



CITY OF SAN ANTONIO
METROPOLITAN HEALTH DISTRICT

10 Things to Know About Adverse Childhood Experiences (ACEs)

Community Health and Equity Committee

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1. Scored with a 10-question quiz

The three types of ACEs include

ABUSE



Physical



Emotional



Sexual

NEGLECT



Physical



Emotional

HOUSEHOLD DYSFUNCTION



Mental Illness



Mother treated violently



Divorce



Incarcerated Relative



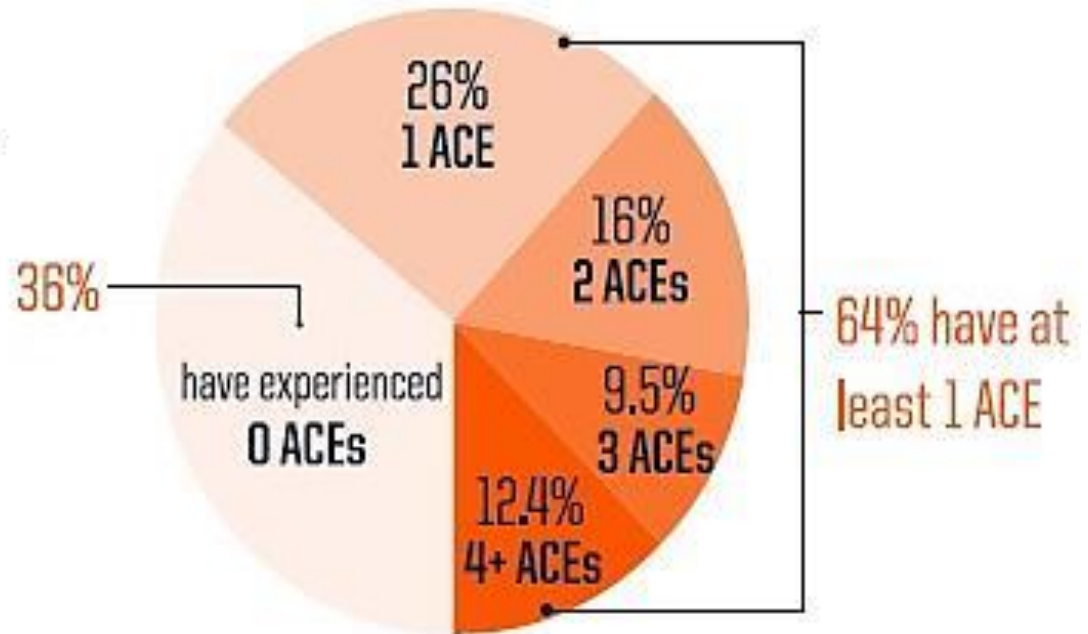
Substance Abuse



Graphic: Robert Wood Johnson Foundation, rwjf.org/aces

2. ACEs are common

*Of 17,000 ACE
study participants:*



3. ACEs cause toxic stress

Positive Stress

(ex. getting a shot)
Brief. Part of healthy development.



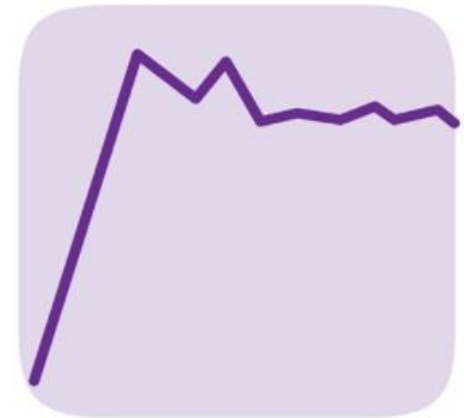
Tolerable Stress

(ex. death in family)
More severe.
Buffered by adult support



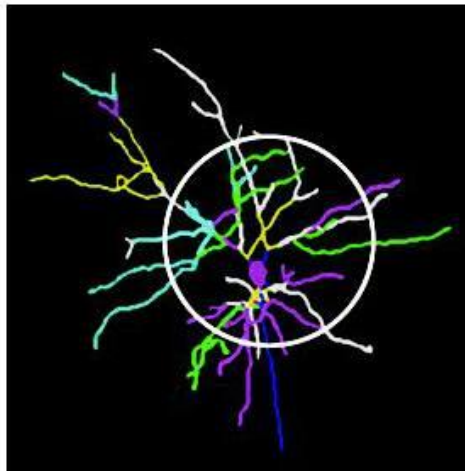
Toxic Stress

(ex. chronic neglect)
Strong, frequent
and/or prolonged
adversity, without
enough adult support

