

WELCOME TO...

This is Your Brain on Stress: Navigating Uncharted Waters

“Students who were struggling in school before are still struggling. Those who were doing well may now be struggling too. Remember that some **[educators]** might be overwhelmed with the amount of extra support they are needing to provide for all kids.

Grace.”

-- Jimmy Casas, #Culturize



This is Your
Brain on
STRESS:
Navigating
Uncharted Waters



REMOTE
LEARNING
SUPPORT

[GO.NCSU.EDU/REMOTETEACHING](https://go.ncsu.edu/remoteteaching)



**NC STATE
UNIVERSITY**

College of Education
Friday Institute for Educational Innovation

PLLC

Professional Learning and
Leading Collaborative

fi.ncsu.edu/teams/pllc/



**Educate
Innovate
Inspire**



serving
NC
and beyond





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Nancy Mangum

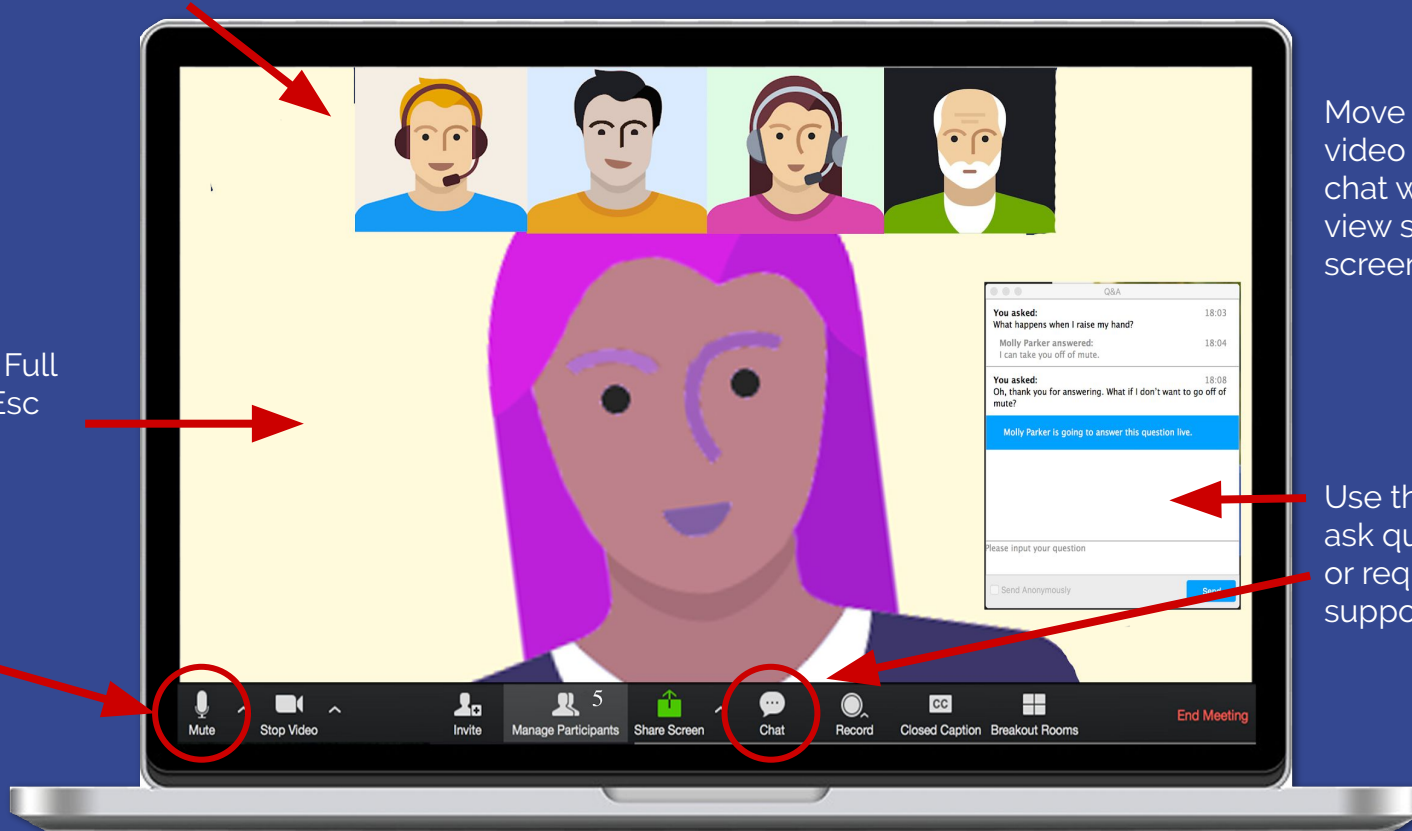
nkmangum@ncsu.edu
@nmangum

zoom[®]

