



Working Through the Adversity:

The Impacts of ACEs within a Housing
Authority and what we can do about it





SESSION 1

ACES: What are they? What do they mean?



Introduction

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Ashland Housing Authority

What are we talking about during both Sessions?

1. The ACEs study
2. Understanding how this impacts our work with the Housing Authority
3. How we can improve life of those we serve, those we work with, and ourselves
 - a. Practice some exercises

Goals and Objectives

- Understand Adverse Childhood Experiences (ACEs)
- Identify why this is important for Housing Authorities to understand
- Take away strategies that can be implemented immediately to provide an opportunity for change in our workplaces
- Understand the necessity of self-care

Why ACES?

- Stumbled upon by Dr. Vincent Felitti, Clinical Professor of Medicine at University of California while practicing Internal Medicine at Kaiser Permanente
- Led to an extensive study conducted with the CDC and Kaiser Permanente between 1995 and 1997 first described the term Adverse Childhood Experiences. In the study's follow-up phase, more than 17,000 people answered questions about their childhood experiences. The study found a close association between Adverse Childhood Experiences (ACEs) and various adverse outcomes in adulthood.
- The study is Correlational, not Causal- Just because you have experienced ACES does not mean you are locked in to a negative outcome

Demographics of Respondents

Total Responding: 17,337

Gender: Male: 46% Female: 54%

Race/Ethnicity:

White:	74.8%
Black:	4.5%
Hispanic:	11.2%
Asian/Pacific Islander:	7.2%
Other:	2.3%

Demographics (con't)

Age:

19-29:	5.3%
30-39:	9.8%
40-49:	18.6%
50-59:	19.9%
60 and over:	46.4%

Education:

Not High School Graduate:	7.2%
High School Graduate:	17.6%
Some College:	35.9%
College Graduate or Higher:	39.3%

Let's look at the Survey

Think about the people that were part of the 17,000+ group and whether or not they have these experiences.

Make a quick tally about how many ACES you think this group had on average.

Adverse Childhood Experience (ACE) Questionnaire

Finding your ACE Score

While you were growing up, during your first 18 years of life:

1. Did a parent or other adult in the household often ...

Swear at you, insult you, put you down, or humiliate you?

or

Act in a way that made you afraid that you might be physically hurt?

Yes No If yes enter '1' _____

2. Did a parent or other adult in the household often ...

Push, grab, slap, or throw something at you?

Or

Ever hit you so hard that you had marks or were injured?

Yes No If yes enter '1' _____

3. Did an adult or person at least 5 years older than you ever...

Touch or fondle you or have you touch their body in a sexual way?

or

Try to or actually have oral, anal, or vaginal sex with you?

Yes No If yes enter '1' _____

4. Did you often feel that ...

No one in your family loved you or thought you were important or special?

or

Your family didn't look out for each other, feel close to each other, or support each other?

Yes No If yes enter '1' _____

5. Did you often feel that ...

You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you?

Or

Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?

Yes No If yes enter '1' _____

6. Were your parents ever separated or divorced?

Yes No If yes enter '1' _____

7. Was your mother or stepmother:

Often pushed, grabbed, slapped, or had something thrown at her?

Or

Sometimes or often kicked, bitten, hit with a fist, or hit with something hard?

Or

Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?

Yes No If yes enter '1' _____

8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?

Yes No If yes enter '1' _____

9. Was a household member depressed or mentally ill or did a household member attempt suicide?

Yes No

If yes enter '1' _____

10. Did a household member go to prison?

Yes No

If yes enter '1' _____

Now add up your "Yes" answers: _____

This is your ACE Score

Thoughts....

Which experience do you think was the most common for this group of people?

What do you think would be an 'average' score for this group?

Other thoughts?

Adverse Childhood Experiences Are Common

Household dysfunction:

Substance abuse	27%
Parental sep/divorce	23%
Mental illness	17%
Battered mother	13%
Criminal behavior	6%

Abuse:

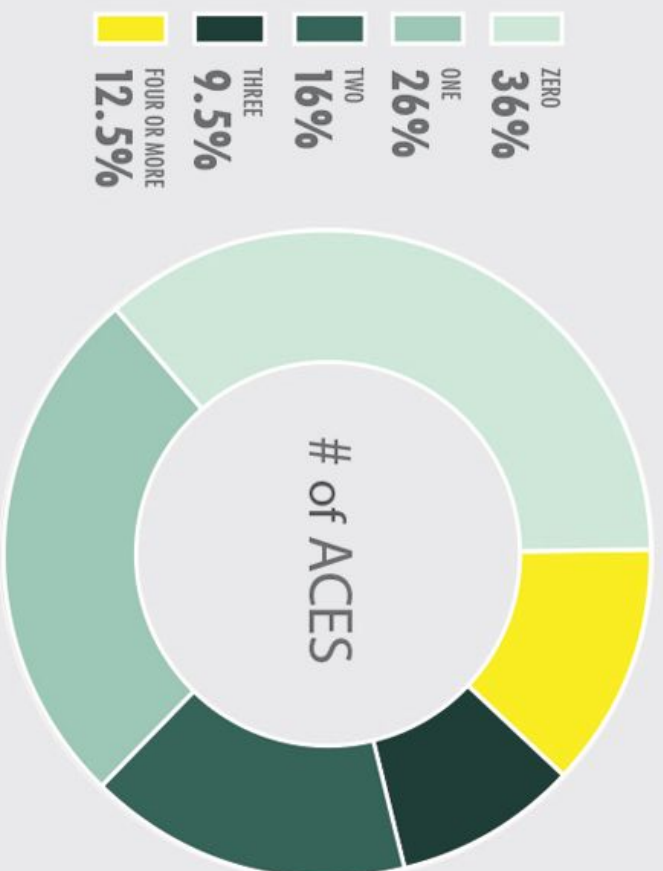
Psychological	11%
Physical	28%
Sexual	21%

Neglect:

Emotional	15%
Physical	10%

How Common are ACES?

ACE Study



While 36% had '0' ACES...

More than 1 out of 4 had
one adverse experience...

AND

12.5% had MORE THAN 4

**ACES ARE
COMMON**

Source: CDC

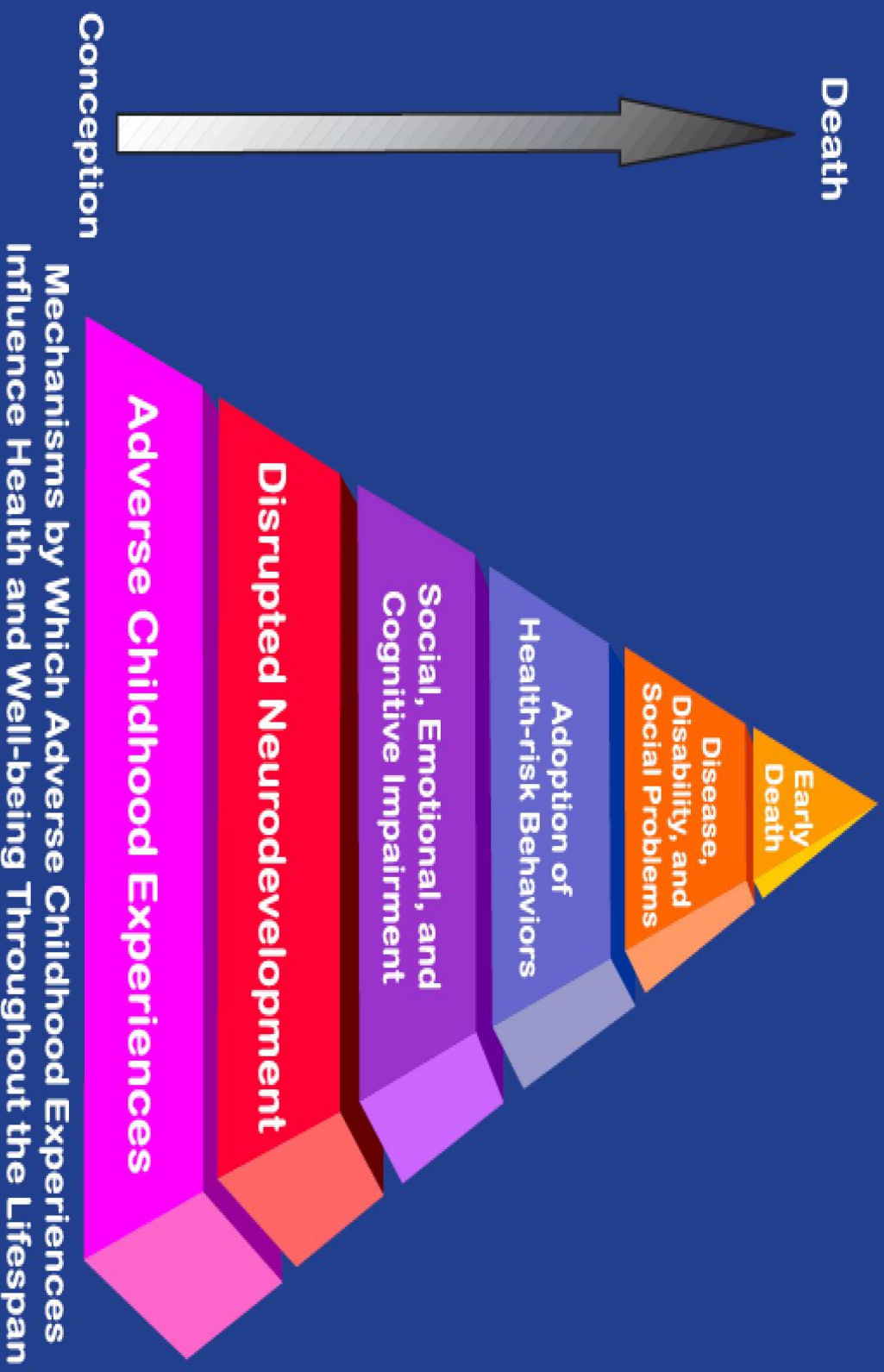
ACEs were so common that the study was expanded to a more representative population and over time four additional questions were added.....

ADDITIONAL QUESTIONS:

- 1) Did you experience repeated bullying as a child?
- 2) Did you repeatedly experience discrimination based on ethnicity, skin color or sexual orientation?
- 3) Did you live in a neighborhood that experienced gang related violence?
- 4) Did you ever live in a foster home or group home?

