Implicit Memory – Memorizing procedures, walking, talking, eating, how to relate to difficult emotions.
- ▶ Implicit memory is what we're after in breaking old emotional procedures and patterns.

Implicit Vs. Explicit: Demonstration



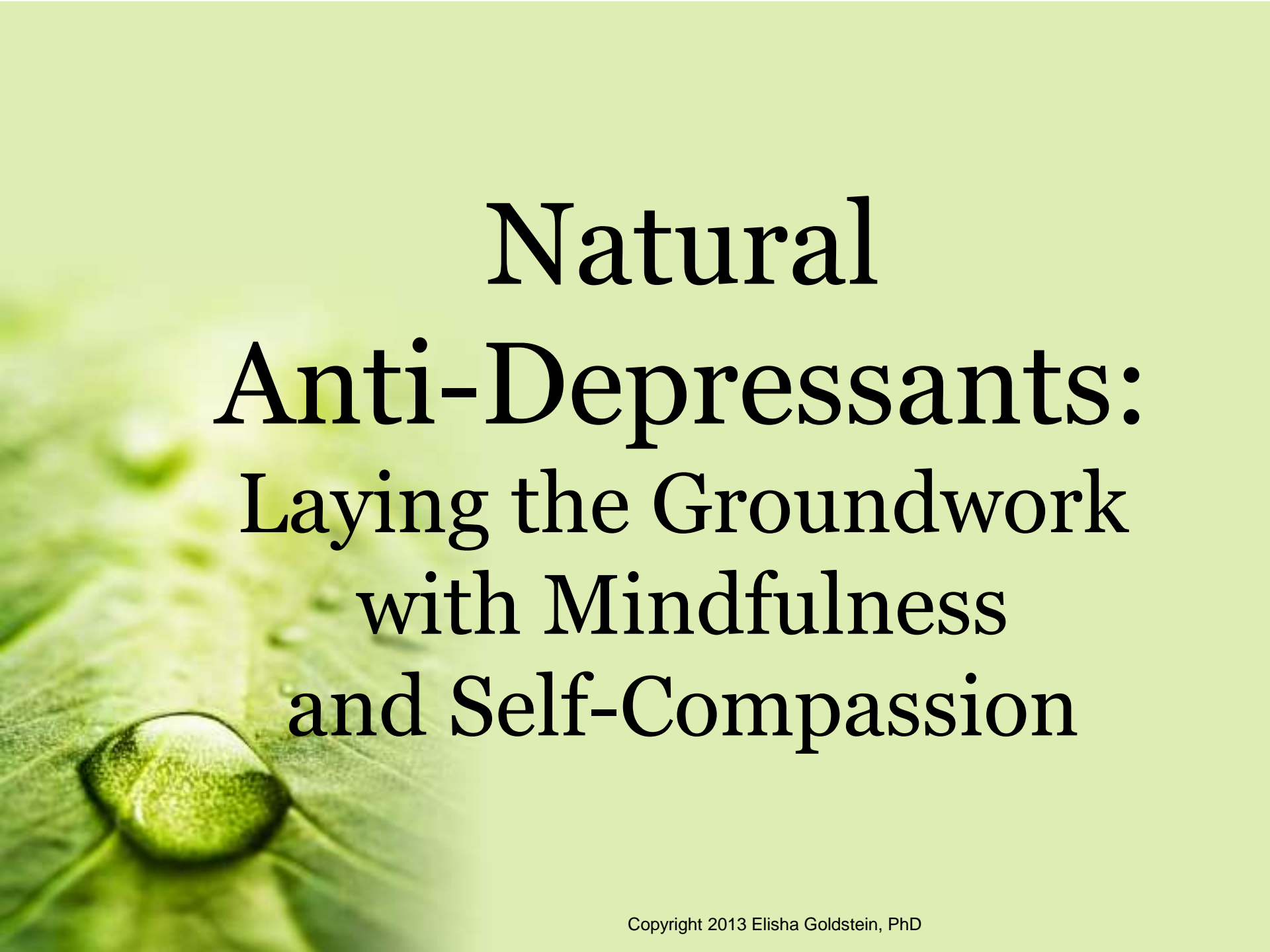
The Science of Natural Anti-Depressants

- ▶ Left prefrontal activation (Approach)
- ▶ Reduction of amygdala
- ▶ Reduction of cortical midline
- ▶ Increase cortical thickness
- ▶ Boosts immune system
- ▶ Improves mood
- ▶ Creates “positive loop.”