Participants' video minimized

Double click screen to go Full Screen and Esc to go back

Mute and unmute as needed



Move participant video block and chat windows to view shared screen as needed

Use the chat to ask questions or request support



General Goals

- Understand how the brain reacts to stress
- Explore brain-based strategies that educators can manage their stress


SEL Goals

- Focus on **you** (not your students, children, spouse, etc.)
- Reflect and commit to a positive behavioral change


test

1. What is the official language of France?
2. Name one muscle or bone in your upper body.
3. What is wrong with this sentence: **I don't want to not go outside.**
4. $(x + 8)(9 + 2x) =$
5. Select **one** of the following to answer:
 - Describe the first concert that you attended.
 - Where were you when 9/11 occurred?
 - Describe your favorite teacher or best school experience.

Part II

1. Write your name with your non-dominant hand.
2. You have 10 seconds to say the alphabet **backwards**.
3. Sing Happy Birthday. 

What is the difference between Part I and Part II?



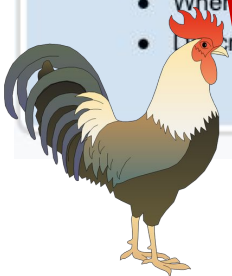
Educators with
**10+ years of
experience**
respond in the
chat.

Part I

1. What is your favorite color?
 2. Describe your body.
 3. Do you want to not go outside.
 4. Describe your favorite food.
 5. Describe your favorite teacher or best school experience.
- Describe what you attended.
 - When did you when 9/11 occurred?
 - Describe your favorite teacher or best school experience.

Part II

1. Write your name in cursive with your non-dominant hand.
2. You have 10 seconds to say the alphabet **backwards**.
3. Sing Happy Birthday. 🎵





Long term
memory is
like...



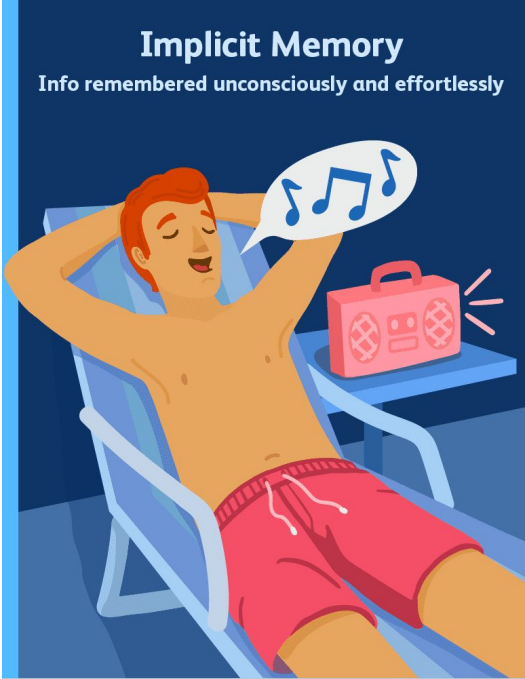
Explicit Memory (long term)

$$(x + 8)(9 + 2x)$$

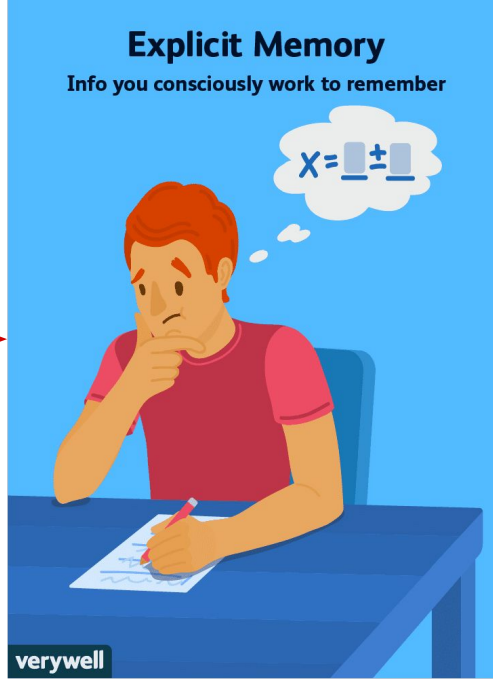
x	9x	2x ²
8	72	16x

Implicit Memory (long term)