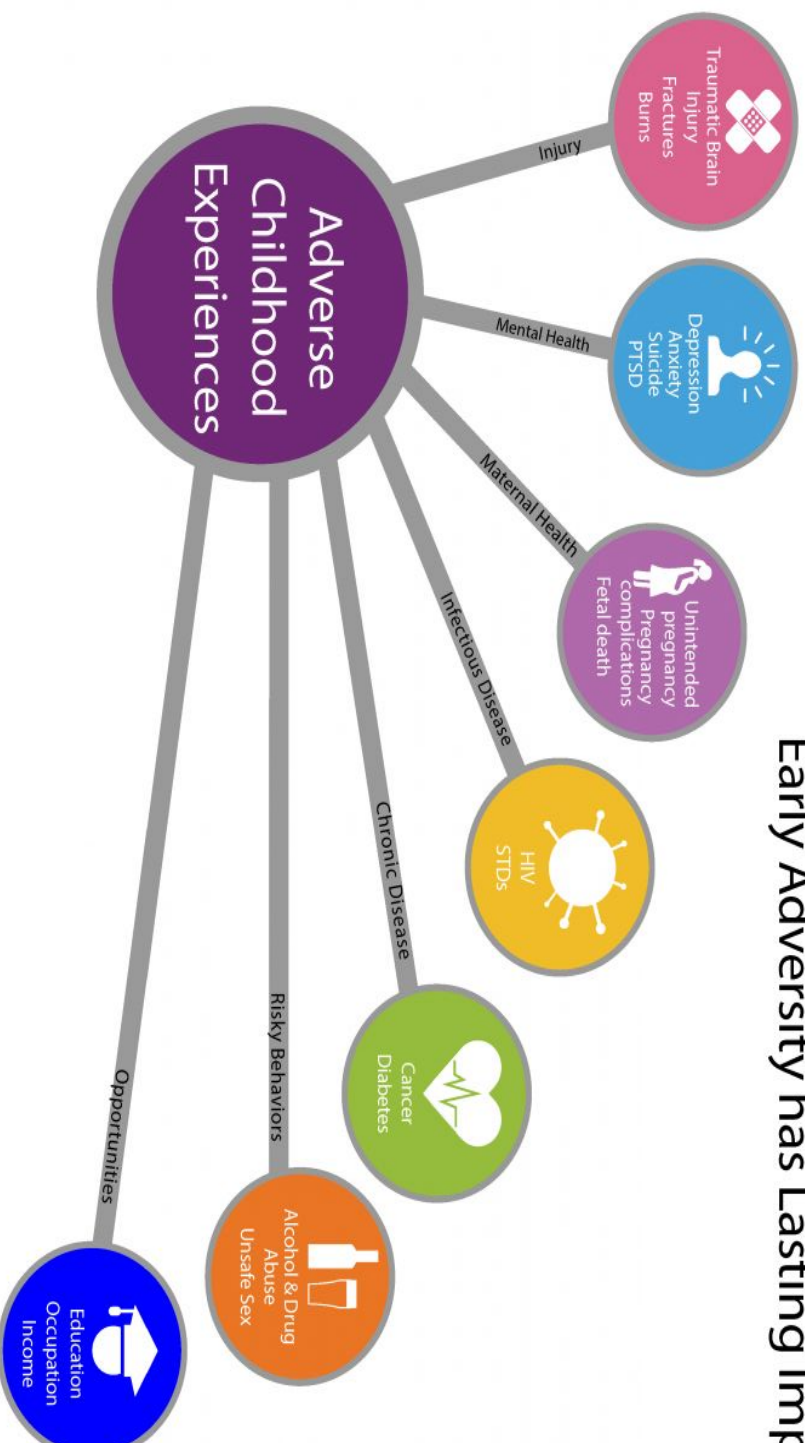
Why do ACES Matter?

Research has shown that people that have more adverse experiences experience more negative health and life outcomes in many areas.

