

The background features a repeating pattern of teal diamond shapes on a light beige grid. In the center, a stage is depicted with teal curtains and three spotlights shining down. The text is centered within this stage area.

# SPOTLIGHT ON

Adverse  
Childhood  
Experiences

*Communities Shifting  
the Future of Public Health*

Pause, listen, breathe.



# **THE ADVERSE CHILDHOOD EXPERIENCE STUDY**

**“THE ACE STUDY”**

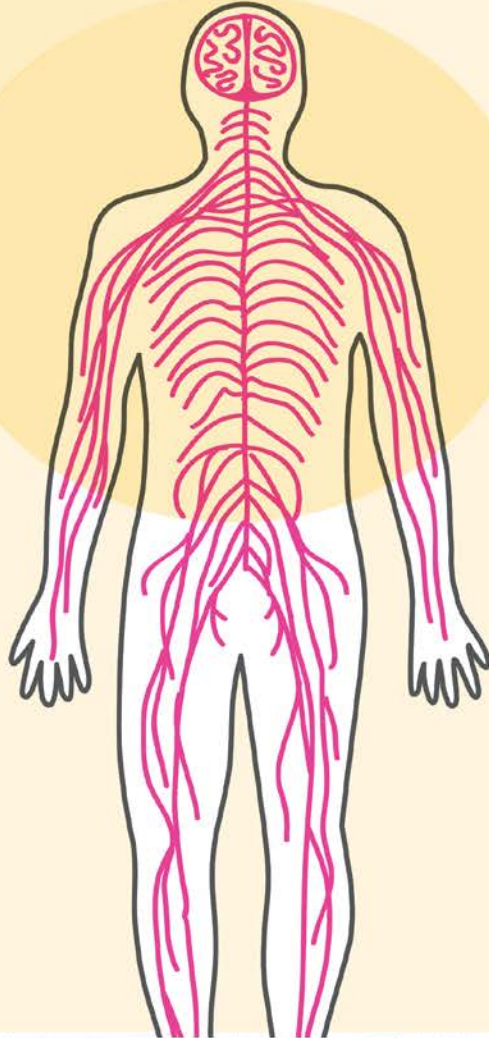


**Dr. Robert Anda**



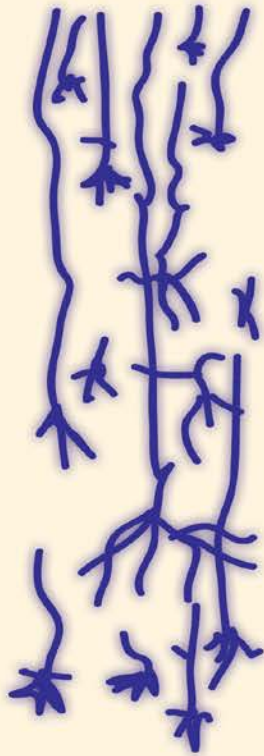
**Dr. Vincent Felitti**

# THE HUMAN CENTRAL NERVOUS SYSTEM

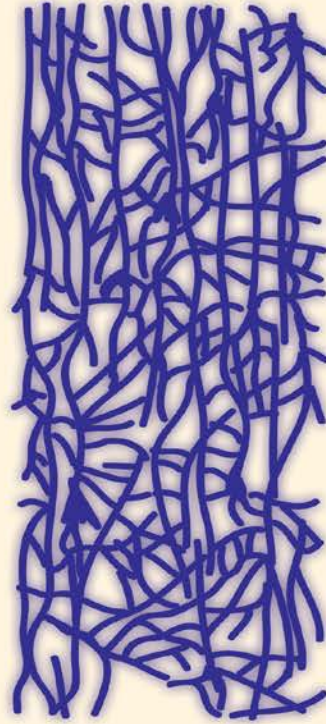


# SYNAPTIC DENSITY

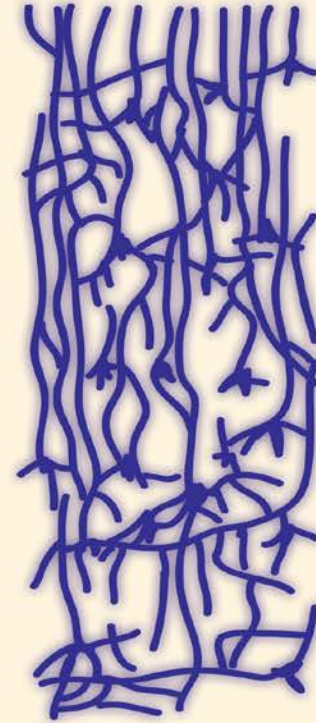
birth



6 years old



14 years old



# Different Stress Responses

## ▶ Positive stress response

- Normal and essential part of health development
- Brief increases in heart rate and mild elevations in hormone levels

## ▶ Tolerable stress response

- Activates body's alert system to greater degree
- If activation is time-limited and buffered by relationships with adults who can help child adapt – this can be ok

## ▶ Toxic stress response

- Strong, frequent and/or prolonged adversity
- This type of response can disrupt typical brain and neural development

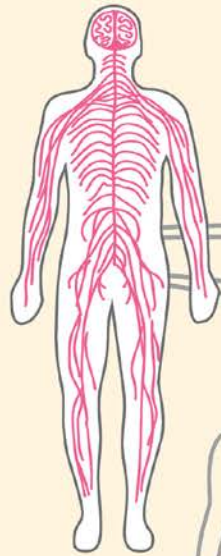
# Harvard Video on Toxic Stress

<http://www.youtube.com/watch?v=rVwFkcOZHJw&feature=youtu.be>

# PREDICTABLE PATTERNS



## MALEVOLENT WORLD



- emotion processing regions smaller, less efficient
- efficient production of stress-related chemicals
- dysregulated hormones
- less calming receptors
- less white matter

- competitive
- hot tempered
- impulsive
- hyper vigilant
- or
- withdrawn
- dissociated
- numb

Unpredictable, continuous stress, dangerous world

20 min

## BENEVOLENT WORLD



- emotion processing regions robust and efficient
- abundant happy hormones
- high density white matter, especially in mid-brain

- laid back
- relationship oriented
- reflective
- "process over power"