Uncovering Happiness:

5 Natural Anti-Depressants

1. **Mindfulness:** A state of mind defined as a kind awareness, where we can have fresh eyes, perspective and balance.
2. **Self-compassion:** A state of mind where you understand your own suffering and use mindfulness, kindness, and loving openness to hold it non-judgmentally and consider it part of the human condition.
3. **Purpose:** A state of mind where you are actively engaged in living alongside your values, inclined toward compassion for others, and an understanding of how your existence contributes value to the world.
4. **Play:** A flexible state of mind in which you are presently engaged in some freely chosen and potentially purposeless activity that you find interesting, enjoyable, and satisfying.
5. **Mastery:** A state of mind where you feel a sense of personal control and confidence and are engaged in learning to get better and better at something that matters.




Natural Anti-Depressants: Laying the Groundwork with Mindfulness and Self-Compassion

Two Wings to Fly

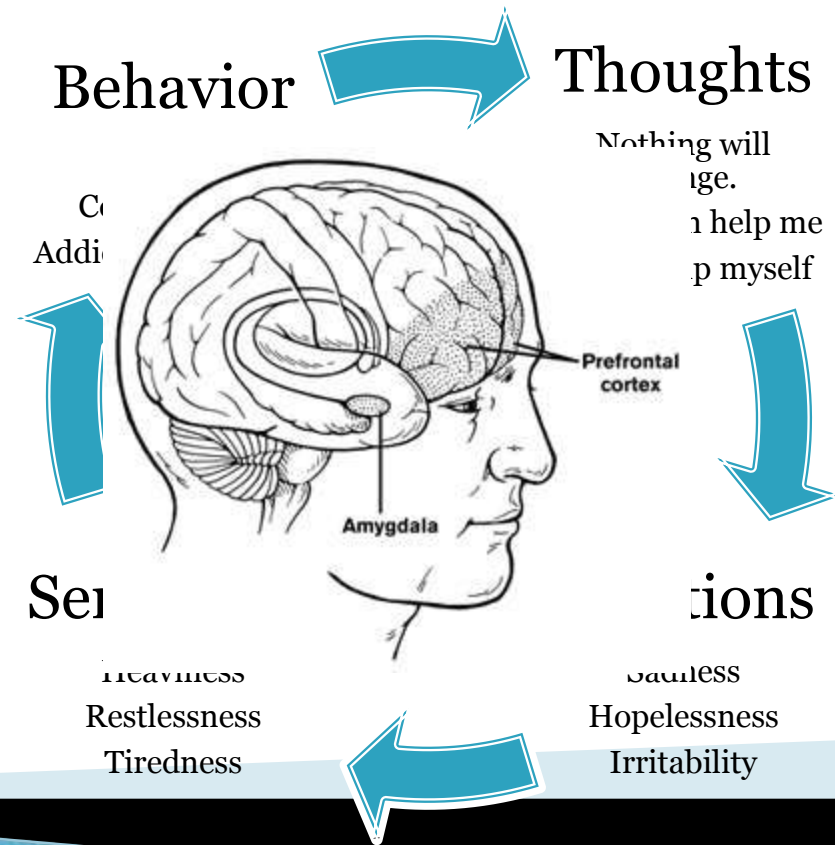


Amber Burnette



Why Mindfulness?

Creates Perspective and Choice





Why Self-Compassion

What is it?

“Being aware of our own suffering with an inclination to help ourselves.”