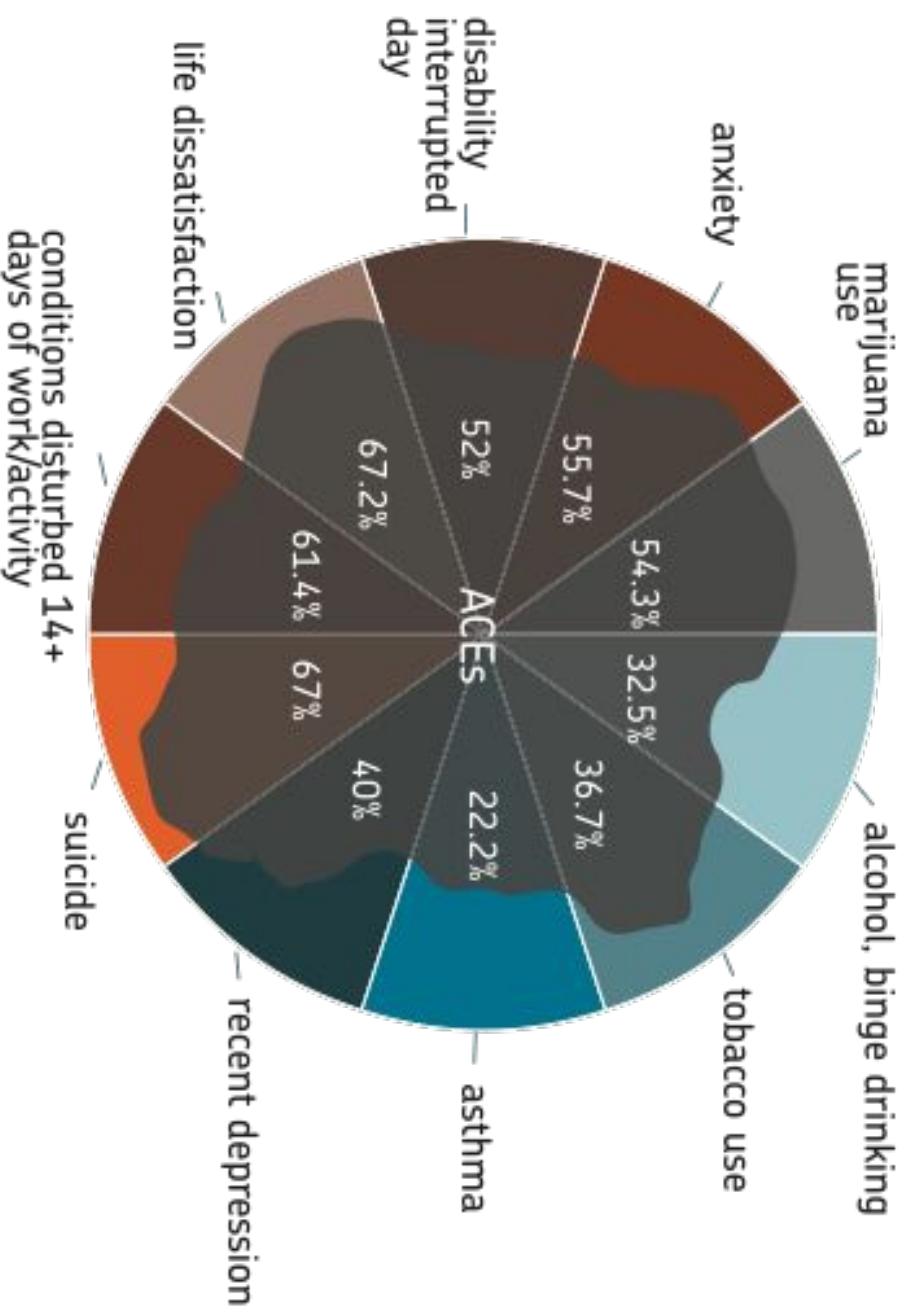


ACEs health outcomes

Early Adversity has Lasting Impacts

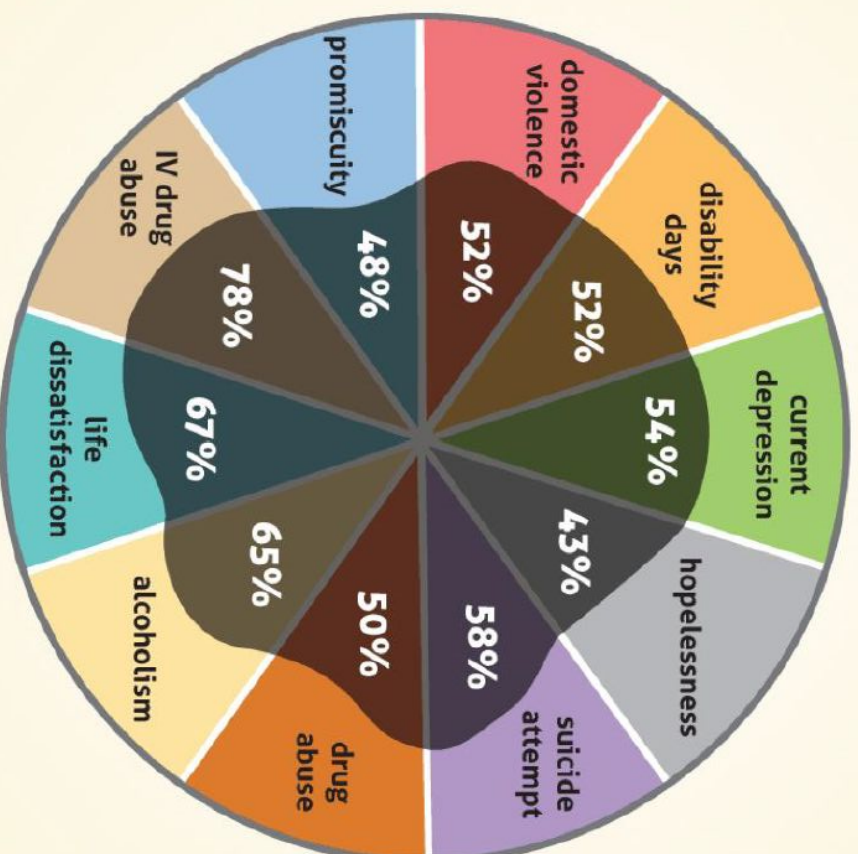


Population Attributable Risk



Controls: gender, age, income, education, race-ethnicity

ACEs and Population Attributable Risks

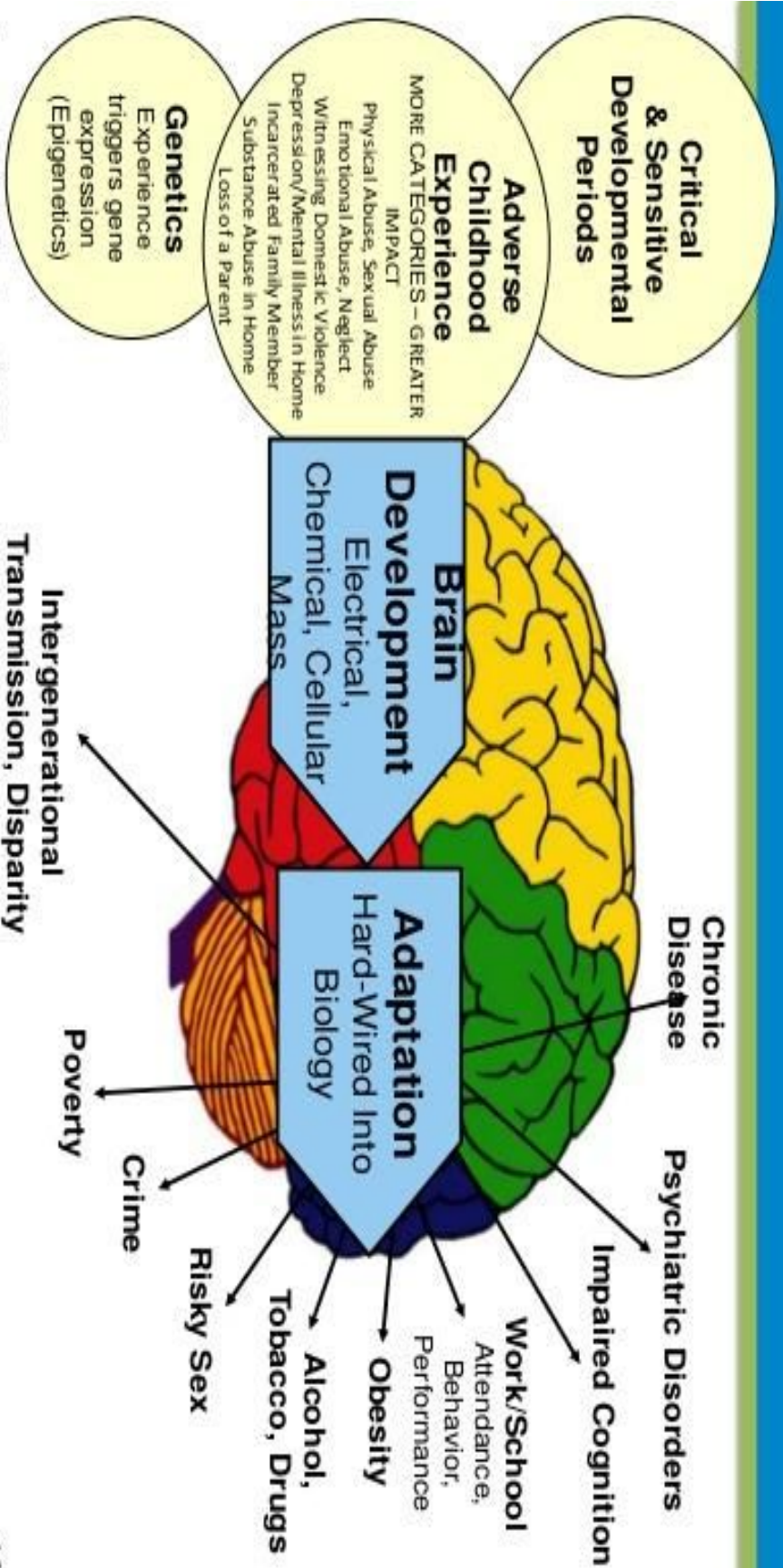


ACES AND ATTRIBUTABLE RISKS



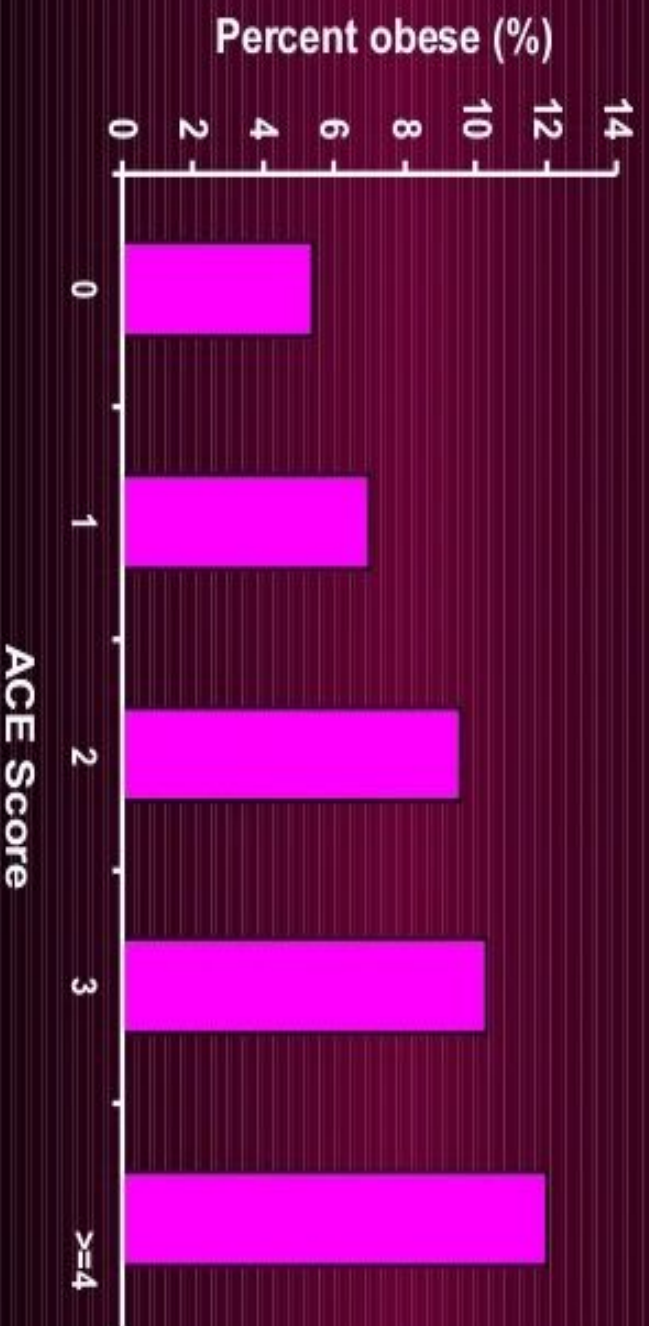
Credit: The Pinetree Institute

Lifespan Impacts of ACEs

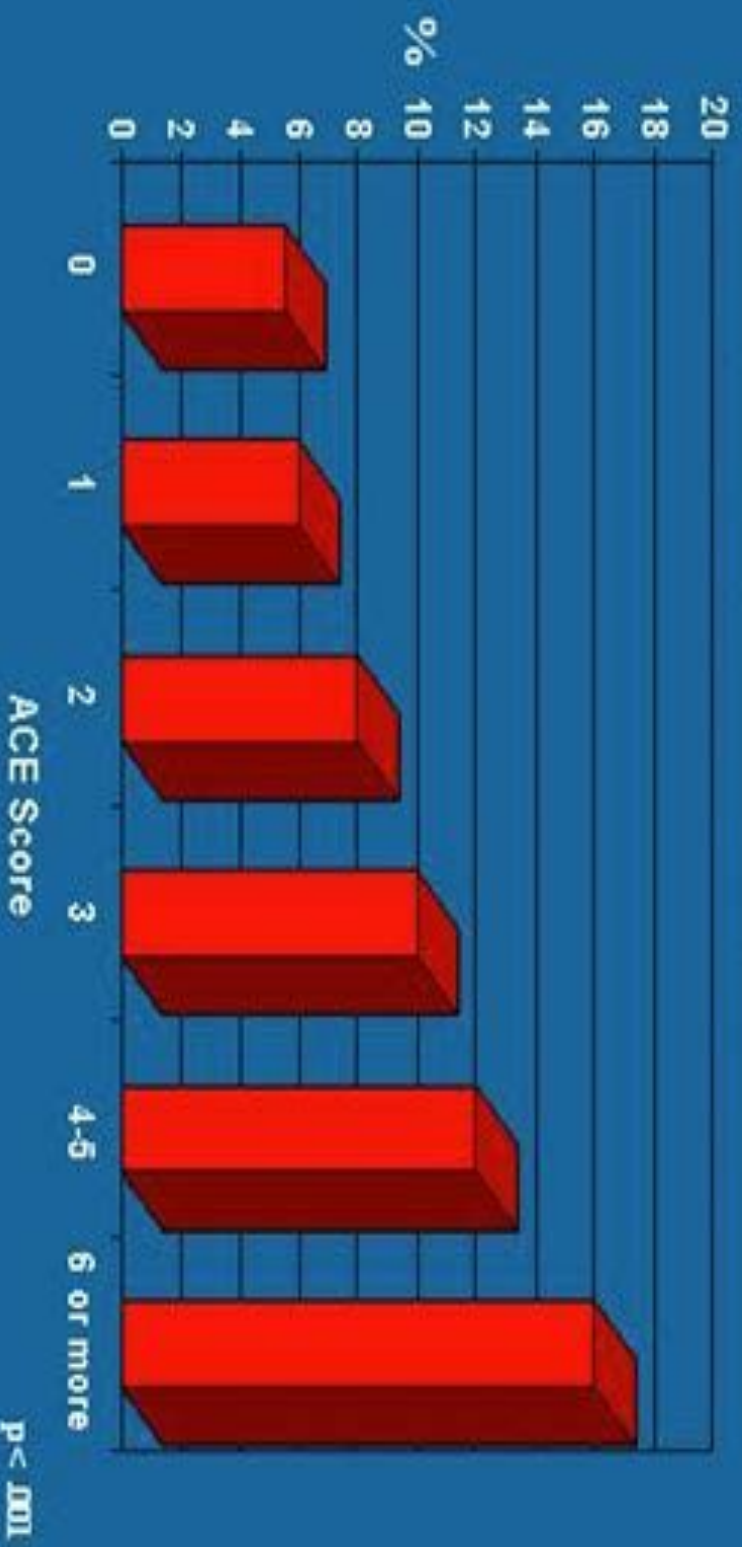


Source: Family Policy Council, 2012

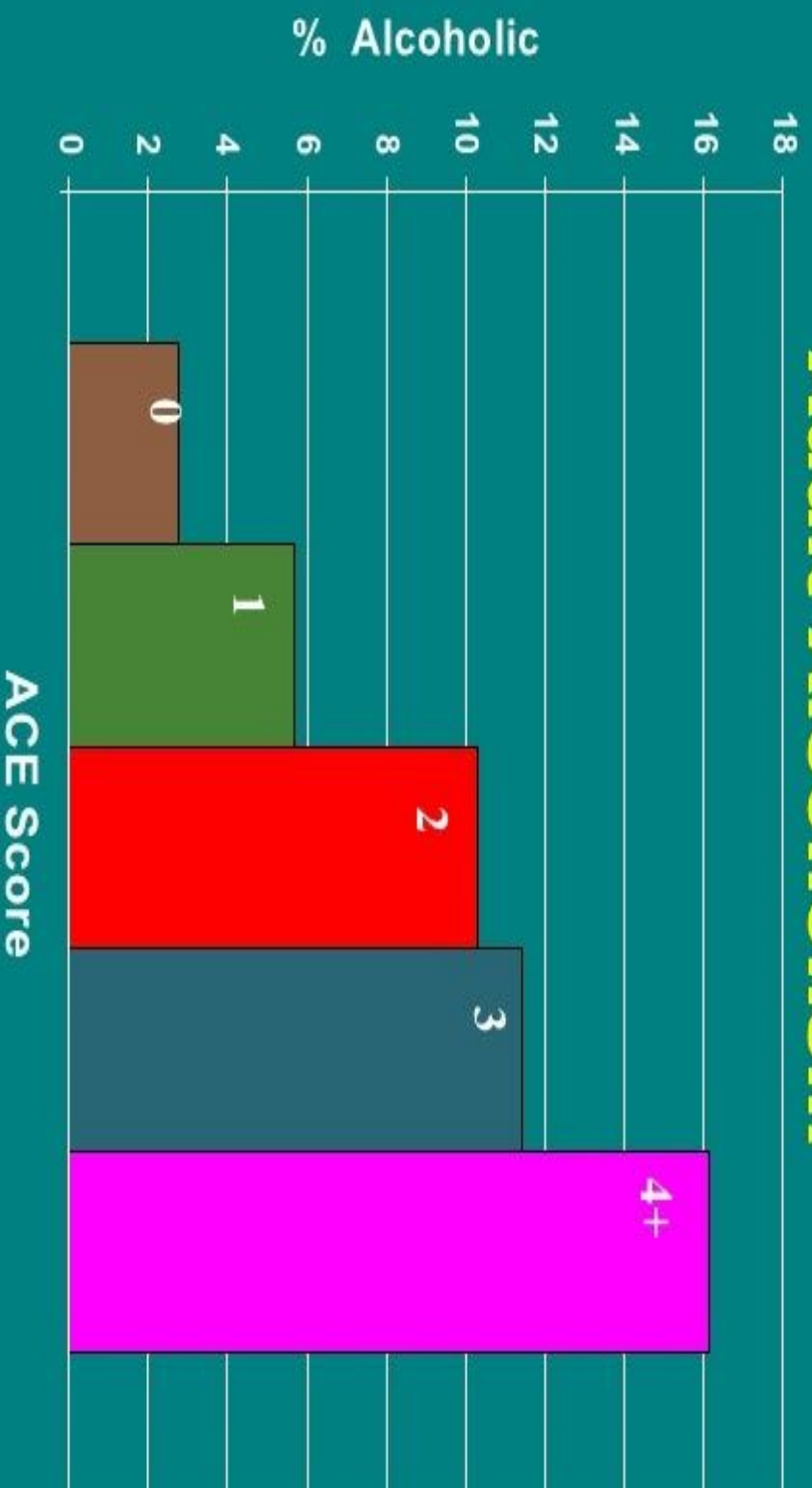
The ACE Score and the Prevalence of Severe Obesity (BMI ≥ 35)



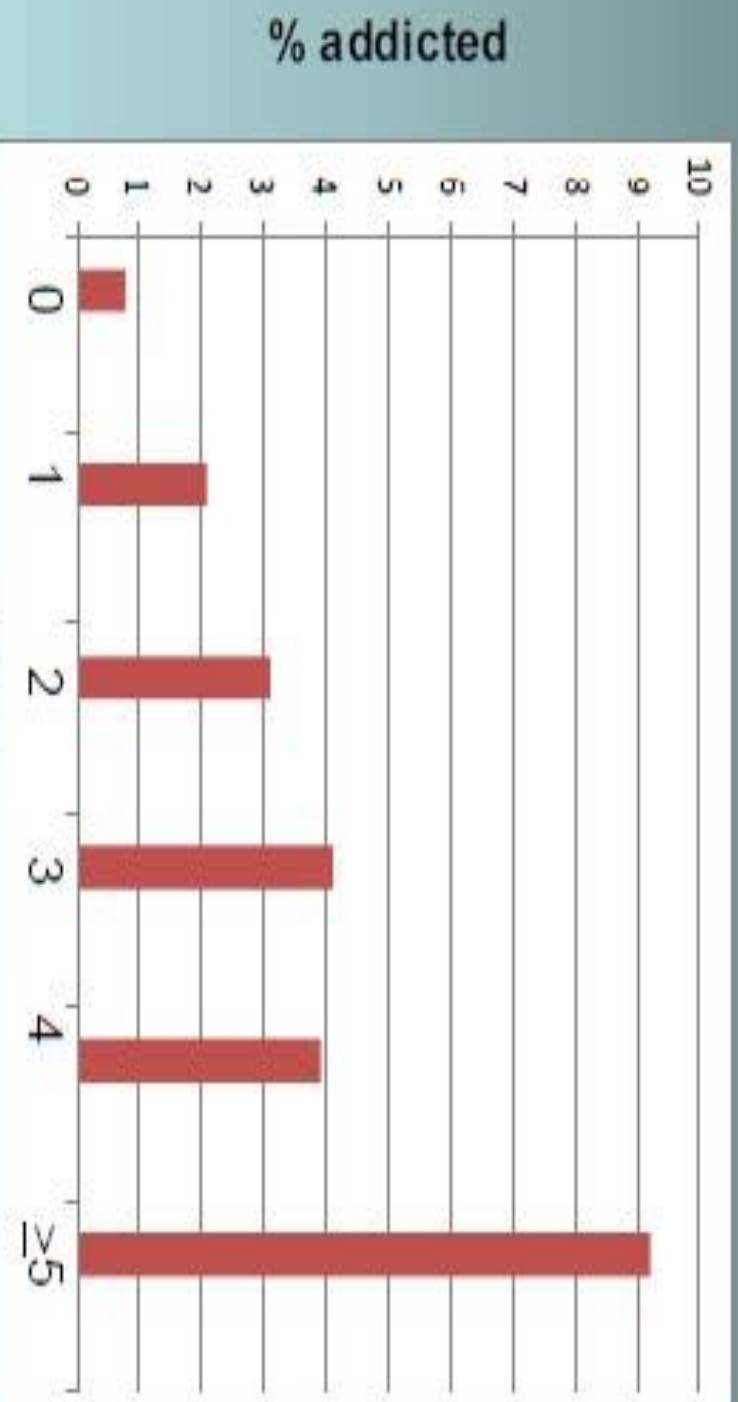