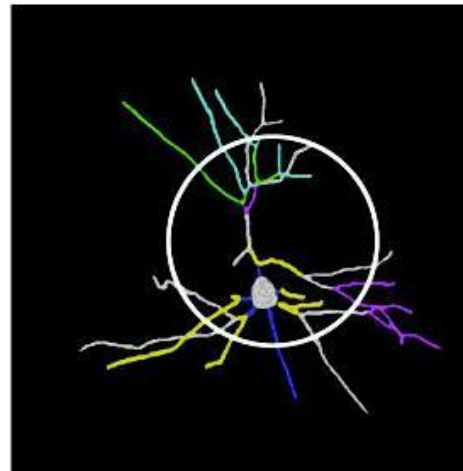


4. Toxic stress harms brain architecture

- Children's brains that are constantly bathed in "fight or flight" hormones start to wire differently
- Neutral facial expressions may be interpreted as threatening
- Fewer connections grow in "reasoning" section of brain
- Weaker impulse control, shorter attention spans



*Typical neuron:
many connections*



*Neuron damaged by toxic stress:
fewer connections*



5. This has broad impacts

ACES can have lasting effects on....



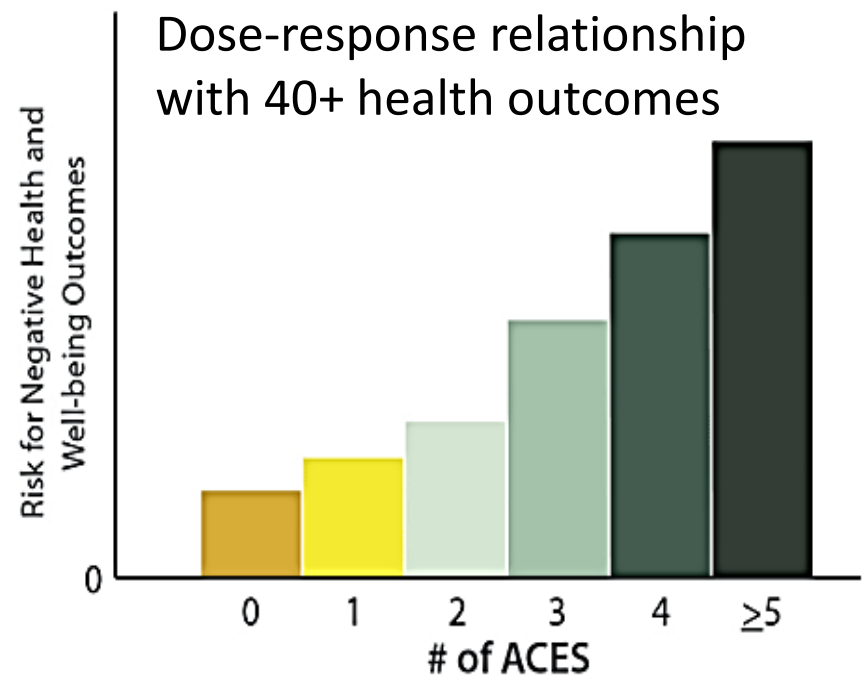
Health (obesity, diabetes, depression, suicide attempts, STDs, heart disease, cancer, stroke, COPD, broken bones)



Behaviors (smoking, alcoholism, drug use)



Life Potential (graduation rates, academic achievement, lost time from work)



Graphic: Centers for Disease Control and Prevention

ACEs dramatically increase risk for 7 out of 10 leading causes of death

	Leading Cause of Death	Odds Ratio
1	Heart disease	2.2
2	Cancer	1.9
3	Chronic lower respiratory diseases	3.9
4	Accident	
5	Stroke	2.4
6	Alzheimer's	4.2
7	Diabetes	
8	Influenza and Pneumonia	
9	Kidney disease	
10	Suicide	12.2



Odds Ratios associated with 4 ACEs (CDC 2015, Felitti 1998)
Data: Nadine Burke Harris/Center for Youth Wellness

ACEs dramatically increase risk for 7 out of 10 leading causes of death

	Leading Cause of Death	Odds Ratio
1	Heart disease	2.2
2	Cancer	1.9

Without intervention, there can be a 20-year difference in life expectancy

7	Diabetes	
8	Influenza and Pneumonia	
9	Kidney disease	
10	Suicide	12.2



Trauma is common among adults and children in social service systems.