The Neuroscience of Resiliency



Self-Compassion ≠ Depression

- ▶ 142 Depressed, 120 not-depressed
- ▶ Depressed showed lower self-compassion
 - Controlling for depressive symptoms
- ▶ Self-compassion ≠ depressive symptoms, rumination and avoidance
- ▶ Rumination and avoidance mediated relationship between self-compassion and depressive symptoms
- ▶ Tobias Krieger, David Altenstein, Isabelle Baettig, Nadja Doerig, Martin Grosse Holtforth, Self-Compassion in Depression: Associations With Depressive Symptoms, Rumination, and Avoidance in Depressed Outpatients, **Behavior Therapy**, Volume 44, Issue 3, **September 2013**, Pages 501–513

First a Question:

Since it's difficult to cultivate self-compassion with a history of depression. How do you convey the quality of compassion when dealing with our own emotional suffering?

We need to appeal beyond the rational brain and to the emotional brain.

How can we do this?



What Comes Up for You?



The Power of Vulnerability



*Don't turn away. Keep your gaze on
the bandaged place. That's where the
light enters you.*

~ Rumi

13th Century Sufi Poet






Self-Compassion Practice



Discussion

- ▶ What did you notice?
- ▶ i.e., thoughts, sensations, emotions?
- ▶ How is this relevant to breaking the depressive loop?





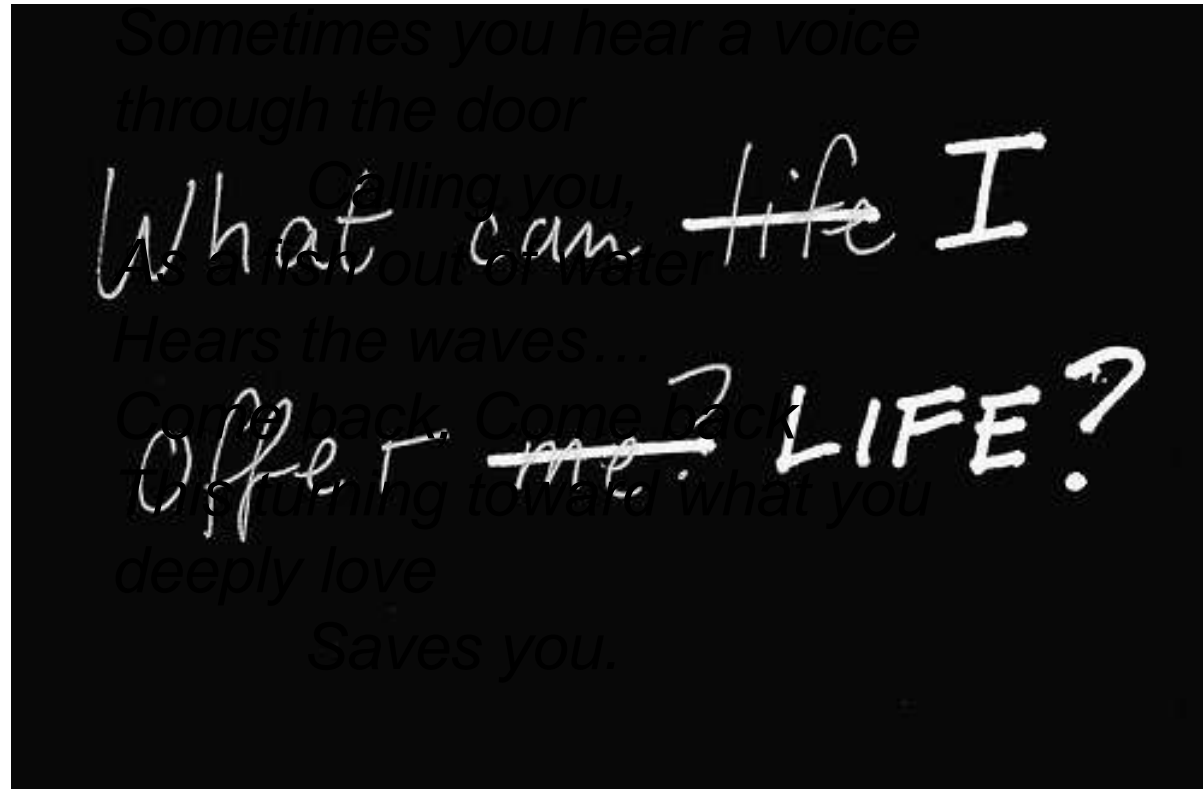
Compassion, Purpose & Meaning

*Sometimes you hear a voice
through the door*

*Calling you,
As a fish out of water
Hears the waves...
Come back, Come back
This turning toward what you
deeply love
Saves you.*