Old Habit or Skill



NEW Knowledge

=



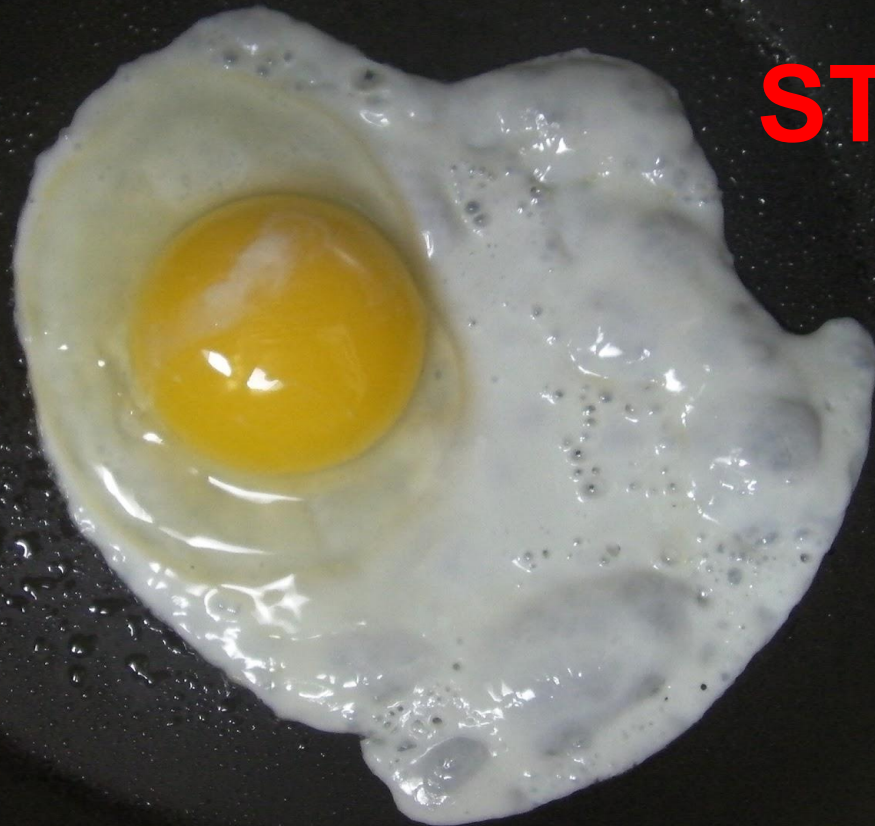
Frustration
Confusion
Rejection
Excitement
Denial



“It can take anywhere from **18 to 254** days for a person to form a NEW habit and an average of **66** days for a new behavior to become automatic [implicit memory].”

Healthline

**This is your brain
on
STRESS.**



What is happening in our brains right now?