Predictable, moderate stress world



# We adapt to our environment



**Predictable, moderate stress world**



**Unpredictable, continuous stress, dangerous world**

# Experience gets wired into our biology

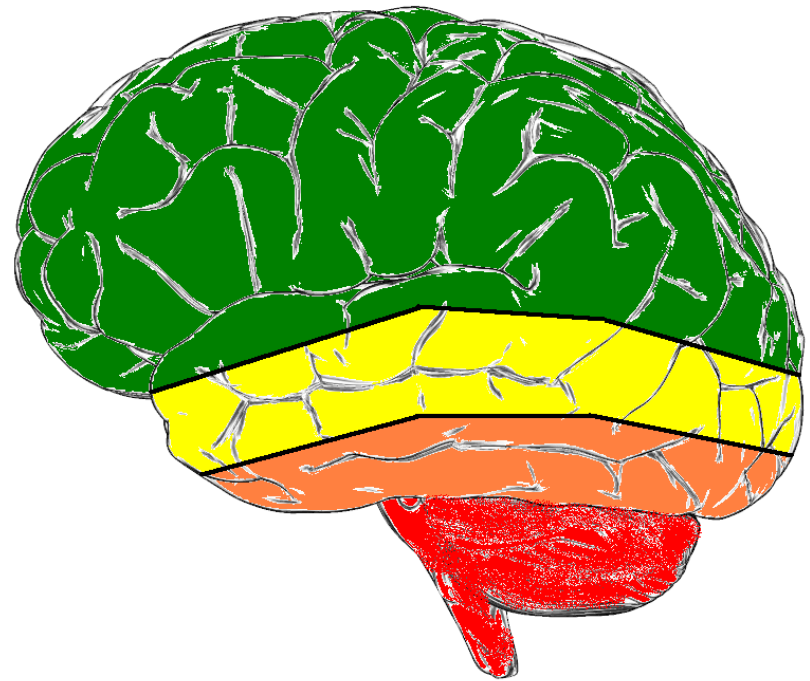


# Adversity Gets Wired into Our Central Nervous System and our Physiology

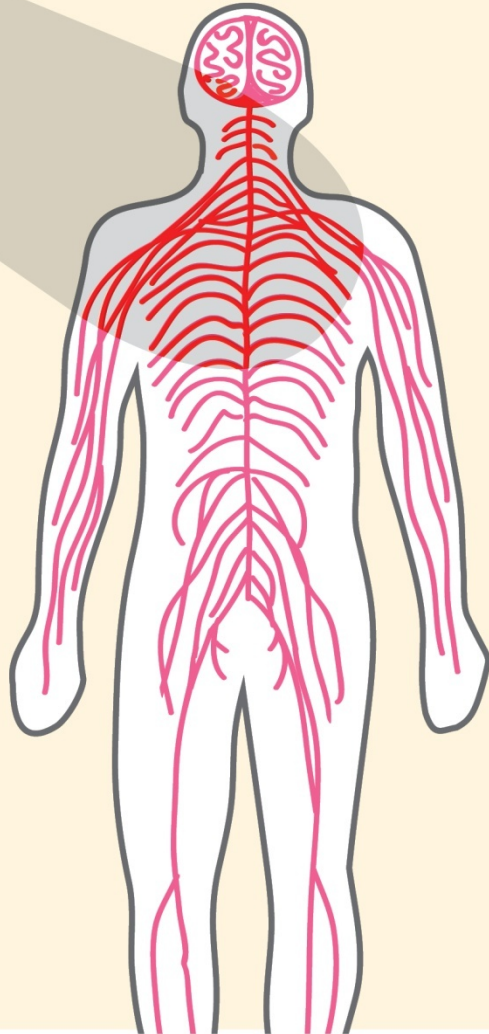
- Research has found a change in RESTING heart rates
- Some of these students are “wired” to be on HIGH ALERT!!
- They don’t understand that their “set point” is almost more than twice as high as what it typical
- Their bodies “learn to” go into “fight/flight/freeze” very quickly

# Color System of Activation

- Green
- Yellow
- Orange
- Red



## **BIOLOGICAL RESPONSES**



Behavior, affect,  
attitude, capacities  
may not be “choices” -

They may be normal  
biological responses to  
toxic stress during  
development.

Not: *What's wrong with you?*



But: *What happened to you?*

# Stand and Talk

Think about a child whose story now may make more sense to you, given this information about toxic stress and brain development.



# Key Messages: Toxic Stress and Adaptation

- Anxiety and stress is a normal part of life
- Stress can become toxic and damaging when:
  - Severe, prolonged and/or occurs repeatedly and is not buffered by caring adults
  - These adverse experiences can have significant affects on brain development and the development of the nervous system
- Children “adapt” to these adverse experience to “survive” – this is normal biological response to traumatic events
- Repeated experience gets wired into our biology/brain



A stage with red curtains and a spotlight illuminating a yellow banner that reads "THE ACE STUDY".

# THE ACE STUDY

# STUDY PARTICIPANTS



## 10 CATEGORIES OF ACES

### HOUSEHOLD DYSFUNCTION

substance abuse	27%
parental sep/divorce	23%
mental illness	17%
battered mother	13%
criminal behavior	6%