98%

of **female offenders** have **experienced trauma**, often interpersonal trauma and domestic violence



96%

of **adolescent psychiatric inpatients** have histories of **exposure to trauma**



93%

of **homeless mothers** have a **lifetime history of interpersonal trauma**



90%

of **juvenile justice-involved youth** have experienced trauma, often **multiple traumas from an early age**



75%

of **adults in substance abuse treatment** report histories of **trauma**



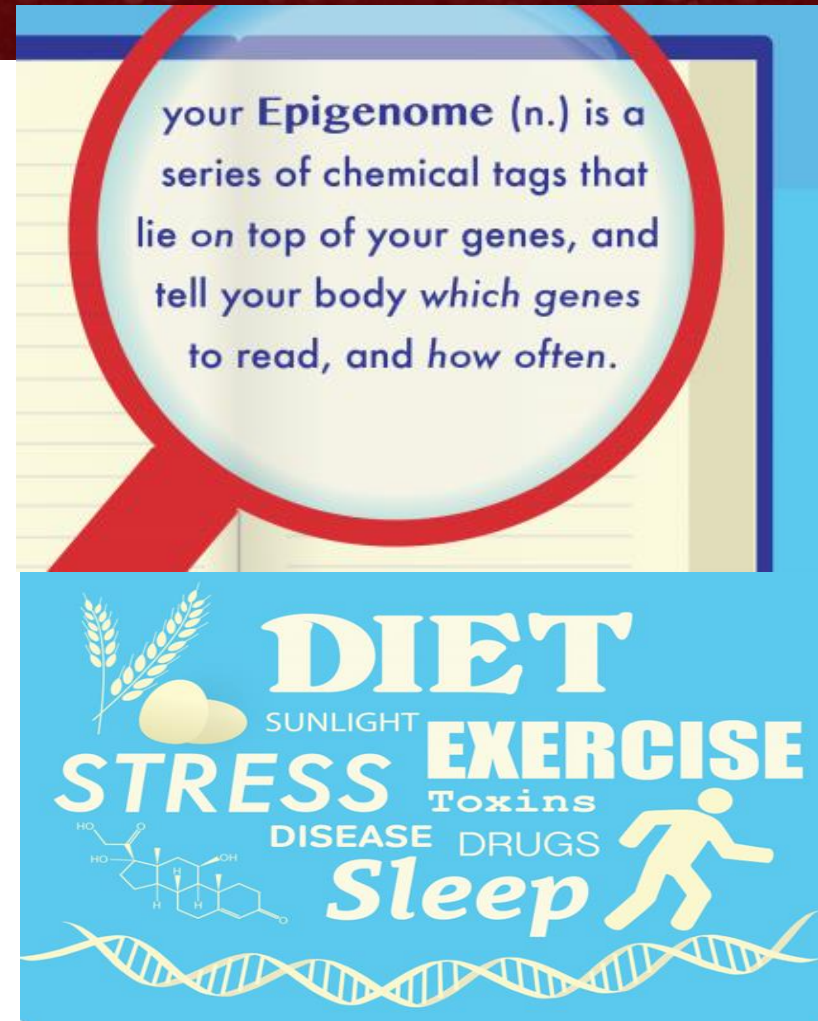
70%

of **children in foster care** have experienced **multiple traumas**



6. Effects may last generations

- Trauma changes our cells on a deep level (the *epigenome*)
- So do diet, exercise, lack of sleep, more
- Epigenes affect how likely we are to suffer some illnesses
- Can epigenetic changes from trauma be passed on to children and grandchildren? Stay tuned



7. We can overcome high ACEs

- **Good news:** Trauma-induced changes (including epigenetic changes) are reversible
- The brain is plastic, and the body wants to heal

*“Trauma-informed care shifts the focus from:
‘What’s wrong with you?’ to
‘What happened to you?’”*



Case study: Walla Walla, WA



After four years of a trauma-informed approach at Lincoln High School:

- Suspensions dropped 90%
- Zero expulsions
- Grades and graduation rates surged

Regardless of ACE score,
teens with **resilience** thrived

Case study: Walla Walla, WA

- Teachers and counselors intervene early with “Conversations that matter” (“What happened to you?”)
- Strategies: decrease trauma triggers, offer emotionally safe spaces, and share values of hope, compassion, respect, healthy families and healthy relationships
- In staff meetings, conversations switched from how to discipline kids to how to help them and their families
- *Walla Walla is not alone.* Eight more success stories at CommunityResilienceCookbook.org



8. What creates resilience?

- Reducing adversity
- Safe, stable and nurturing relationships and environments
- Sleep
- Exercise
- Nutrition
- Mindfulness
- Mental health