~ Rumi

Live With Purpose & Compassion



Reducing Inflammation

Studies have shown a correlation between high level of cellular inflammation and depression

Hedonic Happiness

“Living the good life”

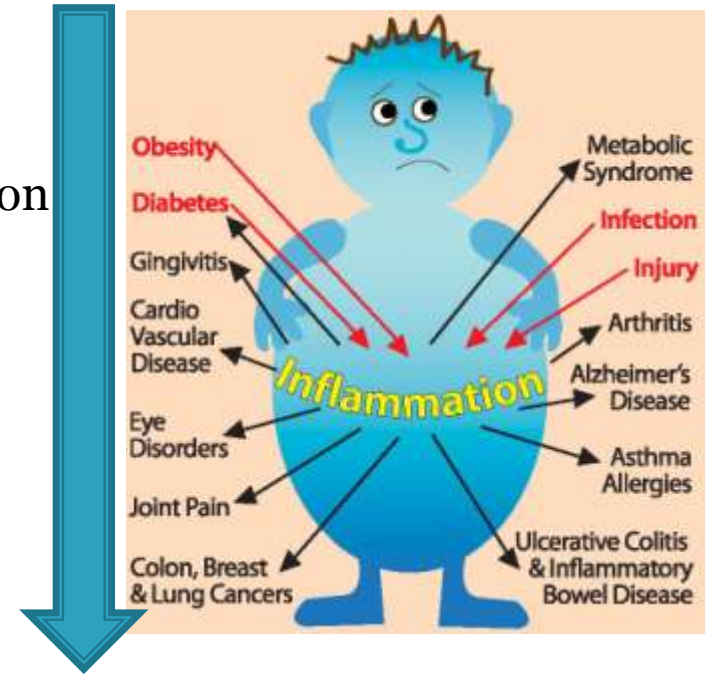
High Inflammation

Eudaimonic Happiness

“A life of purpose and meaning”

“A life rich in compassion”

= Low Inflammation



Barbara Fredrickson et al. “A Functional Genomic Perspective on Human Well-Being,” *Proceedings of the National Academy of Sciences of the United States of America* 110, no. 33 (August 13, 2013): 13684–89.

When Money Can Buy Resiliency Pro-Social Vs. Anti-Social



When Money Can't Buy Resiliency



“It’s not enough to be
compassionate, you
must act.”

~ The Dalai Lama

What Do You Value?

Making Pro-Social Values into Verbs

- ▶ Compassion A daily practice of thinking of people in my life or in the world who are struggling and wishing them lovingkindness
- ▶ Strong Family Have nightly meals together without electronics
- ▶ World Peace Volunteer or give money to (Pick your organization)

Too Much Compassion?

We're all at risk

Between 16 – 85% of healthcare workers develop “compassion fatigue” – a gradual lessening of compassion.

Balance with compassion and...

Hooper, et al. (2010). Compassion Satisfaction, Burnout, and Compassion Fatigue Among Emergency Nurses Compared With Nurses in Other Selected Inpatient Specialties. *Journal of Emergency Nursing*, 36(5), 420-427. Retrieved from <http://dx.doi.org.hsl-ezproxy.ucdenver.edu/10.1016/j.jen.2009.11.027>



Play!

What is Play?

It's Natural







“The opposite of play is not work, it’s depression.”

