

The Effects of Stress and Trauma on Mind, Body ...and Health Care

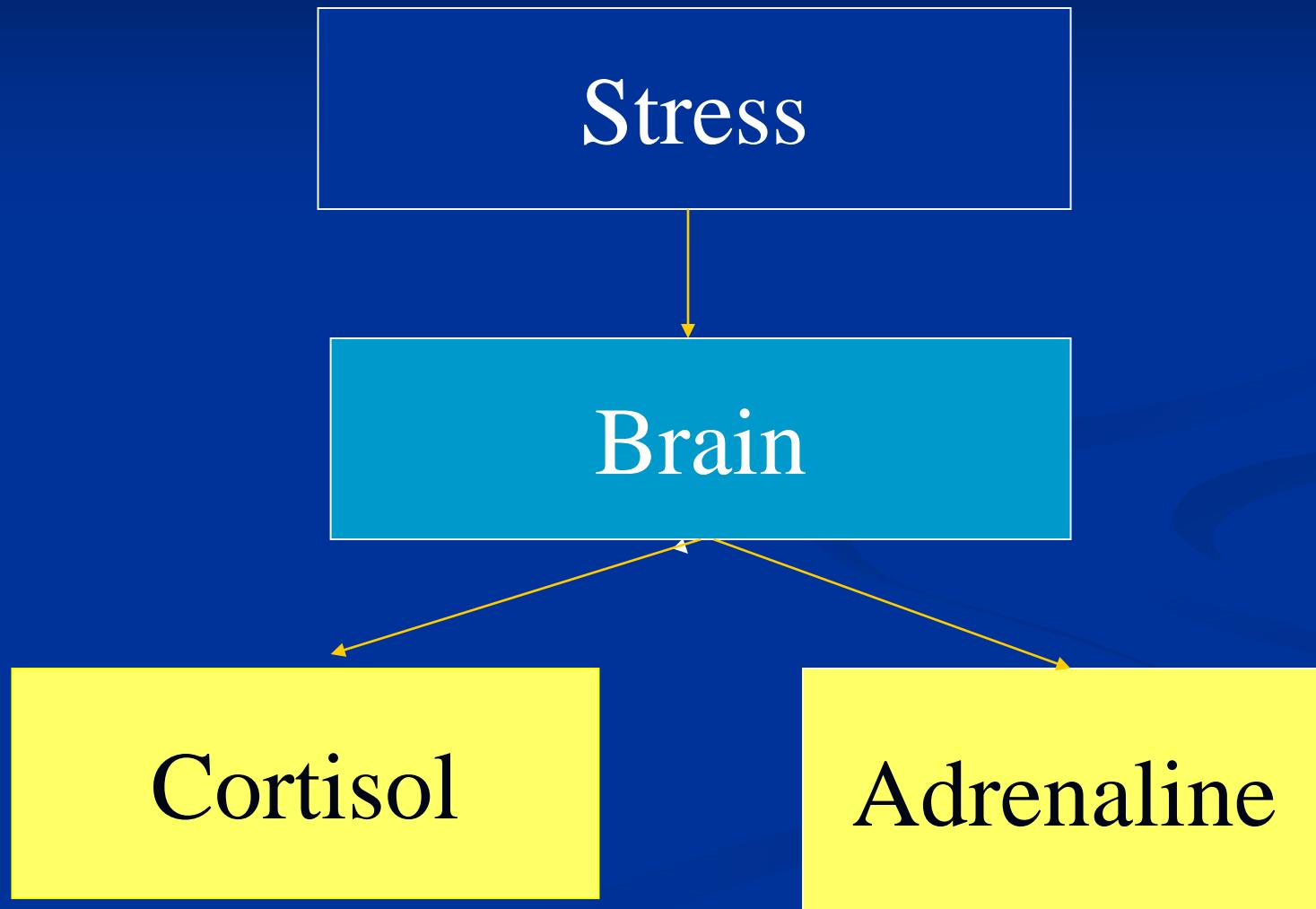


Ann Bullock, MD

**Division of Diabetes Treatment and Prevention
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“It is assumed that once the ‘healthy choice’ is pointed out, everyone will select it and no account is taken of the very differing circumstances and aspirations of different people’s lives.”