Adverse Childhood Experiences vs. Smoking as an Adult



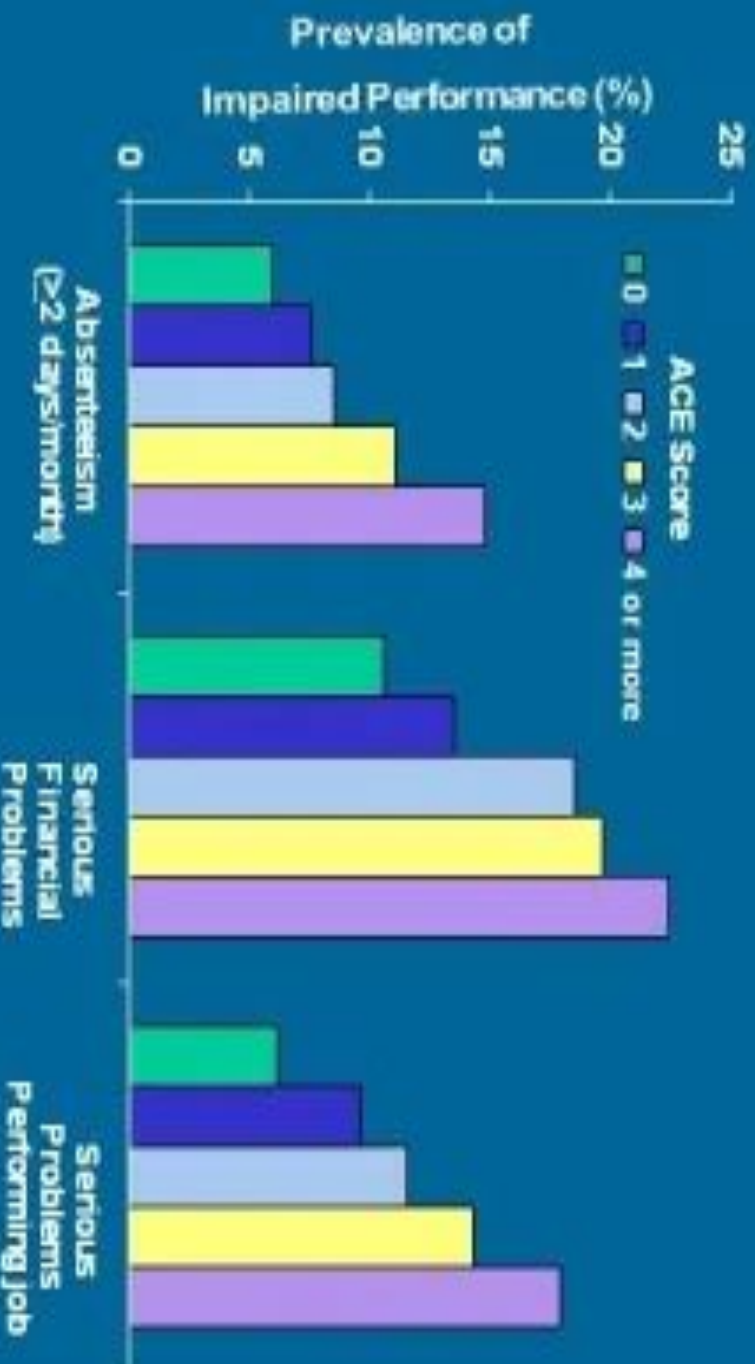
Childhood Experiences and Adult Alcoholism



ACE Score and Ever Addicted to Drugs



ACE Score and Indicators of Impaired Worker Performance



A Connection with Homelessness

- Psychological disorders and substance abuse are more common among homeless people
- ACEs connection to substance abuse and psychological disorders
- Over 50% of homeless with ACE Score of 4 or higher

ACEs and PTSD

Around 50%-60% of adult population in North America are exposed to traumatic events. 6% - 18% of these will meet the criteria for PTSD - get stuck in it.