~ Brian Sutton-Smith

Play ≠ Depression

Play	Depression
Engaged (Left Prefrontal)	Disengaged (Right Prefrontal)
Absence of self-critic	Self-Judgment
Flexible Mind	Rigid Thinking
Positive Emotions	Negative Emotions
Social (High Vagal Tone)	Isolation (Low Vagal Tone)
Open to possibilities	Helplessness

The Science of Toys and Playmates



Three Conditions

1. Playmates and Toys
2. Playmates, No Toys
3. No playmates, No Toys



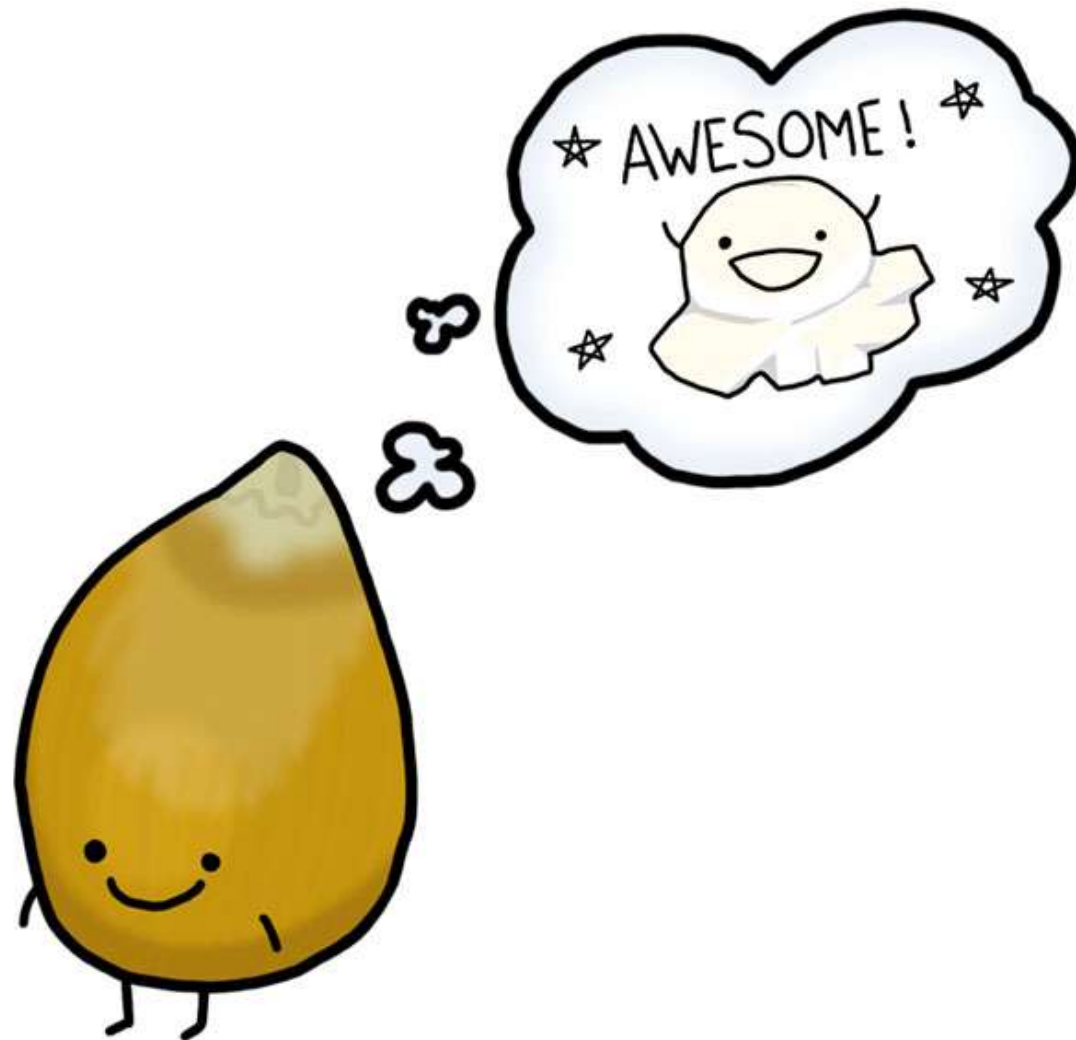
Results

Group 1 had significantly thicker cerebral cortex - Cognitive processing, attention and awareness. (Key determinant of change – novelty).

When thicker is sometimes better - They could also navigate a maze better (higher behavioral performance).

Group 3 showed decreased cortical thickness.

Pop into the Present



Mouse from Group 1



How to Nurture Play?

Take a Play History

- ▶ Diego's Story

Bring it to the Present

- ▶ What are your toys?
- ▶ Who are your playmates?
- ▶ Make a playbook and playdates.