Prefrontal Cortex

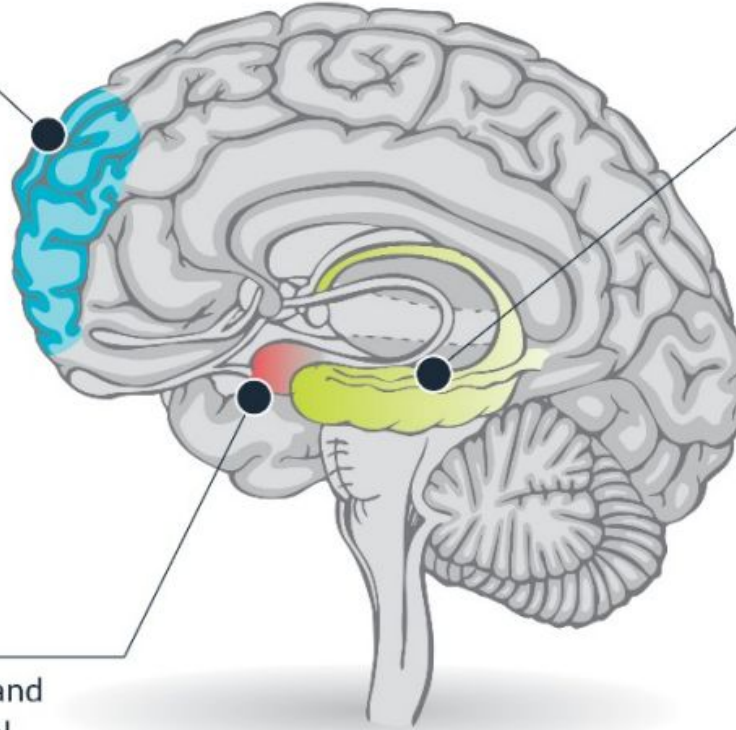
Regulates thoughts, emotions, behavior

Hippocampus

Stores learning and memory

Amygdala

Reacts to stress and emotional arousal





The Prefrontal Cortex

The “thinking” part of your brain.

It likes to gather **details and information** using our senses.

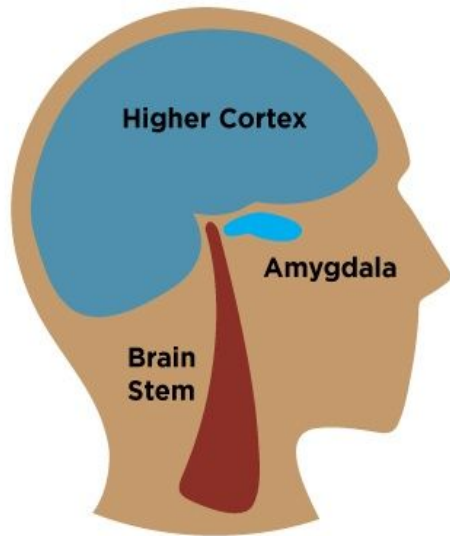
The rational part of our brain.



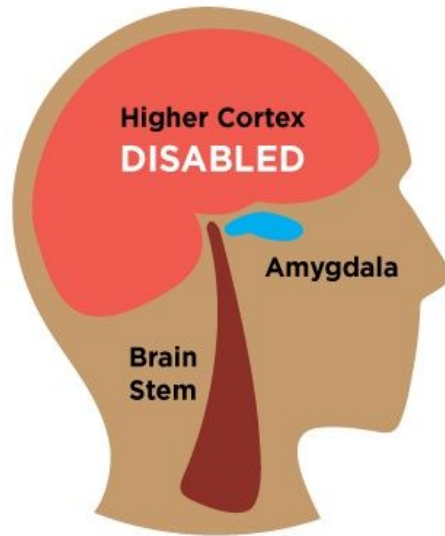
The Amygdala
GO!
RUN!
Forget the details
Just react.



Amygdala = Emotional Hijacking



LOW Emotion
(Calm, Relaxed)



HIGH Emotion
(Anger, Fear, Excitement, Love,
Hate, Disgust, Frustration)

When the *Fight, Flight or Freeze Mode* Occurs
the rational part of the brain is
DISABLED

amygdala takes over

preventing us from making
sound, rational decisions and
creates, maintains, or modifies
anxiety and fear

What happens when the amygdala reacts **before** the cortex?

How much **mental effort** does it take to answer the question while under stress?

After 3 minutes and 1 lifeline...

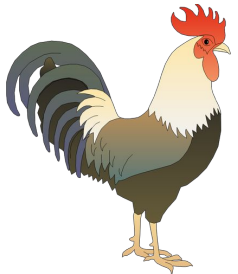


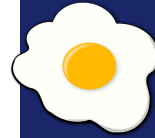


What does stress feel like to you?

How do you typically react to stress?

Educators who live
in the **Triangle,**
Sandhills or Coast
respond in the chat.





*Accelerates
aging*



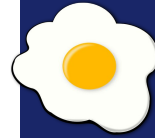


The Impact of Stress



Impairs memory

“Where did I put my glasses?”