High ACE's = vulnerable to PTSD

What about you?

We will go through the same questions again.

This time think about yourself.

Make a quick tally

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Yes No

If yes enter '1' _____

10. Did a household member go to prison?

Yes No

If yes enter '1' _____

Now add up your "Yes" answers: _____

This is your ACE Score

Take a Second

Any Comments?

Helping you meet your housing needs.

HUD provides housing support and uplifts communities. Let us guide your next steps to the right place.

[Find Housing Assistance](#)



AGENCY AND MISSION

Mission

HUD's mission is to create strong, sustainable, inclusive communities and quality affordable homes for all.

As part of its mission, HUD is committed to creating places throughout the nation that effectively connect people to jobs, transportation, quality public schools, and other amenities - "geographies of opportunity."

Our Vision

Our vision is to improve lives and strengthen communities to deliver on America's dreams.

- **For our residents**, we pledge to improve lives by creating affordable homes in safe, healthy communities of opportunity, and by protecting the rights and affirming the values of a diverse society.
- **For our partners**, we will be a flexible, reliable problem solver and source of innovation.
- **For our employees**, we will be a great place to work, where employees are valued, mission driven, results oriented, innovative, and collaborative.
- **For the public**, we will be a good neighbor, building inclusive and sustainable communities that create value and investing public money responsibly to deliver results that matter.

Who Do We Serve?

Families in Poverty
Veterans
Disabled Foster Elderly
Homeless Youth
Survivors of Violence

Discussion

Any thoughts?

Stories/Examples/Challenges for the work of a Housing Authority?

What about the people you serve...

Activity:

- 1) Break into groups of 3 -4. Go through the ACES questions and discuss which of these most impact the population that you work with.
- 2) Write top 2 on post it provided
- 3) Report out- Why did you choose those questions?

Reflect.

Biggest take away

What happened to this person

Goal: Understanding people

Example of flooding



Poverty is slow trauma

Kenneth Donaldson

O'Connor v. Donaldson 1975

Committed in 1957, when he was 29 years old

Florida state hospital - paranoid schizophrenia

Refused treatment and sued - non-dangerous person

Supreme Court - can't take liberty due to mental illness if person can survive in the world safely

Offenders and mental health

Largest mental health
Provider in the country



NIMBY



How to solve the problem

Discuss how you would define “survive in the world safely.”

WE ARE DIFFERENT FROM BIRTH

What do you think about this statement:

CHILDREN BORN IN FAMILIES THAT HAVE LIVED WITH HIGH ACES, HISTORICAL TRAUMA, OR HIGH LEVELS OF VIOLENCE WILL HAVE MORE ACES THAN THOSE BORN WITH PRIVILEGE.

TRUE?

FALSE?

WHY?

HOPE

Our brains change and grow.

We call this resilience.

**EVERYONE CAN BUILD RESILIENCE AND OFFSET
THE IMPACTS OF ACES**

Resilience Score

Please answer the questions below using the following scoring guide:

0	1	2	3	4
Definitely Not True	Probably Not True	Not Sure	Probably True	Definitely True

- 1.** I believe my mother loved me when I was little.
0 1 2 3 4
- 2.** I believe that my father loved me when I was little.
0 1 2 3 4
- 3.** When I was little, other people helped my parents take care of me and they seemed to love me.
0 1 2 3 4
- 4.** I've heard that when I was an infant, someone in my family enjoyed playing with me and I enjoyed it too.
0 1 2 3 4

5. When I was a child, there were relatives in my family who helped me feel better when I was sad or worried.

6. When I was a child, neighbors or my friends' parents seemed to like me.

0 1 2 3 4

7. When I was a child, teachers, coaches, youth leaders or ministers were there to help me.

0 1 2 3 4

8. Someone in my family cared about how I was doing in school.

9. My family, friends neighbors and friends talked about making our lives better.

0 1 2 3 4

10. We had rules in our house and were expected to keep them. 0 1 2 3 4

- | | | | | | | |
|-----|--|---|---|---|---|---|
| 10. | We had rules in our house and were expected to keep them. | 0 | 1 | 2 | 3 | 4 |
| 11. | When I felt really bad, I could almost always find someone I trusted to talk to. | 0 | 1 | 2 | 3 | 4 |
| 12. | As a youth, people noticed that I was capable and could get things done. | 0 | 1 | 2 | 3 | 4 |
| 13. | I was independent and a go-getter. | 0 | 1 | 2 | 3 | 4 |
| 14. | I believe that life is what you make it. | 0 | 1 | 2 | 3 | 4 |
| 15. | There are people I can count on now in my life. | 0 | 1 | 2 | 3 | 4 |

Total Score: _____

Reactions?

LIFE PRACTICES THAT BUILD RESILIENCE

- Building and Sustaining close, personal relationships
- Having a sense of purpose: through faith, culture, identity, etc.
- Developing individual competencies: problem-solving skills, self-regulation, autonomy, etc.
- Connecting socially with others
- Using community support services
- Living in communities that value people and support health and personal growth
- Focus of part two

QUESTIONS?

Thank you for attending.

Our next session will focus on working with people that have experienced adversity or trauma.

SESSION 2

How ACES impacts work
reflections/thoughts/feedback on part 1

Understanding how ACES causes the unhelpful outcomes

Successfully working with people that have experienced adversity or trauma
and take care of yourself.

Those are long term impacts....



Why are adverse
experiences
associated with
these impacts?

What can we do
about it?

Correlation vs causation

ACES is a correlational study.

What might be the cause of the outcomes?



What is the main job of our brains?

To protect
So we survive



How does our brain protect us?

Our security system:
Parts of the brain pay
attention to what's
Going on around us



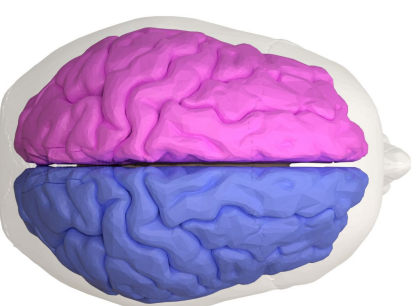
Our Brains

Two hemispheres -right and left.

They are connected and constantly interact

We can now see what the brain does

Right hemisphere - Fight, flight, freeze. Scream.

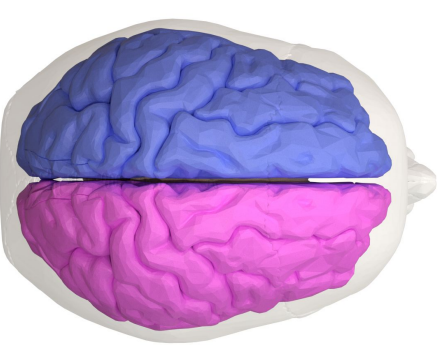


Protection. anxiety, depression, alarm system, global, protection. Unpleasant emotions, withdrawal behaviors, feeling overwhelmed. Sense of humor. Inhibition.

Activation of the Sympathetic Nervous System

Our Brains

Left Hemisphere - Rest and digest, rest and mend. Purr.



Connection. Activation and approach behaviors, curiosity assertion, **here/now thinking.** Pleasant emotions, labeling thoughts and feelings, developing new narratives. I'm going to do this and do it now. Suppress sadness.

Activation of the Parasympathetic Nervous System.

What happens if our brains detect danger?



Sympathetic Nervous System turns on

Fight

Flight

Freeze

Stress Response



This is normal, it protect us. It raises the odds of survival

Stress response helps us:

keeps us from walking into traffic

Fights off an attack

Avoids an attack

Run away

Cat caught by mouse will freeze

Play dead.

Body surges with energy to do what needs to
be done

We need our stress response!





ADVERSITY

THAT WHICH DOES NOT KILL ME POSTPONES THE INEVITABLE.