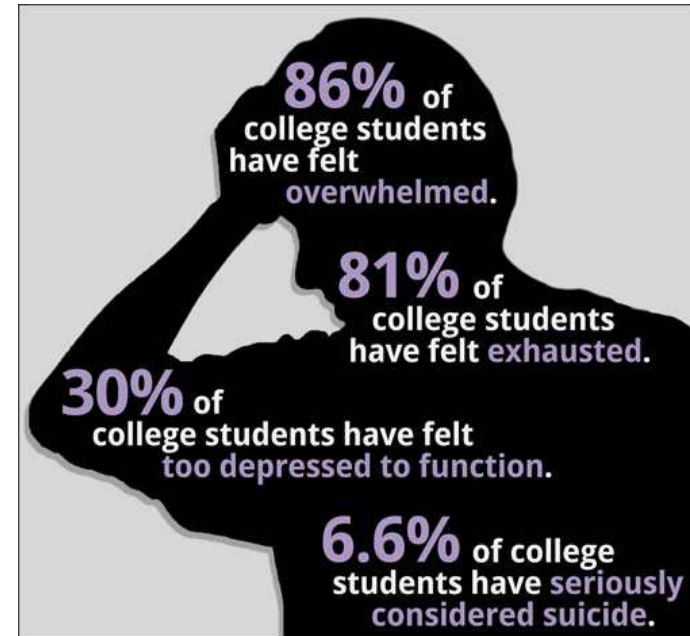


Confidence

Tying it All Together

The Golden Rule:

Getting Better is Not About Performing Well



STATISTICS FROM THE AMERICAN COLLEGE HEALTH ASSOCIATION NATIONAL COLLEGE HEALTH ASSESSMENT, FALL 2011

Mindset Matters

Fixed Mindset - Performance

- ▶ Rigid belief that you have finite abilities.
- ▶ Every encounter with the depression loop becomes a measure of your ability. Setbacks just reinforced the fixed belief.