Impairs self-control

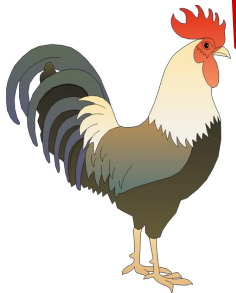
“Snacks, snacks and more snacks!”





What impacts (either emotional or physical) are YOU experiencing as a **result of stress** because of COVID19?

Educators who live in the **Mountains or Piedmont** respond in the chat.



Quick Reflective Writing



Think about an interaction where
you were **UPSET**:

1. What was the physical reaction that you experienced?
2. What were you thinking?
3. What were you feeling?
4. What was the end result?



My body stiffened. I clenched my teeth and my heart rate elevated.

I was thinking, "I can't believe this!"

I felt angry & frustrated.

In the end, I threw the remote down and stormed out of the room.

Managing Stress

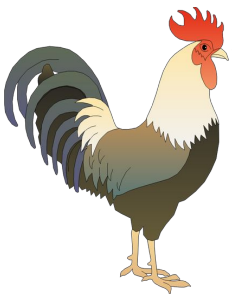




When you hear the word **mindfulness**

I think or feel...

Educators who live
outside of NC or you
haven't responded
yet please share in
the chat.







What is mindfulness?

*Mindfulness is the ability to be **fully present**,
aware of where we are and what we're
doing, and not **overly reactive** or
overwhelmed by what's going on around us.*



Practicing Mindfulness

- **Acknowledge**: Tap into your physiological self-awareness as a cue.
- **Name**: Naming ↔ Admitting
- **Manage**: Distracting vs Processing



Practicing Mindfulness

My body stiffened. I clenched my teeth and my heart rate elevated.

I was thinking, “I can’t believe this!”

I felt angry & frustrated.

In the end, I threw the remote down and stormed out of the room.

- **You think**, “My body is telling me I’m angry.” (**deep, slow breath in**)
- **You recognize**, “I’m having thoughts that this is upsetting.” (**slow exhale out**)
- **You feel**, “Anger...anger...anger...” (**deep, slow breath in**)
- Your body slows down (**slow exhale out**)

Practice awareness of your body's reaction

MINDFULNESS

Label or name emotions

What are the benefits of practicing mindfulness?

Prefrontal Cortex

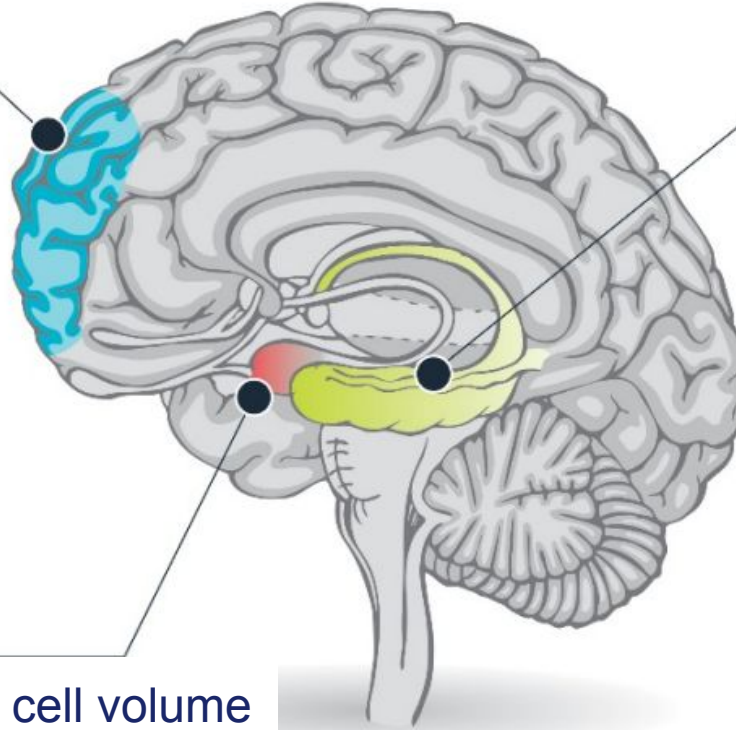
✓ Planning, problem solving & emotion regulation

Hippocampus

✓ Learning & Memory

Amygdala

✓ Decreases brain cell volume
- decreasing fearful or anxious emotions



Additional Methods of Managing Stress





MOVEMENT

Physical activity has been linked to enhanced cognitive function, **improved self-esteem**, **reduced stress** and has often been correlated to positive outcomes in school performance...