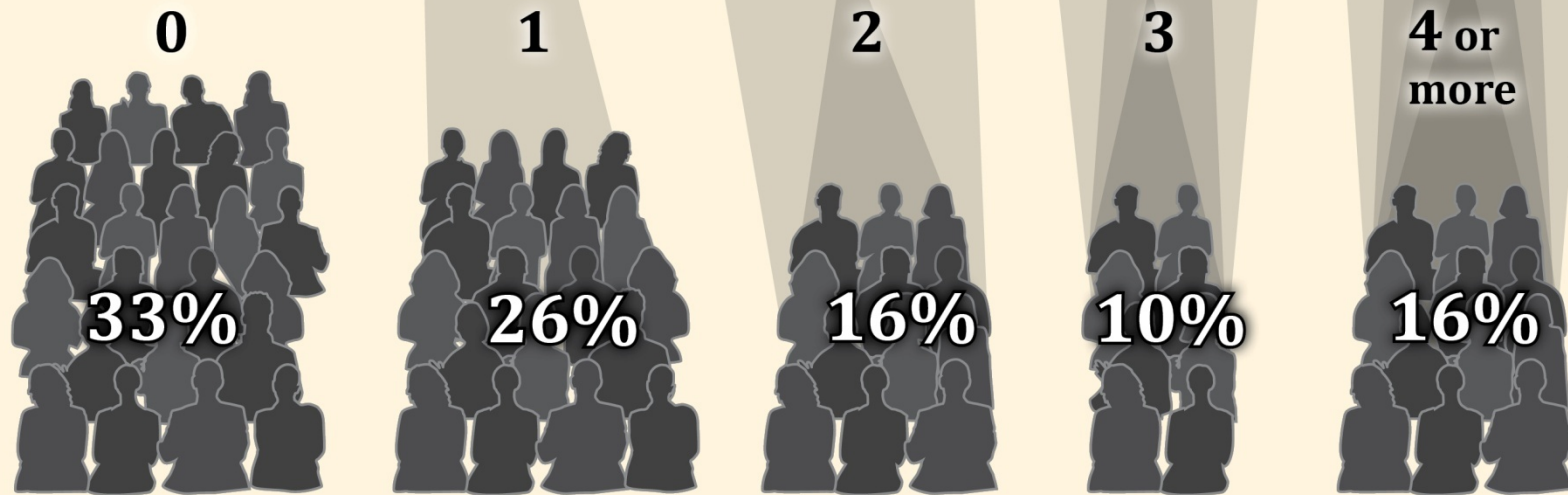
### ABUSE

psychological	11%
physical	28%
sexual	21%

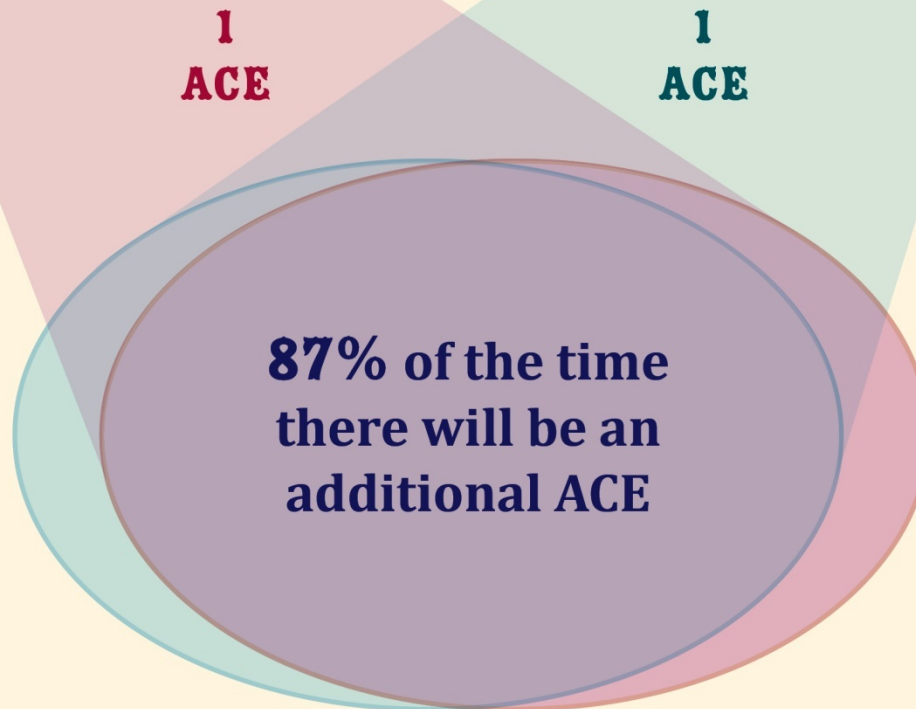
### NEGLECT

emotional	15%
physical	10%

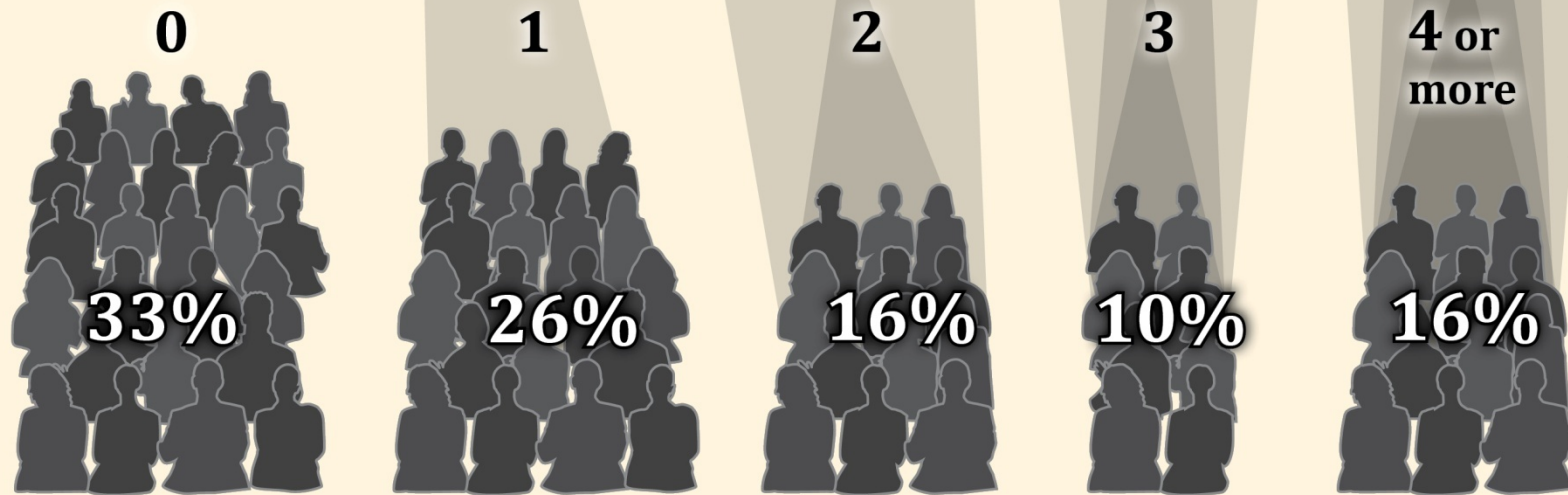
## ACE SCORE: "BIOLOGICAL STRESS DOSE"



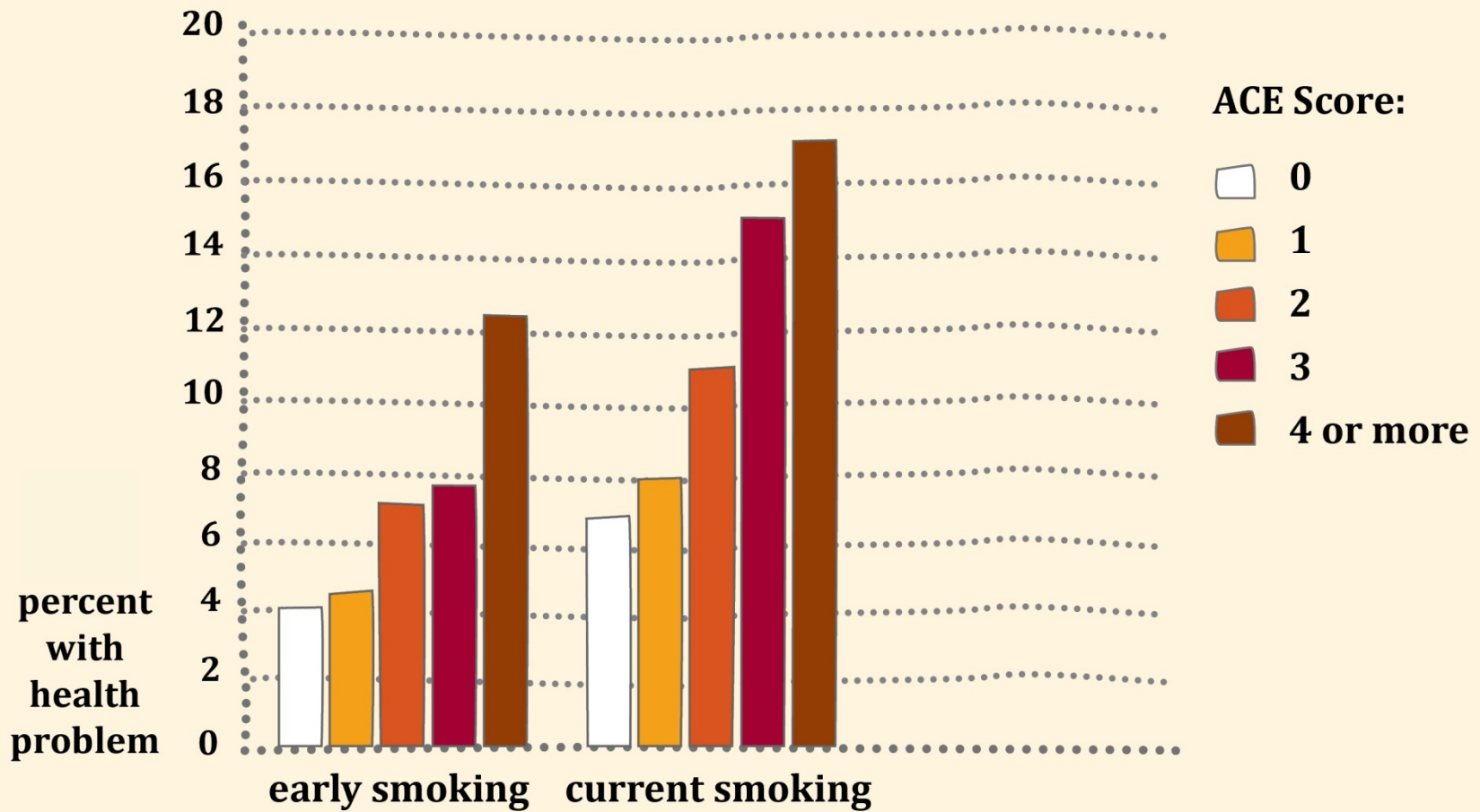
**ACES ARE HIGHLY INTERRELATED:  
WHEN 1 ACE OCCURS THERE IS ALMOST ALWAYS ANOTHER**



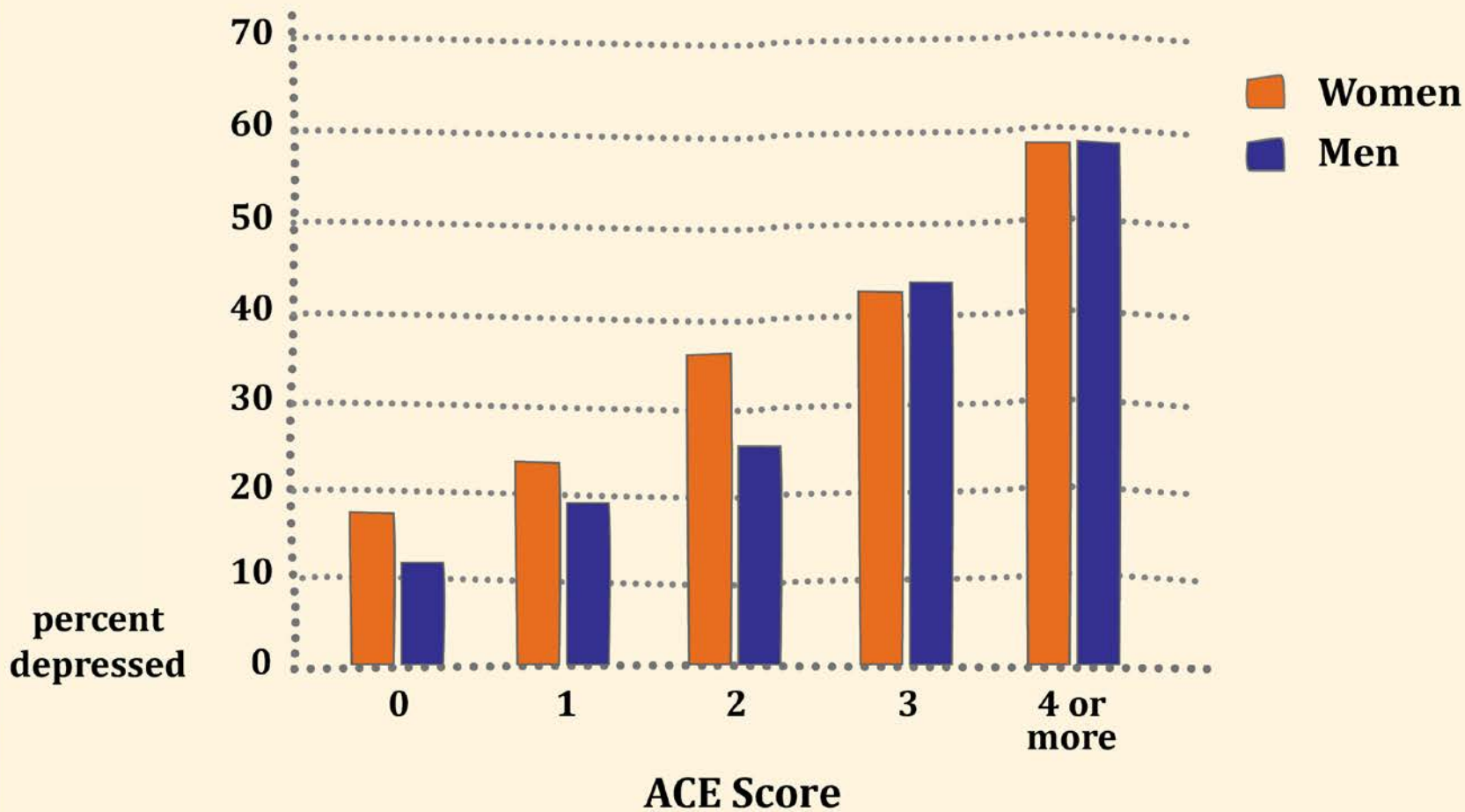
## ACE SCORE: "BIOLOGICAL STRESS DOSE"