Basic Stress Pathway



Stress and Trauma

- Stress: anything that requires a response, can be “good” or “bad”
- Trauma: anything that *overwhelms* our ability to respond, especially if we perceive that our life or our connection to things that support us physically or emotionally is threatened

So what factors make it more likely that a stressful situation will become traumatizing?

Posttraumatic Stress Responses

“the long-term consequences of trauma are far-reaching...”

- Context of the trauma
- Age/stage of life
- Loss of family/cultural coherence
- Pre-trauma characteristics
- Life conditions post-trauma
- Symbolic/moral meanings

Posttraumatic Stress Responses

- PTSD
- Depression
- Anxiety
- “Demoralization”

Kroll, *JAMA* 2003;290:667-670

Original Trauma



Amygdala

Any input which amygdala interprets as like original trauma

Recreates body state at time of original trauma

Cortisol

Adrenaline

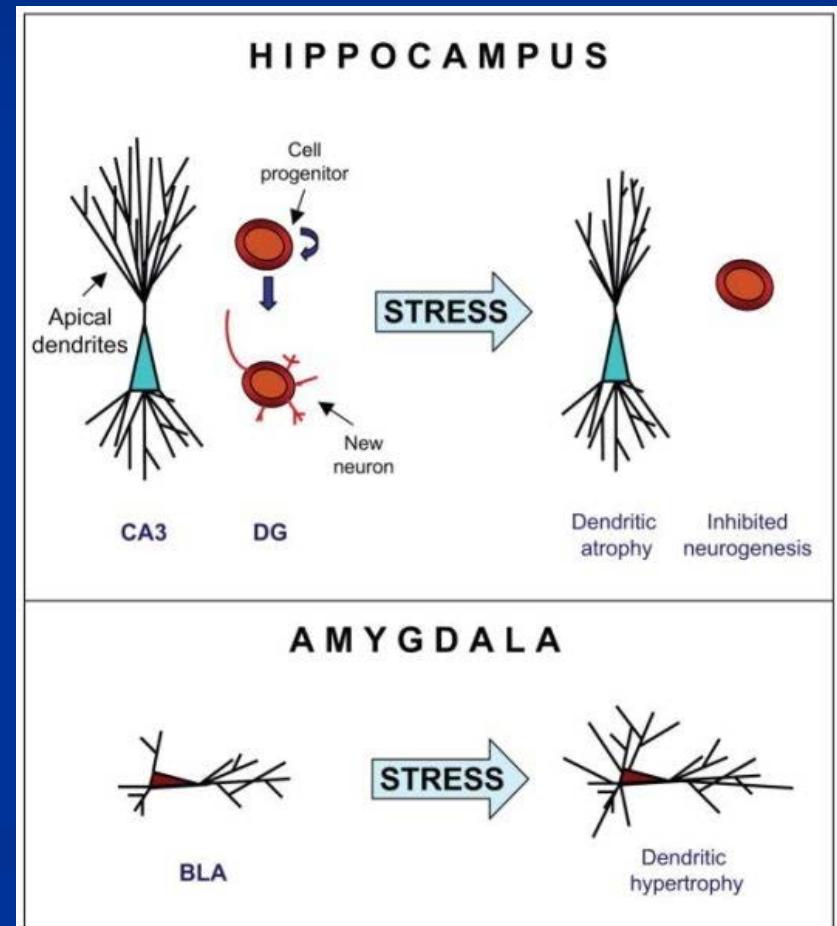
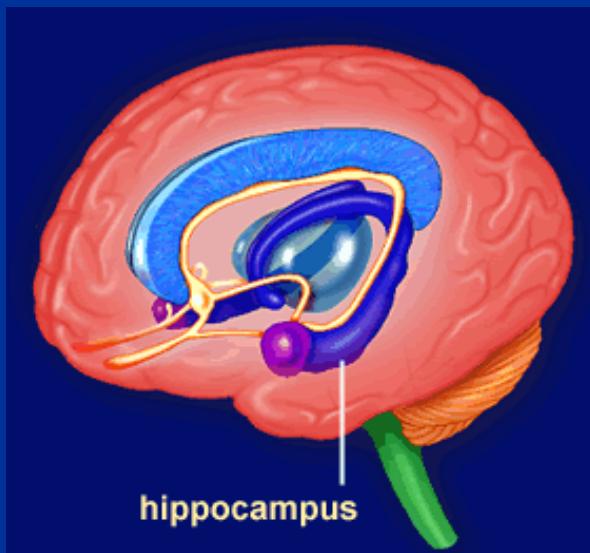
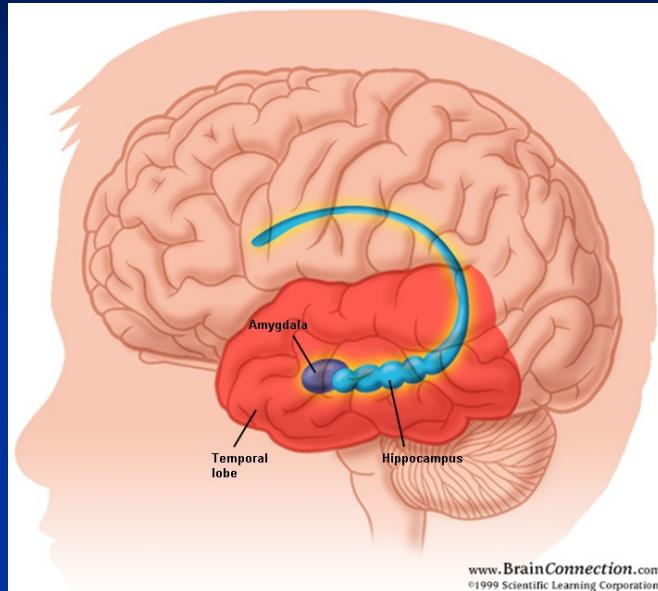
Original emotion re-experienced: fear, rage, sadness