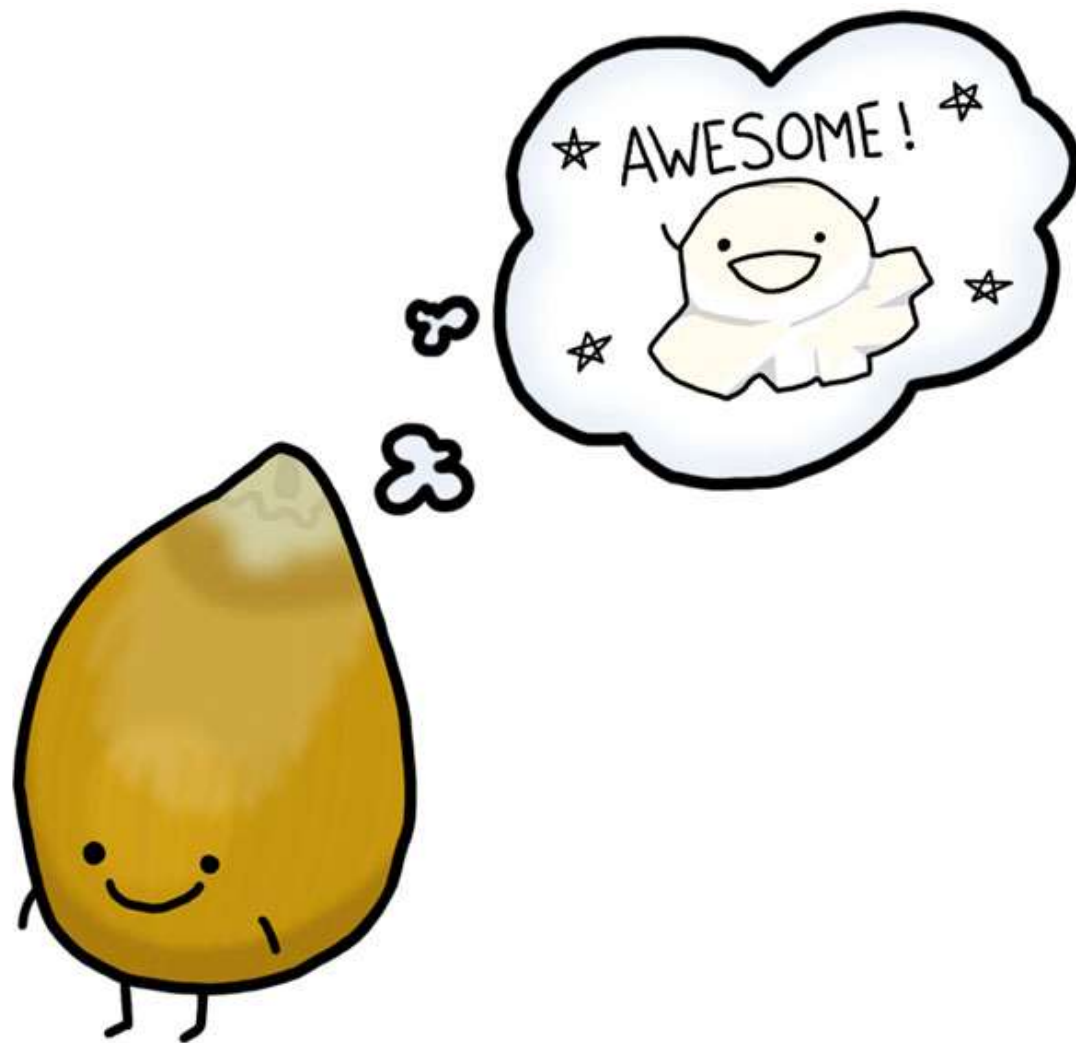
Growth Mindset - Learning

- ▶ Flexible belief that we all have varying abilities, with strategy and effort we can increase them.
- ▶ Every encounter with the depression loop becomes an opportunity to learn and grow.

Exercise:

What is Your Mindset?

1. When it comes to cultivating the anti-depressant brain, you have an idea of what you can and can't do and there's not much you can do to change that.
2. No matter what your upbringing is or genetic predisposition, there is always opportunity for change.
3. While you can change your actions, you have a natural set point that you'll always come back to with depression.
4. There is always the possibility to change certain things about what you believe you can and can't do in the world.



Pulling it All Together

Build It

“Make a list of all the things you do in a day.”

“Mark each with an “N” for nourishing and a “D” for depleting.”

Extend It

“Write other things that integrate your natural anti-depressants - mindfulness, self-compassion, purpose, play or mastery.”

Schedule It

- ▶ Increase Nourishing, Reduce Depleting or Relate to depleting differently
- ▶ Look for open spaces or for neutral activities and replace them with natural anti-depressants.

<u>Neutral/Depleting Activities</u>	<u>Extended List Activities</u> <u>Accomplishment/Pleasure</u>	<u>Natural Anti-Depressant</u>
Wake up, Check phone	Take a few deep breaths or the “BE” practice.	Mindfulness
Make breakfast	Healthy Eating - Swap frozen waffles for healthier choices like oatmeal or granola and yogurt. Remind myself this is taking care of me.	Self-Compassion, purpose, play
Take a shower	Bring more mindfulness to the shower experience.	mindfulness
Drive to and from work	Listen to audio programs I’ve been wanting to hear.	Purpose, self-compassion, play
Checking email during lunch	Go out on a 20-minute walk	Self-compassion, purpose
Flip TV channels at night	Either watching specific shows that are fun for me, taking a bath, connecting with friends and family.	Play
Check messages before bed	Listen to relaxing old tunes, do a meditation, read a book I’ve been meaning to get to.	Play, self-compassion

3 Steps to Uncover Happiness

1. **Engage** - Start with engaging Mindfulness, Self-Compassion and any of the natural anti-depressants.
2. **Forgive** - When the mind wanders, practice “forgive and invite” and gently guide it back.
3. **Repeat** - Repeat step 2 indefinitely.

“The trick is to recognize where the spaces are in your daily life to stop and drop into practice.”

~ The Now Effect

Remember...