# ACES, SMOKING AND LUNG DISEASE

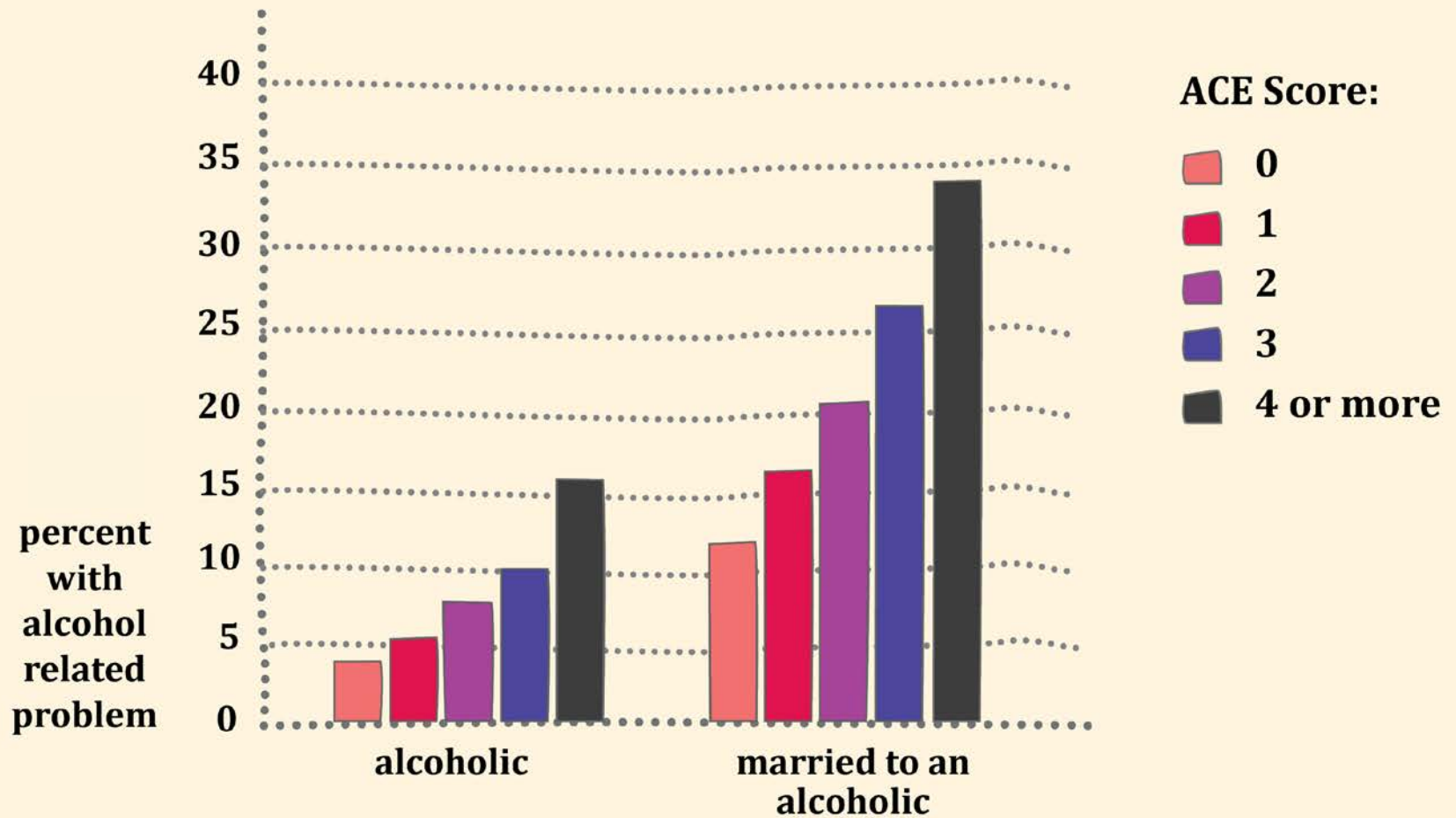


## ACE SCORE AND DEPRESSION

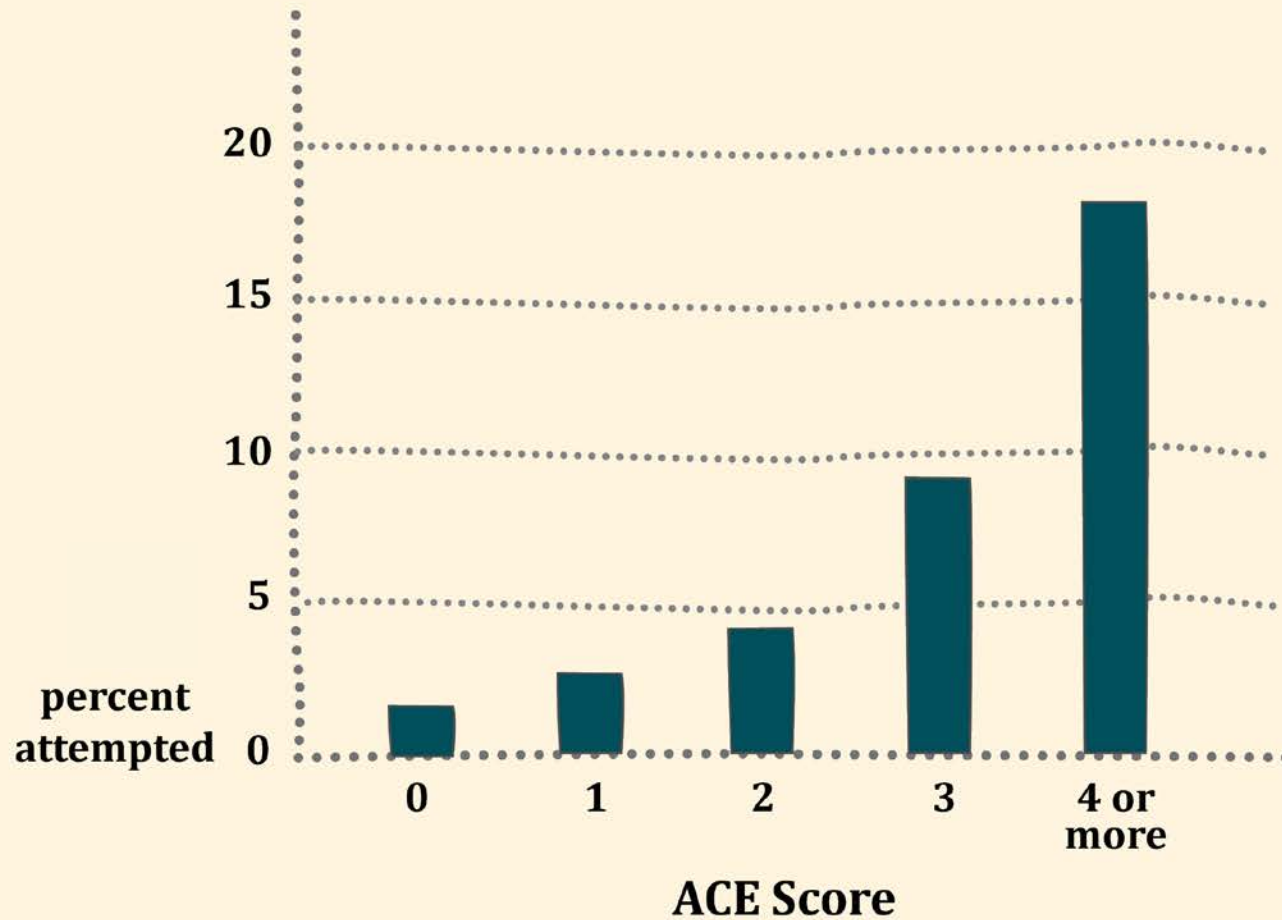




## ACE SCORE AND ALCOHOL PROBLEMS



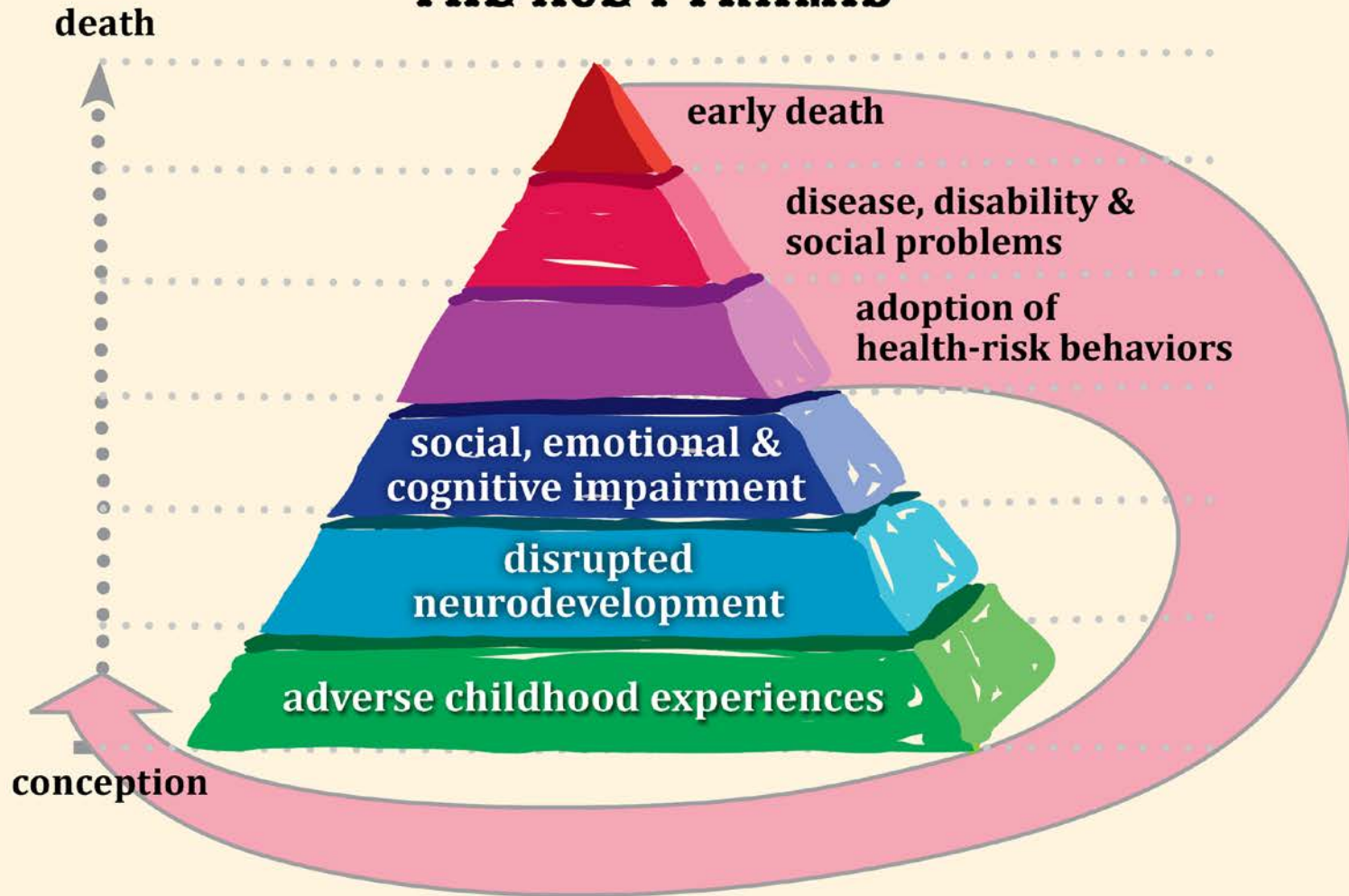
## ACE SCORE AND THE PREVALENCE OF ATTEMPTED SUICIDE



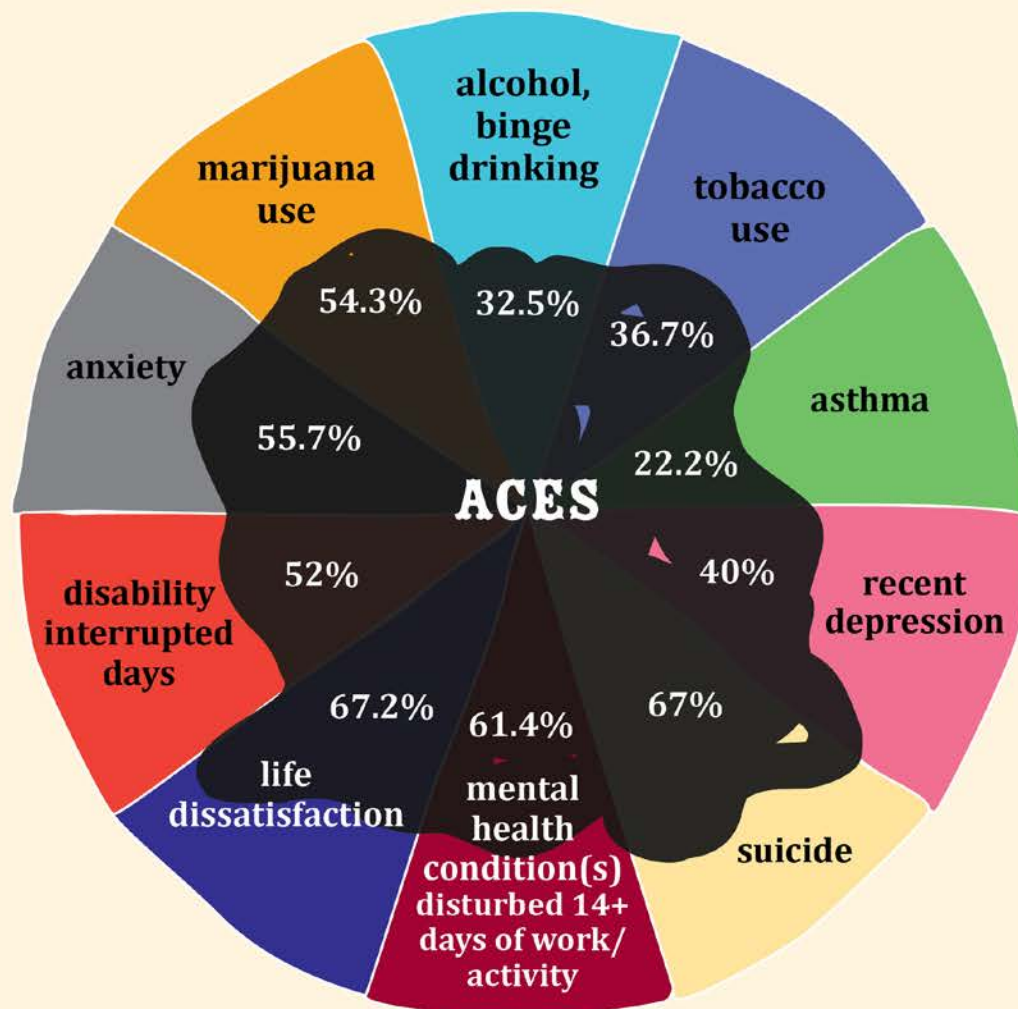
# ACES ARE THE LEADING HEALTH AND SOCIAL PROBLEM IN OUR NATION



# THE ACE PYRAMID



# POPULATION ATTRIBUTABLE RISKS



## Washington School Classroom (30 Students)

### Adverse Childhood Experiences (ACEs)

6 students with no ACE

5 students with 1 ACE

6 students with 2 ACEs

3 students with 3 ACEs

7 students with 4 or 5 ACEs

3 students with 6 or more ACEs

58% (17) students with no exposure to physical abuse or adult to adult violence




29% (9) of students exposed to physical abuse or adult to adult violence

13% (4) of students exposed to physical abuse and adult to adult violence



**TABLE 1: PREVALENCE OF ACEs IN MINNESOTA**

MINNESOTA 2011

		NUMBER OF ACEs (PERCENT)					
		0	1	2	3	4	5+
	All Minnesotans	45	22	12	8	5	8
	Men	46	23	12	7	5	7
	Women	43	22	12	9	6	9