Kantomaa et al., 2015



Why Move?

The same parts of the brain (the cerebellum, motor cortex, and midbrain) that coordinate movement also coordinate the **flow of thoughts**, resulting in complex problems often being solved just by taking a walk.

Sousa, 2011

Before



Now



I don't have
time to
exercise!





Let's move,
stretch, or even just stand up!

Research shows even
short bursts of movement
deliver **BIG benefits**
for
brain health

Scharaldi, 2017





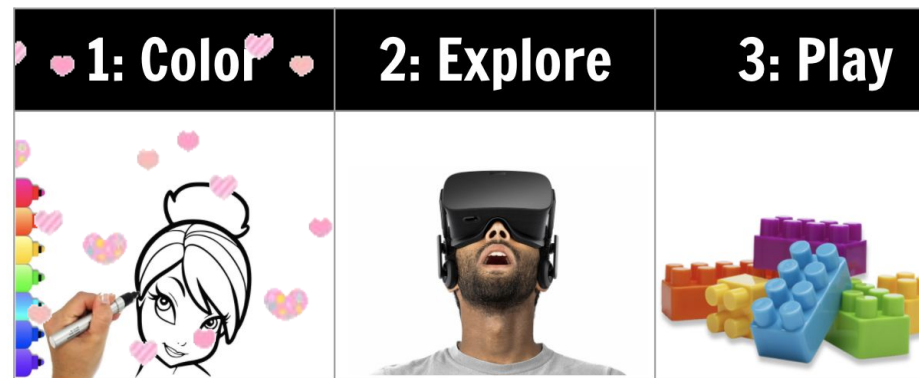
**Change
the
Channel**

Change the Channel

“Take a thought break.”

1. Redirect or distract your mind
2. Allow emotions to dissipate
3. Engage with the prior task

How do you need to start this day?



Other ways to **change the channel**...

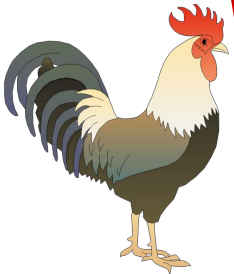
Assemble or fix...

Cook

Yardwork

Take a walk (maybe)

Anyone with 1 - 3
years of
experience share
your response in
the chat.

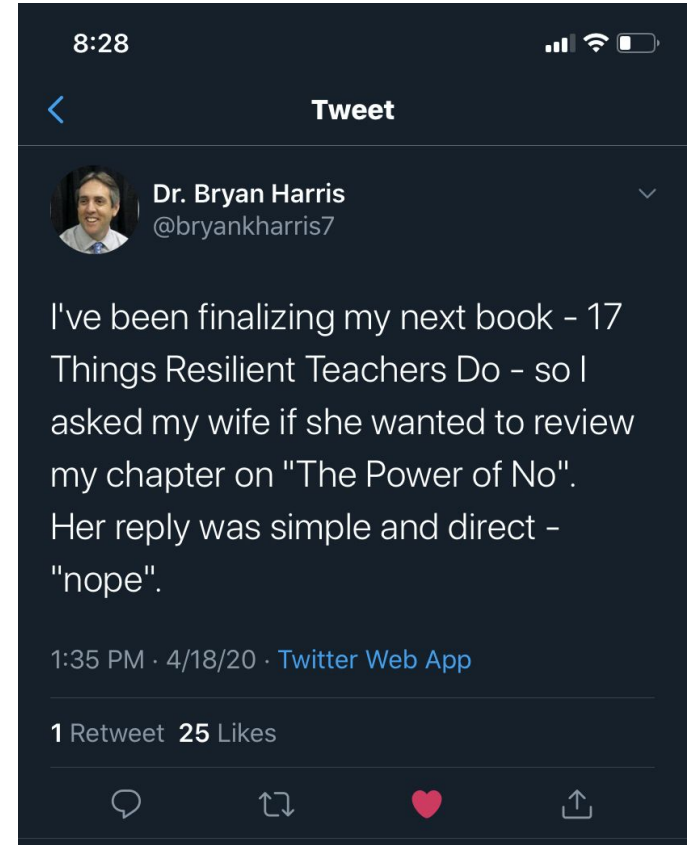




The Power of **No**

Resilient teachers say no.
“No” is a complete sentence.