ACEs triggers stress response

stress noun

\ 'stres \

1: constraining force or influence: such as

c: a physical, chemical, or emotional factor that causes bodily or mental tension and may be a factor in disease causation

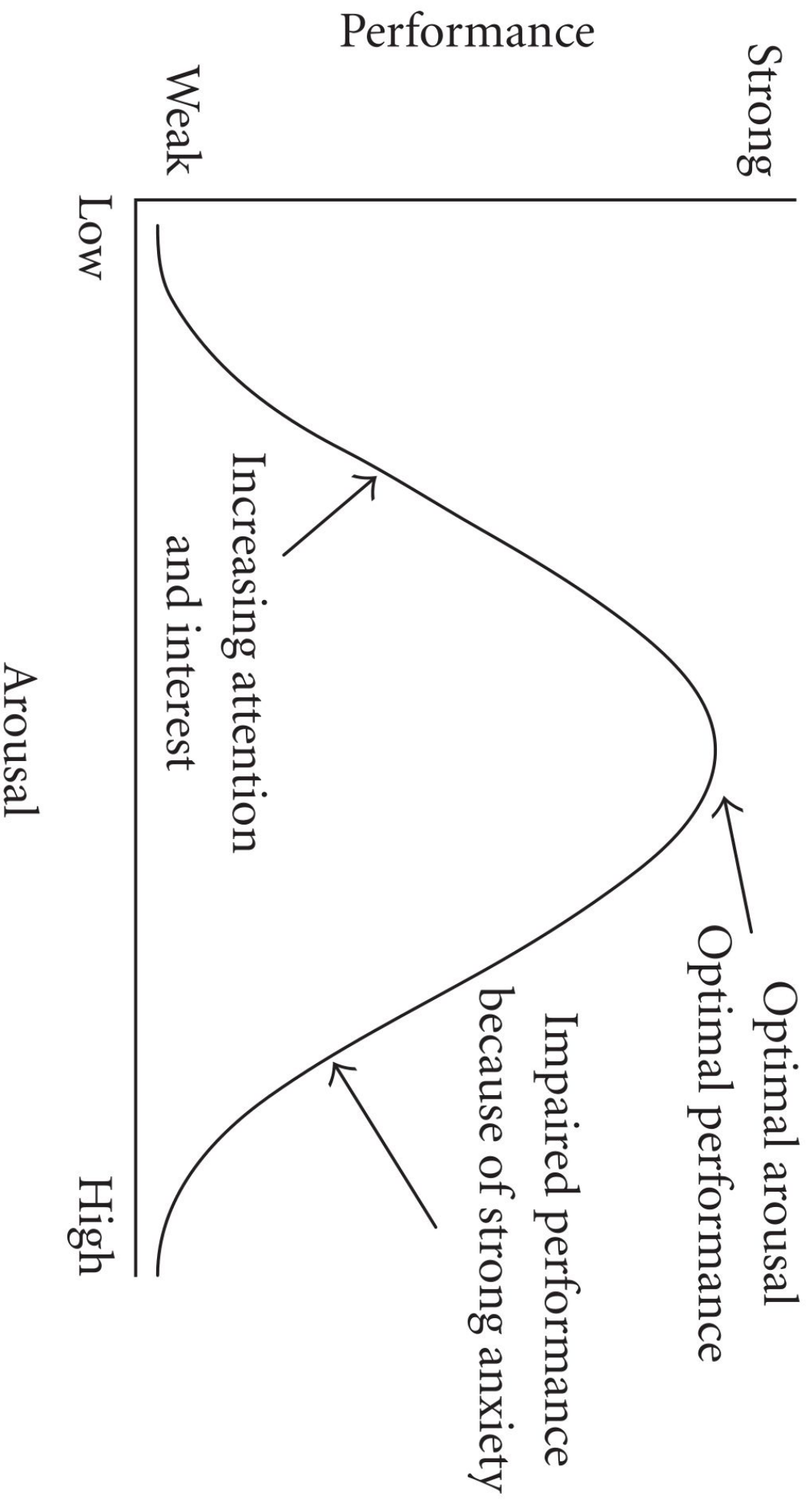
d: a state resulting from a stress *especially* : one of bodily or mental tension resulting from factors that tend to alter an existent equilibrium

stress

noun

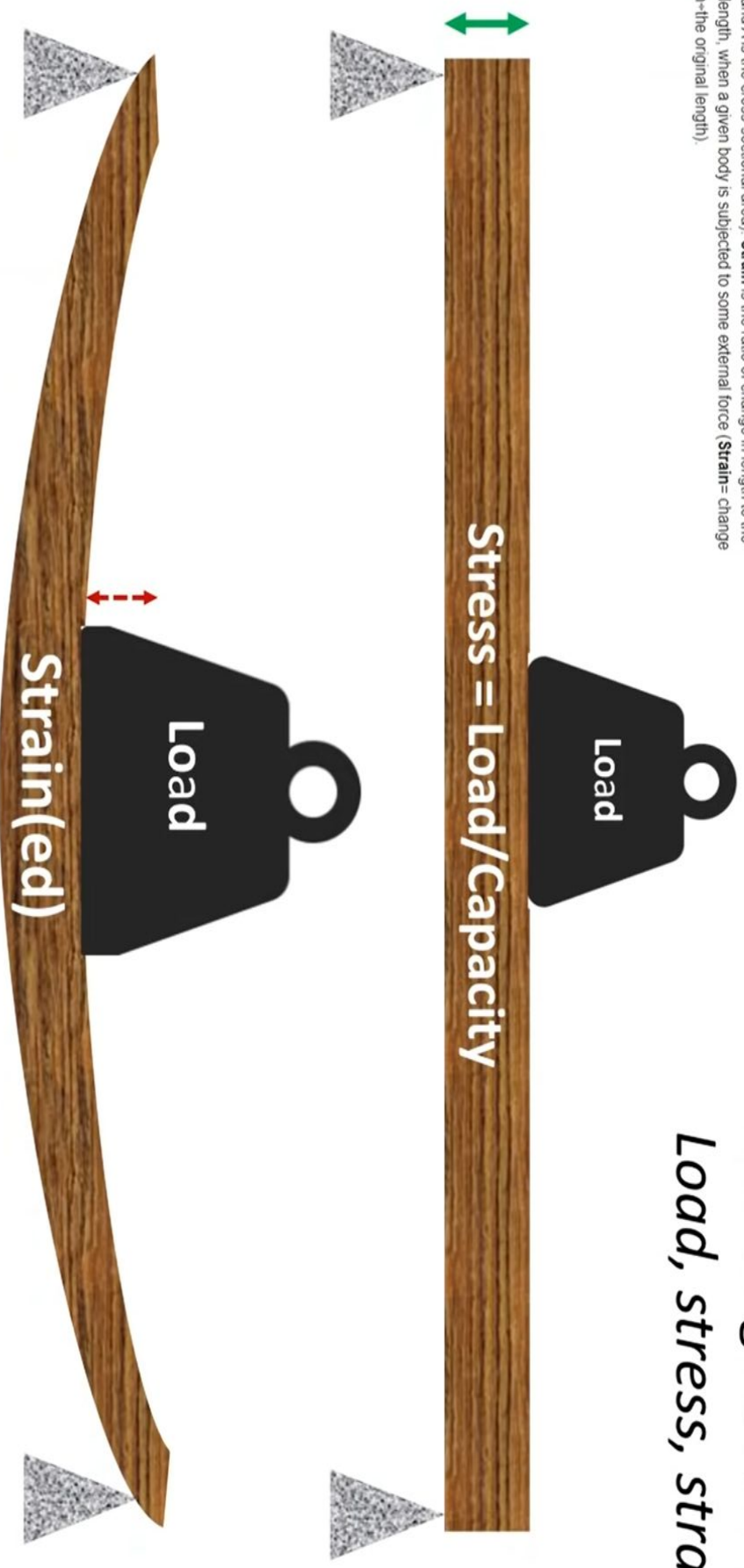
It is a workload.

- Real and Perceived stress.
- Body needs more fuel when stressed. Increased adrenaline and cortisol. Increased blood glucose. Increased cortisol triggers the breakdown of protein to glucose. Ends up with too much glucose. Risk of diabetes goes up.
- We need stress



Stress is the ratio of force over area ($S = F/A$, where S is **stress**, F is the external force or **load** and A is the cross-sectional area). **Strain** is the ratio of change in length to the original length, when a given body is subjected to some external force (**Strain** = change in length ÷ the original length).

How Engineers use *Load, stress, strain*



The stress response

1. Stress challenge vs stress threat (perception).
 - a. Chronic stress and Toxic stress.
 - b. A stress load with recovery leads to helpful adaptation and increased resiliency.
2. Stress reaction activates our alarm system or thermostat.
3. “Overtraining” or “Recovery deficit syndrome.” When there is not enough recovery. Has harmful impacts. PTSD is a disorder of non-recovery

The stress response

Stressors now referred to as *Allostatic load*

- Adjustments (stress reaction) are adaptive over the short term.
- When demands exceed the balance of energy and regulatory gains from rest and recuperation we have problems.
 - Inflammatory response - good thing when not chronic. Sets off the body's adaptation process.
 - Too much inflammation - unpleasant moods. Individuals who have died by suicide have been found to have increased inflammation markers.



The stress response

Children who have good enough nurturing develop brains with more effective thermostats or security systems.

“Ok, that’s enough, time to turn it off.” If thermostat doesn’t work, “can’t turn it off.” the stress response runs wild.

When it works well:

- Increased stress tolerance
- Better able to turn off the stress response system
- Over sensitive security system/thermostat prevents normal development

What's the point of all this?

Brains get good at what they are exposed to

Neurons that fire together wire together

Neurons that are out of sync lose their link

Use it or lose it. (Neuroplasticity)

AND

What brains are exposed to influences how they develop.
(Epigenetics)

Neuroplasticity

- Repeated stimulation of a specific network of neurons results in new and strengthened connections.
- May take thousands of hours. Minimum dose of 15 hours total per targeted brain function performed over 8 weeks or less is necessary for real improvement. (a little under 20 minutes per day)
- Effortful attention and increase in difficulty.
 - Fernandez, Goldberg, and Michelon 2013.

Physical Therapy for the brain

Can see change in brain after 30 minutes of focus. Every firing makes future firing more efficient.

The brain is efficient. Makes shortcuts.

Brains are soft wired, not hardwired. We can restructure the brain.

Brain gets good at what it is exposed to

Neurotransmitters made by **food you eat** and **things you do**.

Neuroplasticity

NIH meta analysis in 2010 showed cognitive training produces a small protective factor, just as physical training does. A clear effect was present.

Repeated **states** repeated enough become **traits**. (John Arden, Ph.D.)

Focus - turns on Prefrontal Cortex (PFC)

Effort - becomes habit

Effortlessness - becomes easier

Determination - stay in practice.

Easy to change mind state - take drug for that, but can you repeat the state? Practice transforms state to trait.