Source: Minnesota Department of Health, Center for Health Statistics, BRFSS

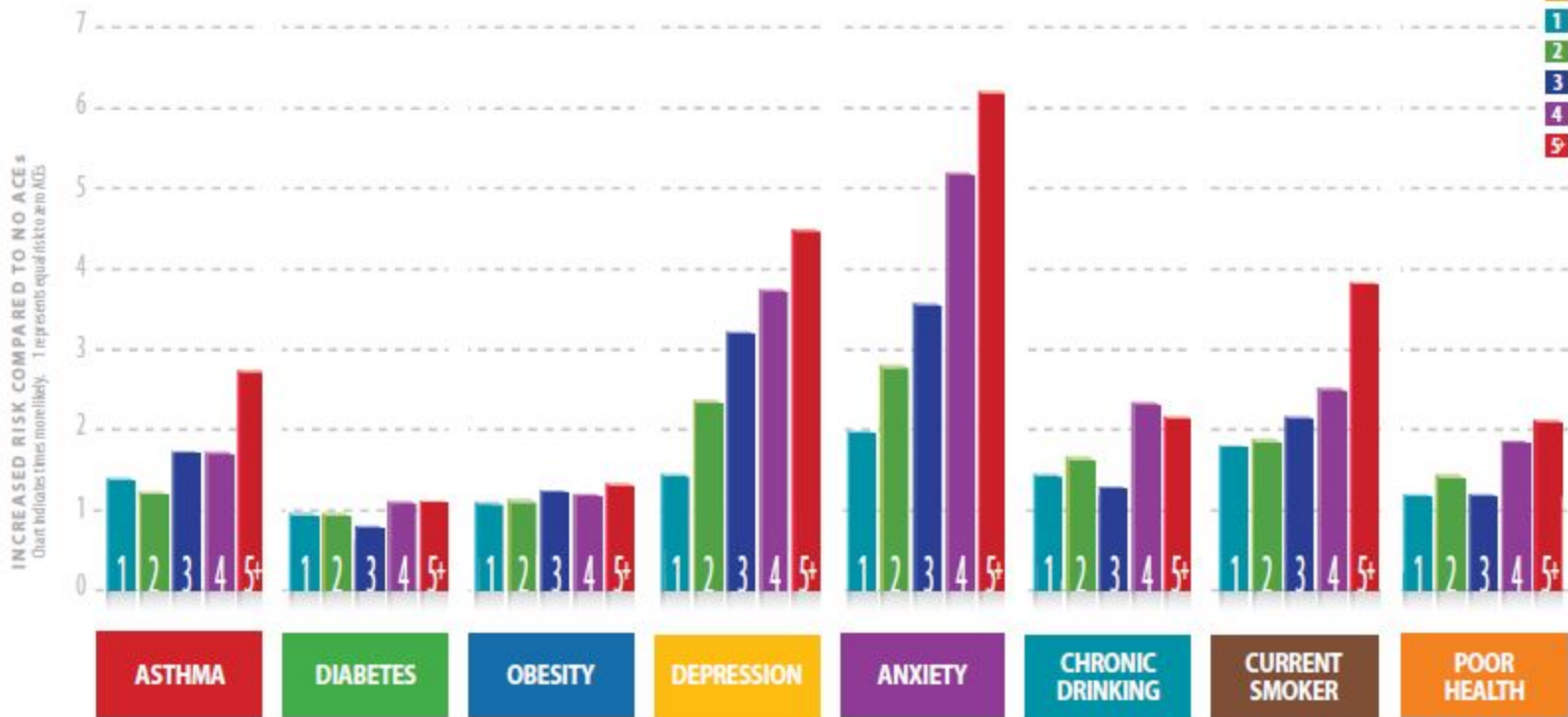
Due to rounding, the numbers may exceed 100%.

**TABLE 20: Increased Risk\* of CONDITION/BEHAVIOR WHEN ACE IS PRESENT**

MINNESOTA 2011

\*Increased risk = percent with chronic condition (1 or more ACEs)/percent with chronic condition (No ACEs)

Number of ACEs





# ***Adverse Childhood Experiences Analysis***

*The Minnesota Student Survey, 2013*

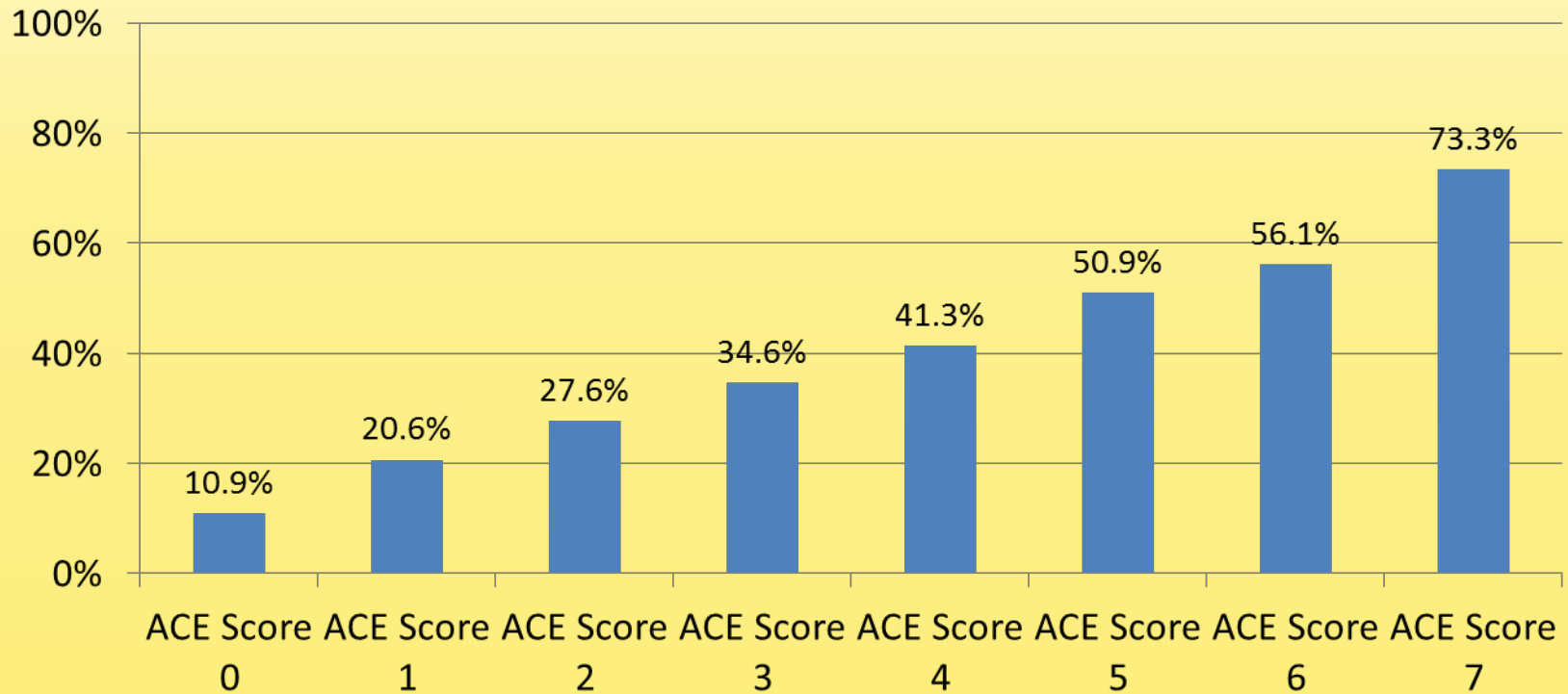


# ACE Score (Zero to Seven)

- **Students reporting that they have a parent or guardian who is currently in jail, and/or who has been in jail in the past**
- **Students reporting they live with someone who drinks too much alcohol**
- **Students reporting they live with someone who uses illegal drugs or abuses prescription drugs**
- **Students reporting a parent or other adult in the household has verbally abuse them**
- **Students reporting a parent or other adult in the household has physically abused them**
- **Students reporting parents or other adults in the home physical abuse each other**
- **Students reporting and adult or other person outside the family, and/or an older or stronger family member, has ever sexually abused them**