Dr. Bryan Harris



This **USED** to be
your brain on **stress**.



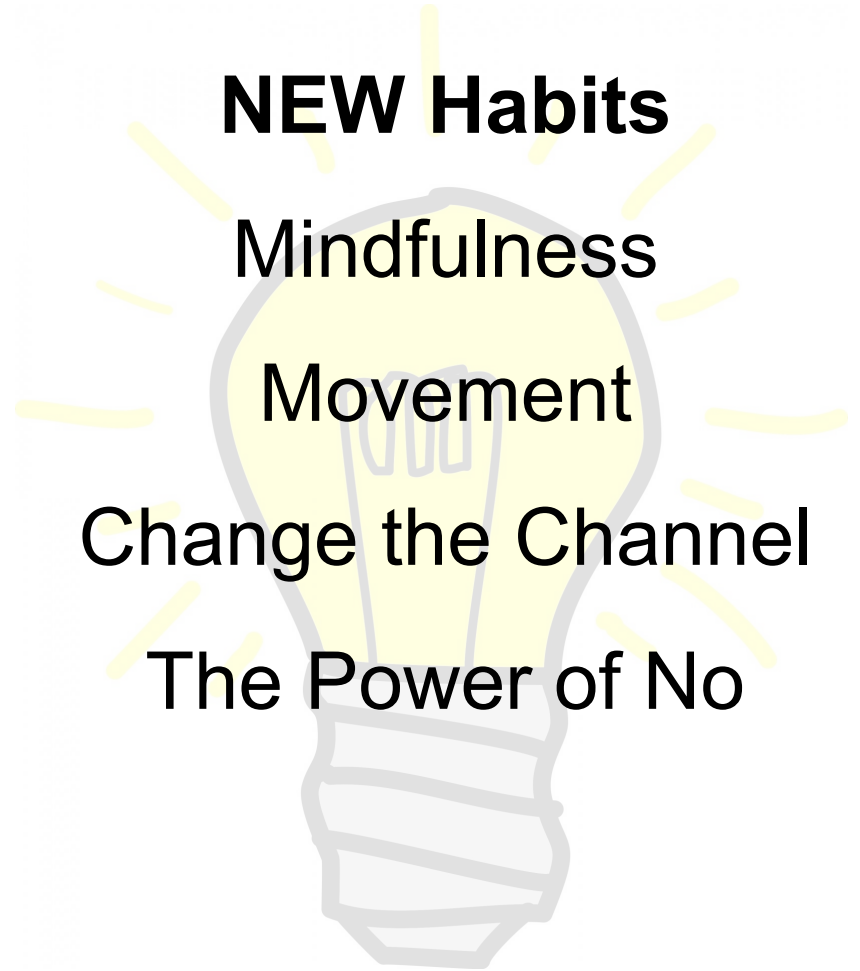
NEW Habits

Mindfulness

Movement

Change the Channel

The Power of No





What **new** stress management strategy or habit will you commit to practice?

Those with
**4 - 9 years of
experience**
respond in the
chat.





“It can take anywhere from **18 to 254** days for a person to form a NEW habit and an average of **66** days for a new behavior to become automatic [implicit memory].”

Healthline



Additional Resources

- [Getting Started with Mindful Practices](#)
- [Meditation Practice with Andrea](#)
- [The Power of No](#) by [Dr. Bryan Harris](#)
- Practice 5 minutes of [Mindful Breathing Meditation](#) (video)



COMING SOON

**Stress, trauma, and resilience:
Helping students manage the challenges of
remote learning**

May 6, 12 & 13

<http://go.ncsu.edu/remotelearning>



North Carolina Department of
PUBLIC INSTRUCTION

NC STATE

Friday Institute for Educational Innovation



Evaluation link for today's session:
go.ncsu.edu/remotelearningstress

Today's Slides/Resources
go.ncsu.edu/brainonstress



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