*“Wherever you are
that’s the entry point.”*

~Kabir



*“Because you are ALIVE,
EVERYTHING is POSSIBLE.”*

- Thich Nhat Hanh

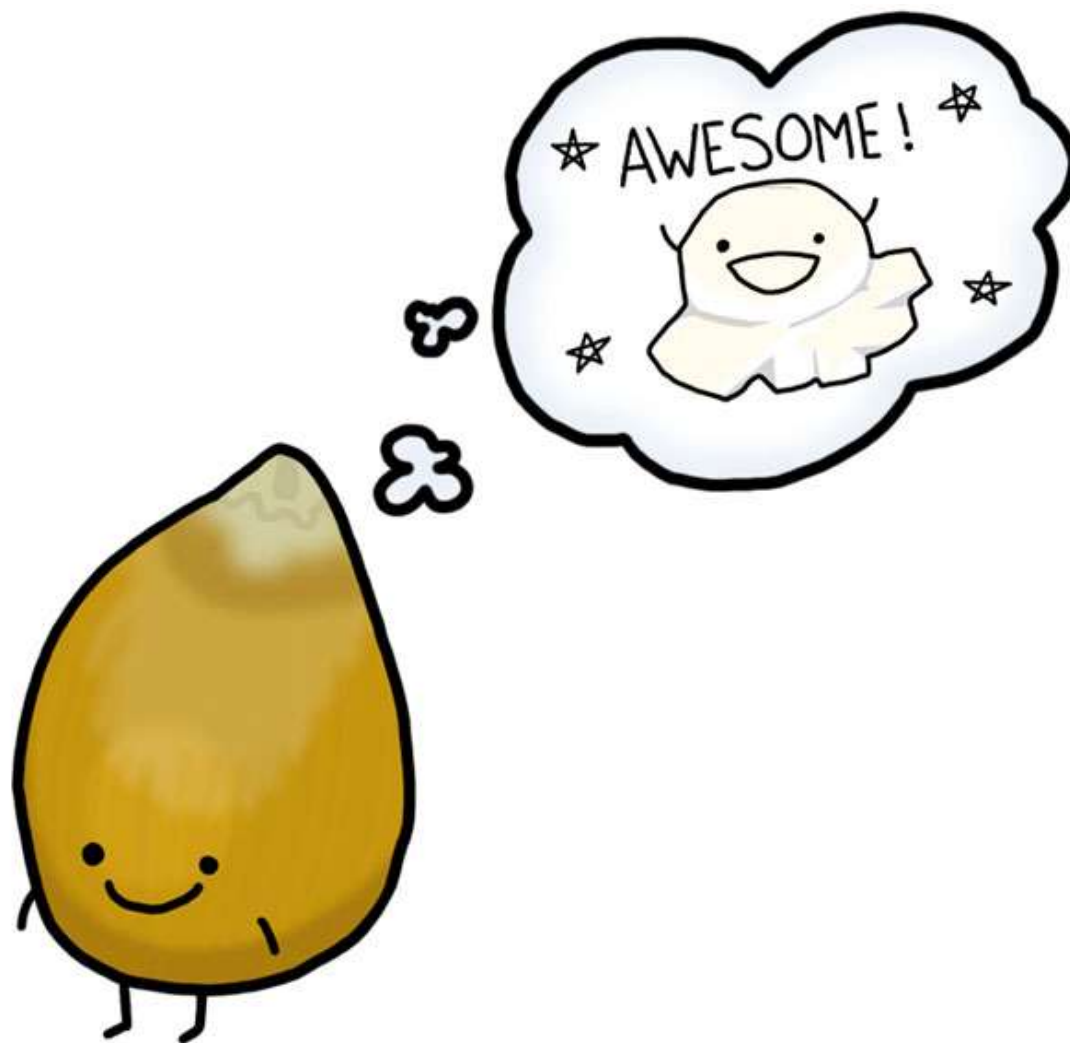
Illustration by Mark Goodwin

What is the Secret?

How
Did the rose
Ever open its heart
And give to this world
All its
Beauty?
It felt the encouragement of light
Against its
Being,
Otherwise,
We all remain
Too
Frightened.



from "The Gift"
(poems by Hafiz)



Question and Answer





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