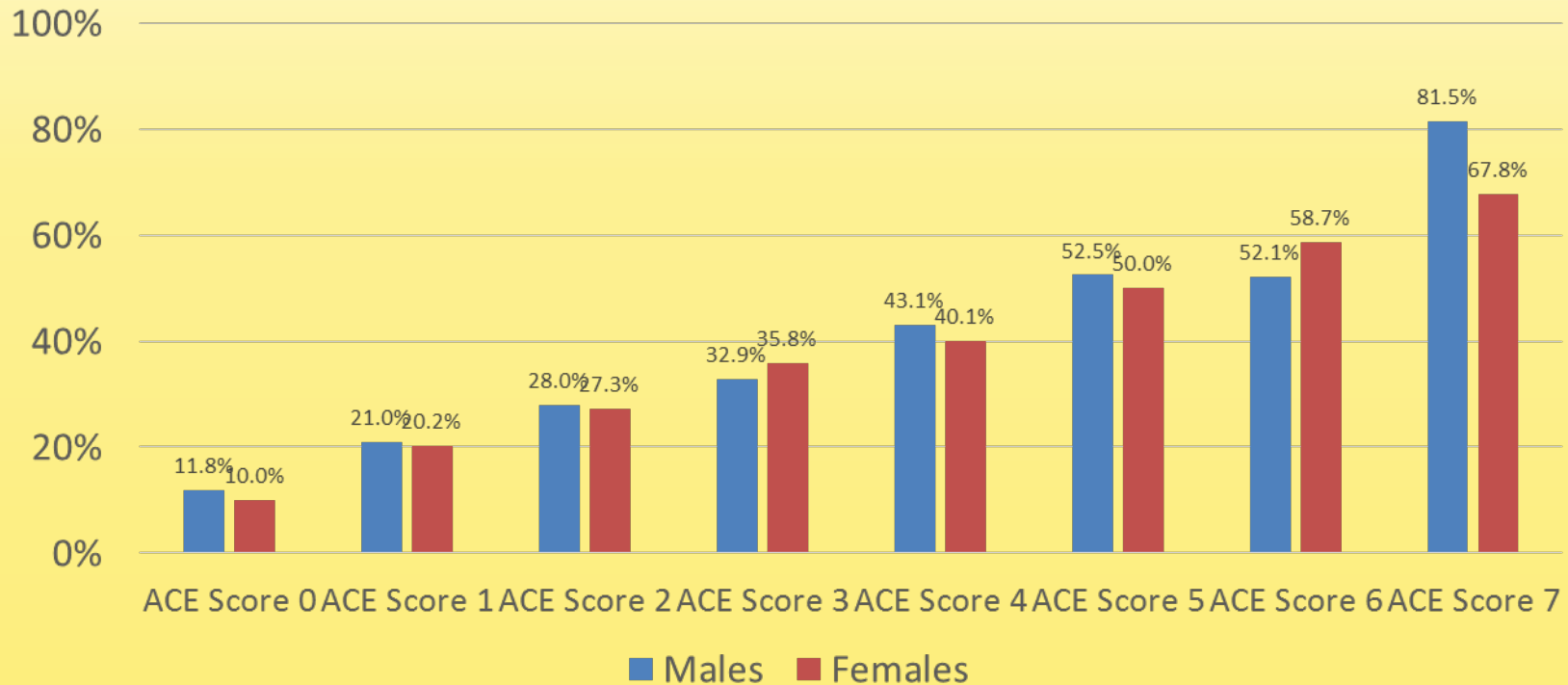
# ACE Score + Past 30 Day Use

Minnesota 8th, 9th, and 11th Graders Reporting Any Past 30 Day Alcohol Use, by ACE Score, 2013