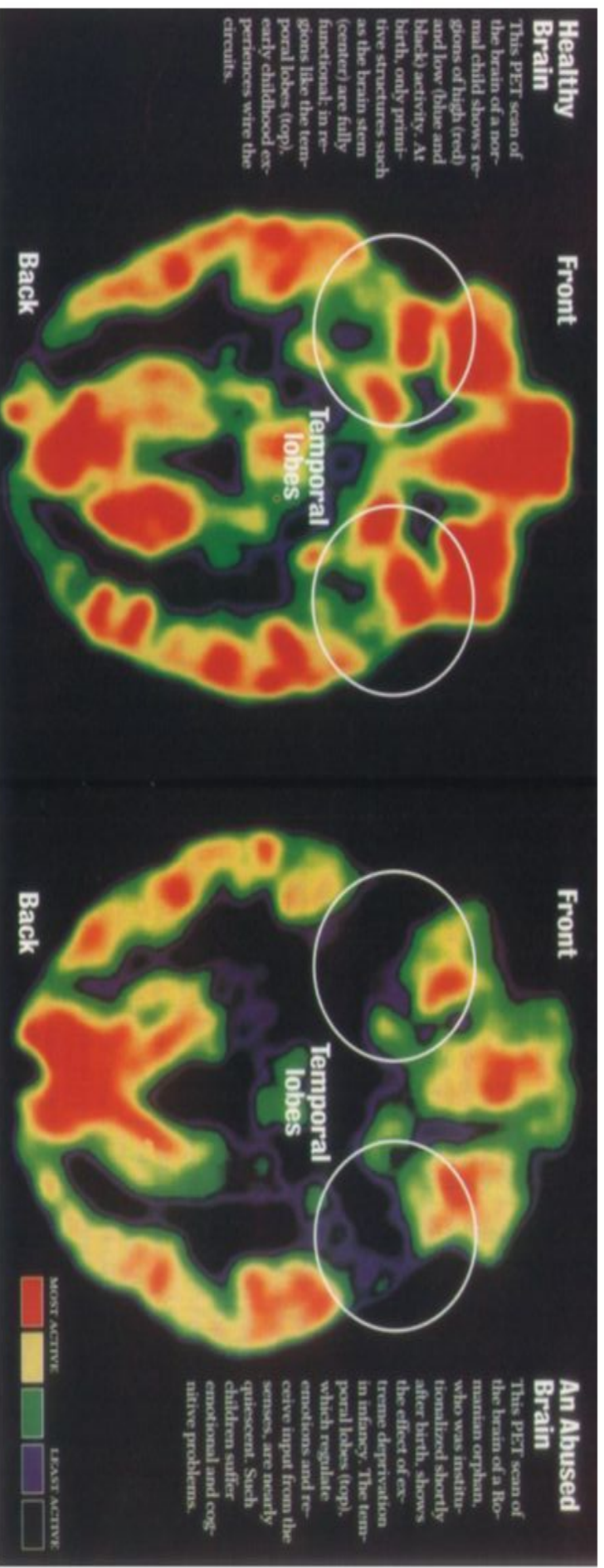


TRANQUILITY

AS LONG AS THERE ARE CHILDREN IN THE WORLD,
THERE WILL NEVER BE ANY REAL PEACE.



Impact of ACEs on Early Brain Development



ACEs and development

Amygdala does not like ambiguity. Ambiguity is a problem for babies.

Threat detection and relevance detection. Cortical processing allows more toleration of ambiguity.

*parents stoned/high - what is impact on child?

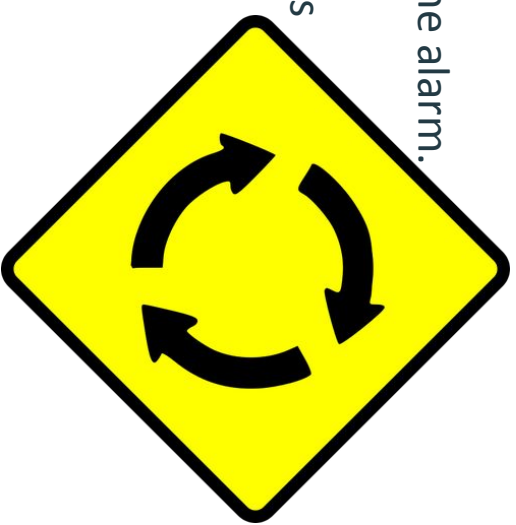
Vicious cycle

The more the security system sets off the alarm,
The better the brain gets at finding danger and setting off the alarm.

The more we are anxious, the better we get at being anxious

The more we move, the better our brain gets at moving

We get better at what we repeat doing.



ACE's triggers the stress response

The higher the number of ACE's, the more work load the body experiences. This leads to breakdown.



Understanding behaviors

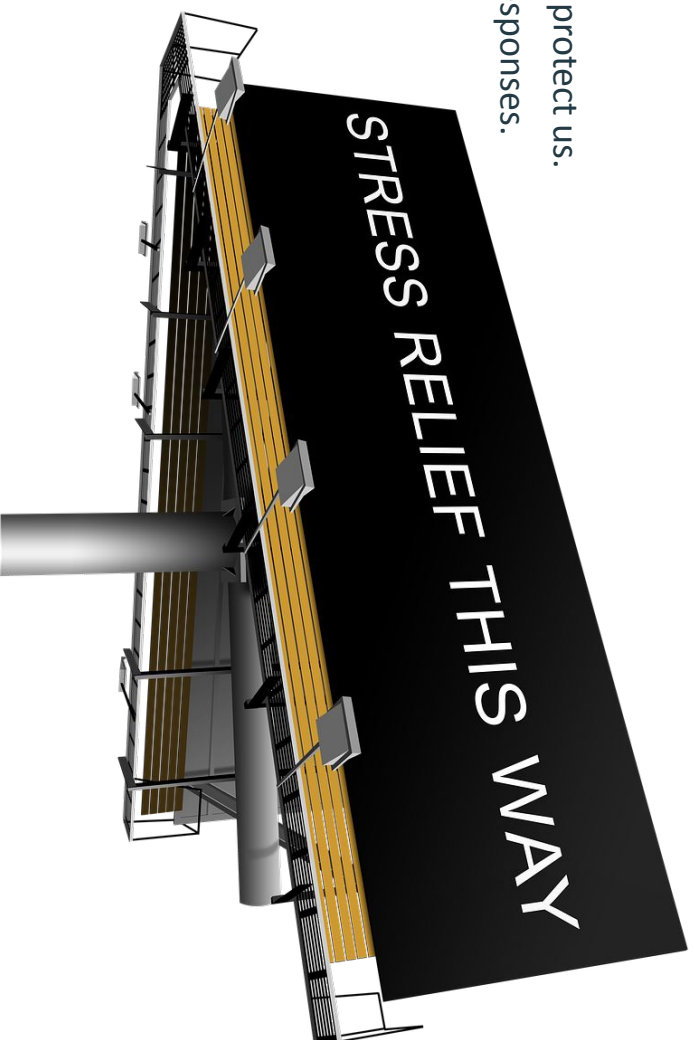
The more our brain activates the stress response, the better our brains get at activating the stress response.

This is exhausting!

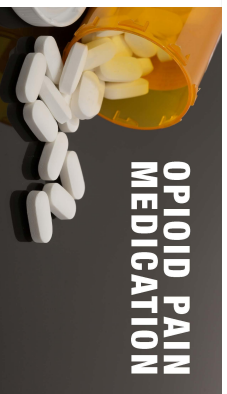


Ours brains do not like this

Even though this is our brain trying to protect us.
our brains do not like chronic stress responses.

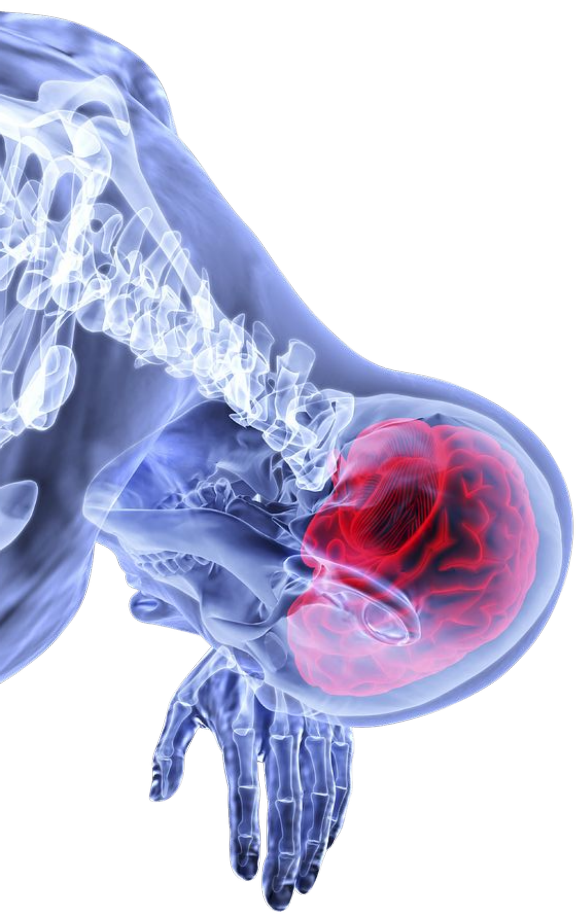


How do brains seek relief?



It is also important to note:

**Lots of ACE's can
impact brain power
Not all brains are the same**



We may judge others. They may judge themselves

“Think they have a broken brain”

“I’m irreplaceably damaged”

“It runs in my family”

“I’m trapped by depression.”

These are beliefs of being stuck, being trapped, of having no control.
AND THEY ARE FALSE.

If we can truly see others (and ourselves)

We might improve our ability
to cut them some slack and
cut ourselves some slack

What happened to them?



Physical Therapy for the brain

Think of the impact we can make in our community if each of us uses our creativity, experience, and expertise to incorporate this into our work setting.

Transforming impacts of ACEs

- Social
- Nutrition/diet
- Exercise
- Sleep
- Education

John Arden, Ph.D.

Down regulating the SNS and activating the PNS

Either triggering stress response or turning it down.

More purring and less screaming

Right side activation is default
- to protect

Intentional activation of left side
to get things in balance.

Here/now vs global thinking



Self-Actualization

You are living to your highest potential

Esteem

You've acquired the skills that lead to honor and recognition

Love & Belonging

Achieving deeper, more meaningful relationships

SAFETY

Home, sweet home

Physiological Needs

Food, water, sleep



© DESPAIR.COM

STRIFE

AS LONG AS WE HAVE EACH OTHER, WE'LL NEVER RUN OUT OF PROBLEMS.