Photo: Thinkstock



9. How communities can help

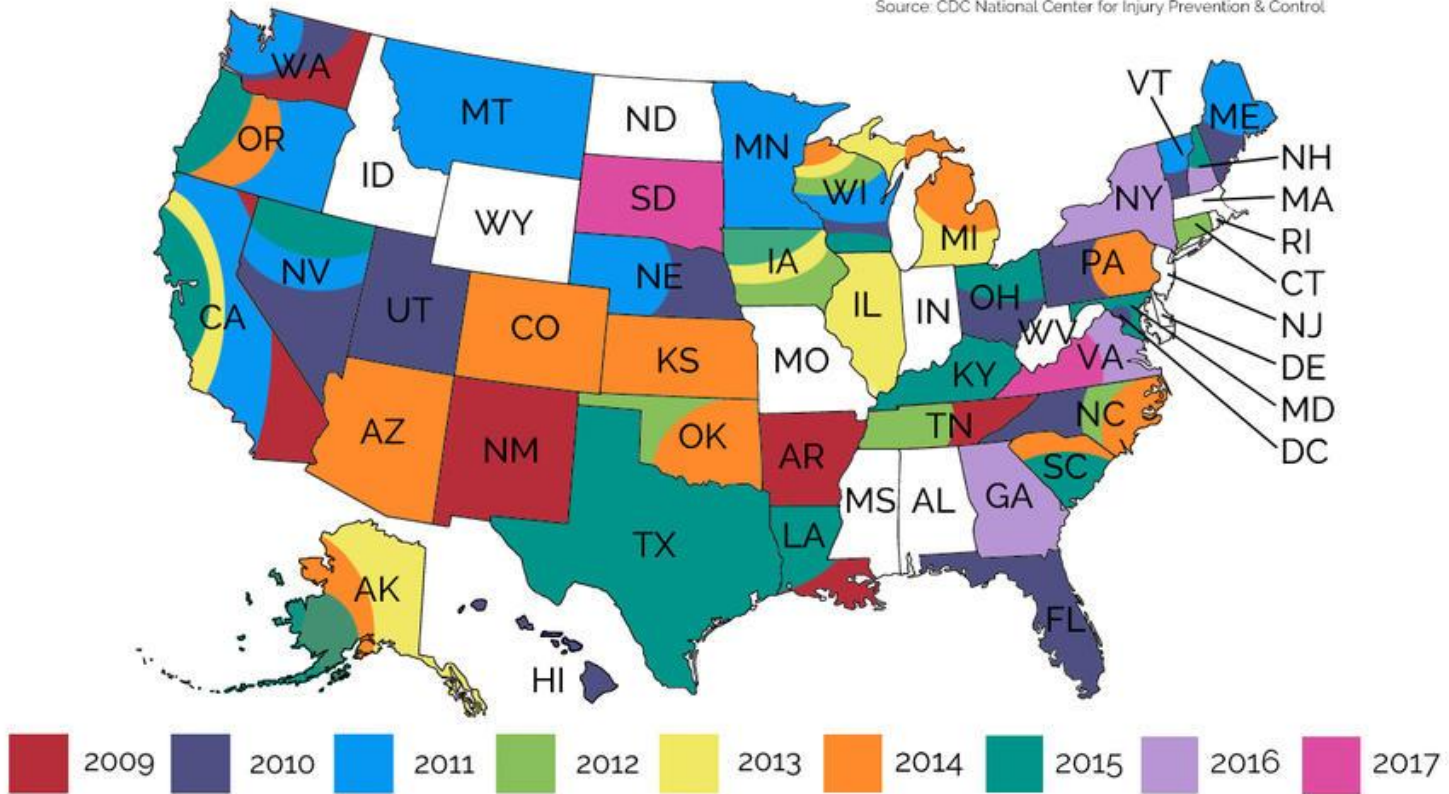
- Raise awareness about ACEs
- If you work with children, screen for ACEs
 - Early detection allows prompt intervention
- Reduce adversity and support caretakers
 - Home visiting nurses
 - Mental healthcare
 - Two-generation interventions
 - Social work
- Create safe and connected communities



10. ACE studies continue

States Collecting ACEs Data 2009 - 2017

Source: CDC National Center for Injury Prevention & Control



Graphic: www.acesconnection.com

10. ACE studies continue

- Texas collected ACEs data in 2002 and 2015
- More than half of Texans have at least one ACE
- Prevalence lower in Hispanic population



Prevalence of Any Adverse Childhood Experiences (Age-Adjusted)		
2015 Texas BRFSS		
	%	95% Confidence Interval
Total	57.6	(55.8 - 59.5)
Race/Ethnicity		
White	62.2	(59.8 - 64.6)
Black	68.2	(61.3 - 74.3)
Hispanic	52.7	(49.5 - 55.8)
Other	42.7	(34.1 - 51.9)
Gender		
Male	56.7	(54.0 - 59.4)
Female	58.5	(55.8 - 61.1)
Education Level		
<HS grad	54.2	(49.5 - 58.9)
HS grad	60.0	(56.4 - 63.4)
Some college	61.6	(58.1 - 65.0)
College grad+	52.1	(48.4 - 55.9)
Income Level		
< \$25,000	60.5	(57.0 - 63.9)
\$25,000 - \$49,999	58.4	(54.2 - 62.5)

Resources

- VetoViolence.cdc.gov
- AcesTooHigh.com
- CommunityResilienceCookbook.org
- Mobile-friendly [ACE quiz](#) on NPR.org website



Thank you!



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