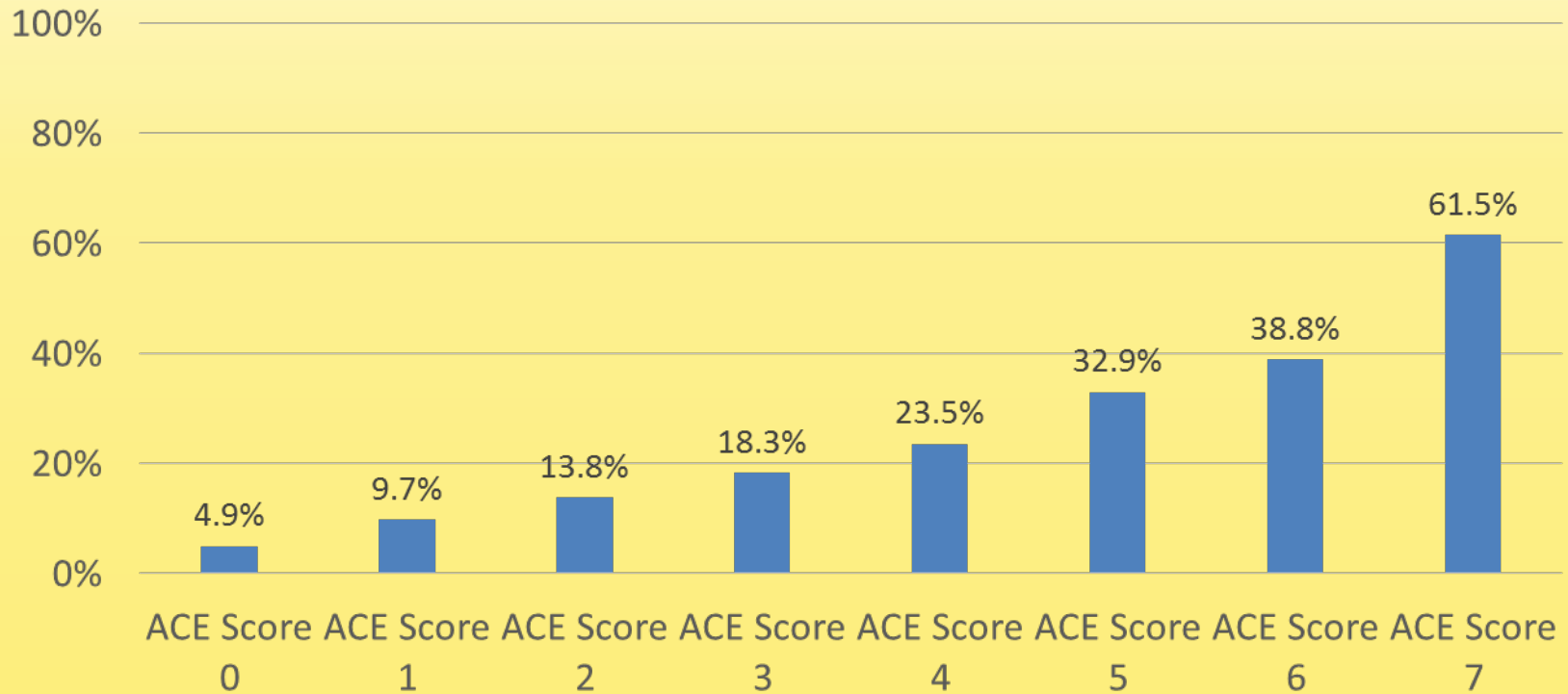
# ACE Score + Past 30 Day Use by Gender

## Minnesota 8th, 9th, and 11th Graders Reporting Any Past 30 Day Alcohol Use, by ACE Score and Gender, 2013



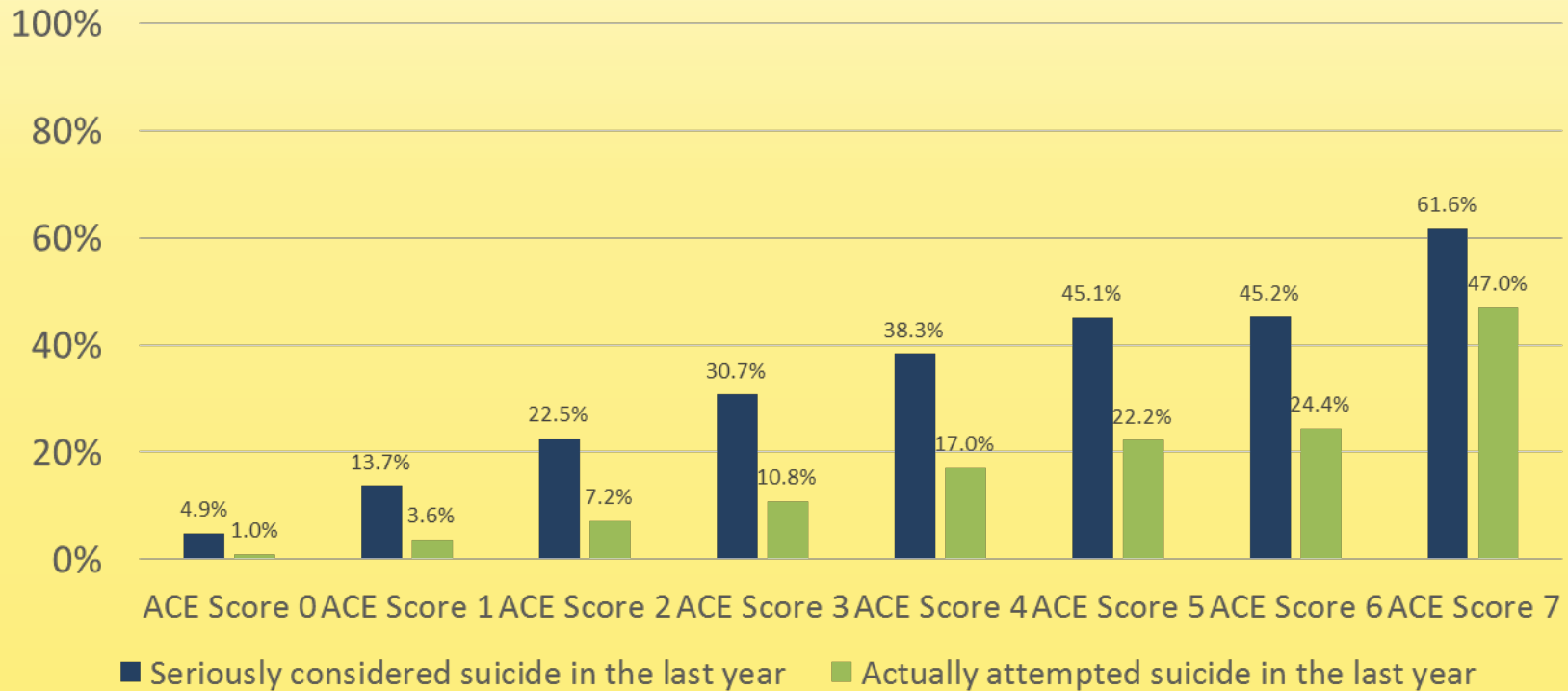
# ACE Score + Binge Drinking

Minnesota 8th, 9th, and 11th Graders Reporting Any Past 30 Day Binge Drinking, by ACE Score, 2013



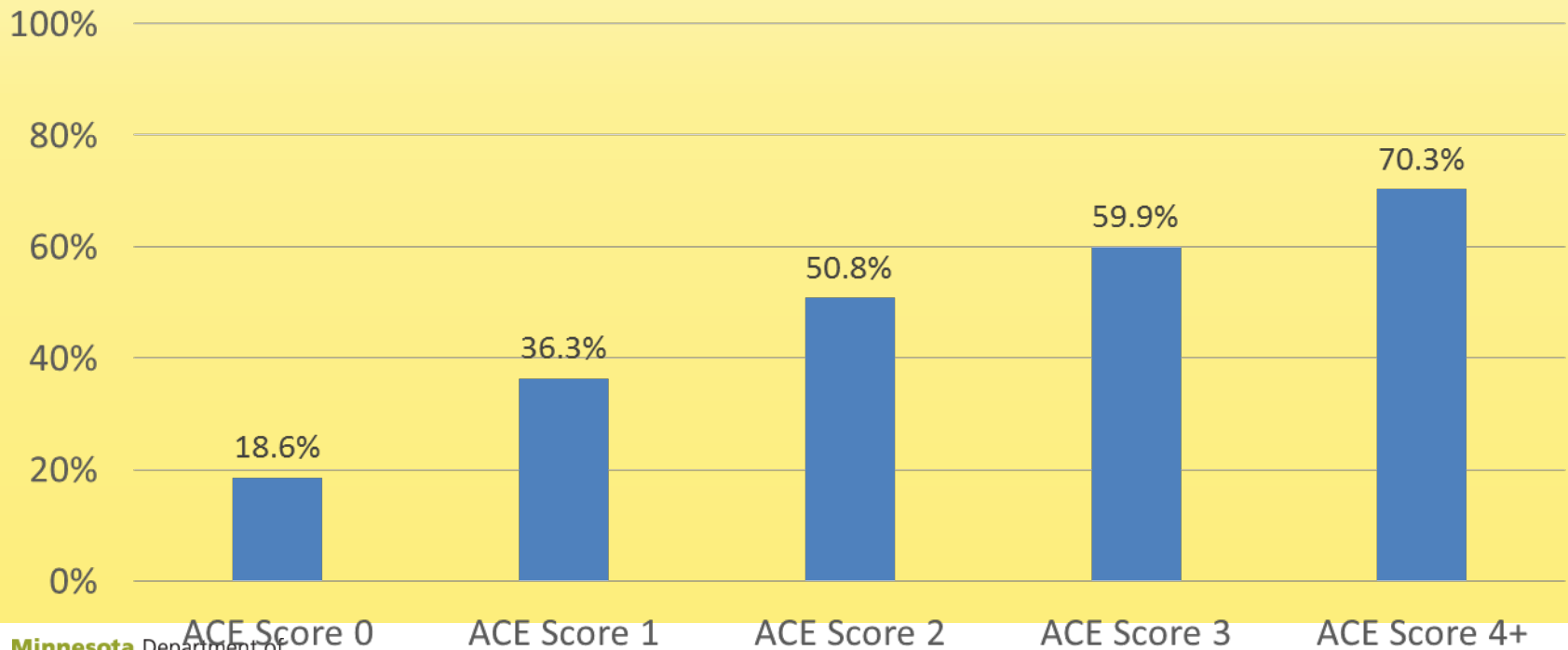
# ACE Score + Suicide

Minnesota 8th, 9th, and 11th Graders Reporting Past Year Suicidal Ideation and Attempts, by ACE Score, 2013



# ACE Score + Mental Health

Minnesota 8th, 9th, and 11th Graders Reporting Having Significant Problems in the Last 12 Months with Feeling Very Trapped, Lonely, Sad, Blue, Depressed, or Hopeless About the Future, by ACE Score, 2013



## **SUMMARY**

**ACEs are common**

**ACEs are highly interrelated**

**ACEs have a cumulative impact**



# For More on ACEs and MN ACEs

- CDC ACEs webpage
  - <http://www.cdc.gov/ace/>
- MN Department of Health ACE webpage
  - <http://www.health.state.mn.us/divs/chs/>

# Brief Discussion

- Does this information making you think of some students differently?
  - If so, how? What's different?
  
- Does this make you think differently about practices and ways that you or your staff interact with some students?
  - If so, how? What's different?

# Compassionate instruction and discipline principles



Always empower, never disempower



Provide unconditional positive regard



Maintain high expectations



Check assumptions, observe and question



Be a relationship coach



Provide guided opportunities for helpful participation

From *The Heart of Teaching and Learning*

# Schools are a Place of Resilience!

- Schools and school staff can be intentional about how they interact with students
- POSITIVE RELATIONSHIPS are a powerful intervention
- The students that need those relationships the most can be the hardest ones to have them with...

# Schools: Providing Supports

- School can and often do provide programs and supports focused on:
  - School Climate
  - Social and Emotional Learning (SEL)
  - Positive Behavioral Interventions and Supports (PBIS) and School-wide Positive Behavior Supports (SW-PBS)
  - Response to Intervention (RtI)
  - Student Support Staff (school psychologist, school nurses, school counselors, school social workers)

# Schools: Providing Supports

- MindUP, Yoga Calm and Zones of Regulation
- Prevention and early intervention groups
- Social Emotional Learning Practices Skill building groups
- Responsive Classroom and Restorative Practices
- Alternatives to Suspensions
- Positive Relationships are the evidence based practice

# Helping to co-regulate

- Where are you at on a scale of 0-10?
- Avoid argument and power struggle
- Calm down (walk) – pacing; you can assess the child's body/emotional (don't talk until they are calm; focus on calming down first)
  - Check in (for both of you): 0-10 scale
- Questions to Avoid:
  - What happened? What did you do? (can start an argument)
  - What were you thinking? (not useful)

# Repair and Skill Building

- There doesn't have to be a punishment or punitive consequence; Compassionate Accountability
- How do you repair the harm that was done?
- Planning for the future
  - How can you help them build skills?
  - Role play, etc.
  - How do you help the adults plan for the future if this comes up again ?



# Repetition Can Rewire

- Many, many, many times!! 100 or more!
- Relationships are the EVIDENCED BASED PRACTICE!
- They anticipate that your reaction will be negative
- They might not “want” a relationship and may “push away”

# Shift Your Perspective Video

<http://www.youtube.com/watch?v=JlRK1vqcuvg>

# Q & A



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