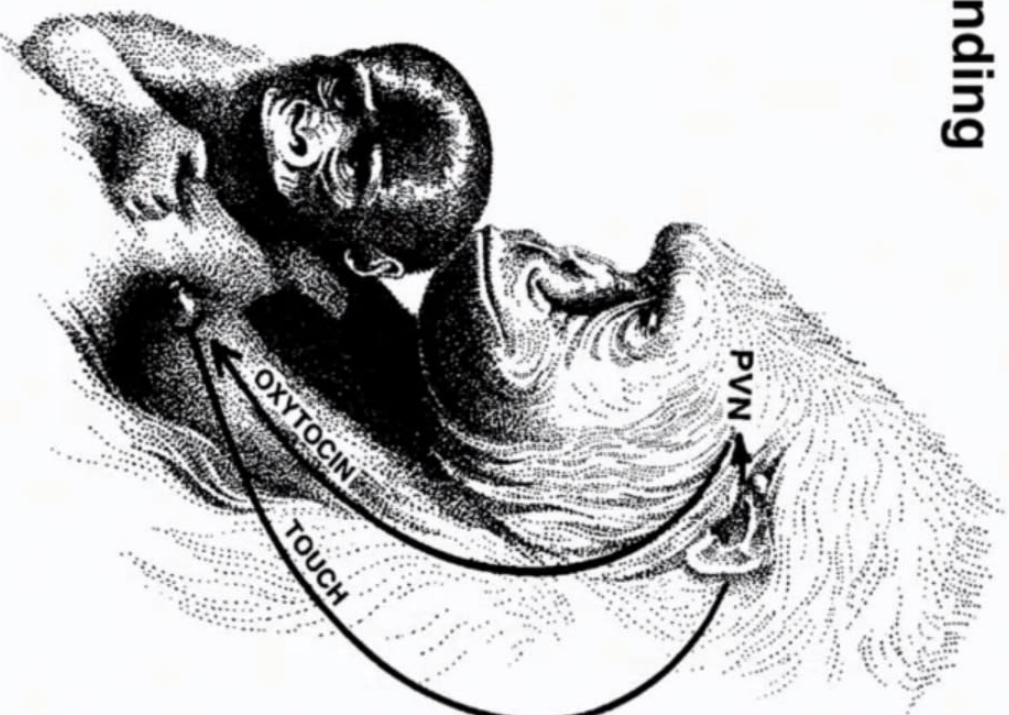
Attachment / Social Bonding Chemistries

Social bonding may be
an addictive process



Brain Opioids
&

Oxytocin & Prolactin
All Powerfully Reduce
Separation Distress



CONTACT COMFORT



PANIC arousal may be a Main Source of “Psychic Pain” that Promotes Depression



Touch Alleviates Pain

Panksepp, J. et al., (1980). Opioid blockade and social comfort in chicks. *Pharmacology Biochemistry & Behavior*, 13, 673-683.

Exercise

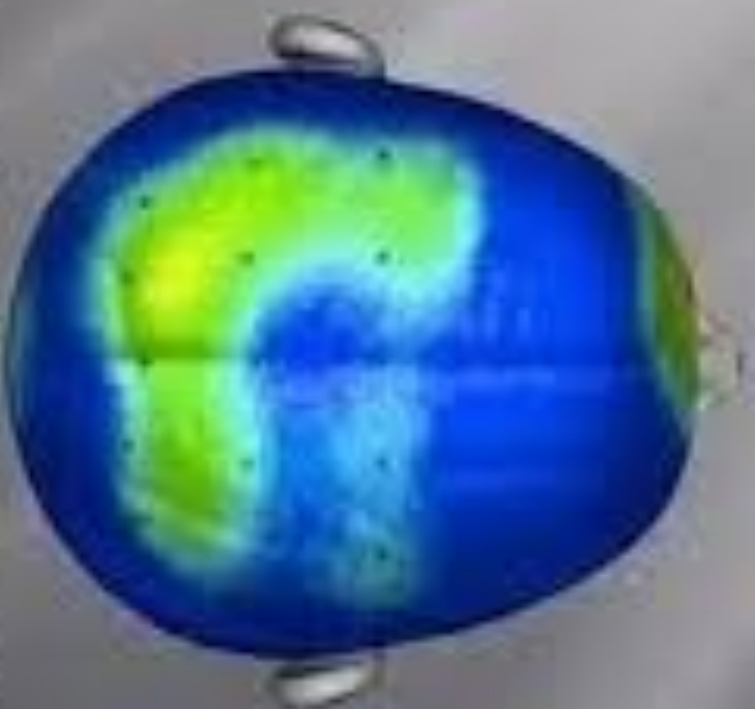
- Best antidepressant we have.
- Better than antidepressant meds and psychotherapy combined.
- With increased intensity, a measure of inflammation (C-reactive protein) goes down.
- Not exercising worse than “smokadiabesity.”
- Aerobic activity **increases BDNF** (miracle growth for the brain)



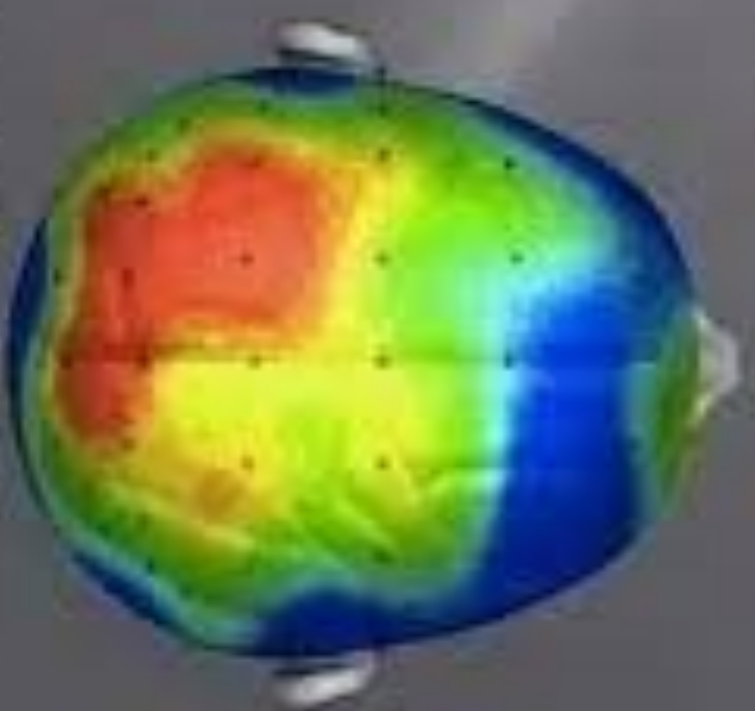
Exercise wisely and make it fun!



BRAIN AFTER SITTING
QUIETLY



BRAIN AFTER 20 MINUTE
WALK



Research by team complements of Dr. Chinedu Hillman University of Illinois

Exercise

- 30-60 minutes, three days a week is optimal.
- Levels of physical activity can predict brain volume nine years later (2010, Kirk Erickson)
- Increase in volume in frontal and temporal areas of the brain involved in executive control and memory.
- Increase in Hippocampus.

Nutrition/diet

No Breakfast - less problem solving,
less working memory, less attention,
less concentration, less energy.

More mood swings, more depression,
more stress reactivity, more anxiety.

Not having breakfast turns alarm system on.

*Stress response drives appetite.



Nutrition/diet

Healthy diets are associated with better health outcomes throughout the lifespan.

Education

- Routine does not challenge the brain.

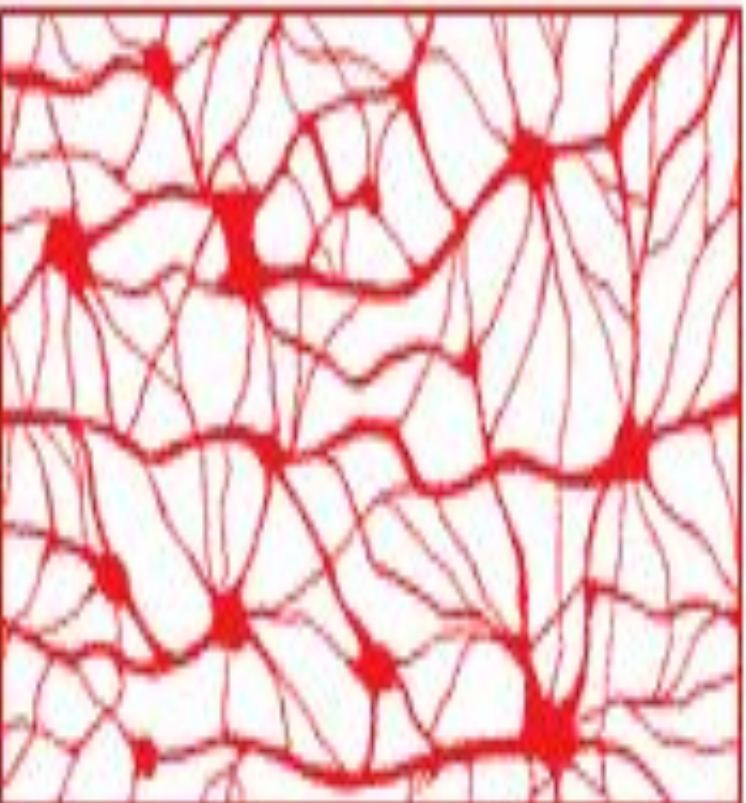
Watching television is associated with reduced cognitive functioning

- Right side - novelty - learning new things
- Left side - routinization.

- **Stress of learning produces growth**



Brain cell connections



section of a
stimulated brain



section of an
unstimulated brain

Sleep



Sleep

- Poor sleep - hippocampus shrinks.
- Melatonin - Hormone whose role is in circadian rhythm - not a sleep potion. If take regularly you'll get depressed. Only 1st two nights when change time zones. Want good sleep architecture.
- Importance of slow wave sleep. Negatively impacted by Caffeine, high body temperature, alcohol, over the counter sleep meds.
- Quality sleep better than quantity of sleep.
- ACEs impact on the development of sleep architecture.

Sleep

- Sleep deprived more likely to eat sugary breakfast...non-sleep deprived more likely to eat more healthy breakfast.
- High cortisol - sugar imbalances, high blood pressure, loss of muscle tissue and bone density, lower immunity. Inflammatory responses. Blocks neuroplasticity. Limits mental flexibility.

Breathing

Breathing

- Exhale - parasympathetic. Breathing air out of the lungs reinstates parasympathetic influence on heart rate, resulting in a heart rate decrease.
- Inhale - sympathetic - breathing air into lungs temporarily gates off the parasympathetic influence on heart rate, producing a heart rate increase.
- Practice.
- HRV - heart rate variability.

Something to practice



practice



QUESTIONS?

Thank you for attending.