Adapted from LeDoux, *The Emotional Brain*, 1996

The brain itself is changed by stress

- “What fires together, wires together”
- Complex process of “sculpting” the brain, converting experience into neuronal changes
 - Cortisol, Brain-Derived Neurotrophic Factor (BDNF)
 - Chronic stress and depression:
 - shrink the hippocampus and prefrontal cortex
 - ↓ Memory, selective attention, executive function/decision making
 - potentiate growth of the amygdala
 - ↑ Fear/hypervigilience, anxiety, aggression

Stress and the Brain



Stress of Racism

- “The lifelong accumulated experiences of racial discrimination by African American women constitute an independent risk factor for preterm delivery.”
 - Odds ratio of 2.6
 - Independent of maternal sociodemographic, biomedical, and behavioral characteristics.

Am J Public Health 2004; 94:2132–2138

Stress in Children: Long-term Consequences

- Chronic exposure to Intimate Partner Violence almost doubles (OR 1.8) risk of obesity at age 5 years

Arch Pediatr Adolesc Med 2010;164:540-546

- Young children who had objectively-measured poor quality maternal-child relationships had $2 \frac{1}{2} \times \uparrow$ prevalence of adolescent obesity c/w those who did not
Pediatrics 2012;129:132-40
- “...reducing toxic stress can target the common physiologic pathway implicated in an enormous array of health outcomes from asthma to cardiovascular disease.”
Pediatrics 2013;131:319-327

Stress in Children

■ Positive

- Normal/necessary part of healthy development
 - First day with new caregiver; immunization
- Brief increases in heart rate and stress hormones

■ Tolerable

- More severe, longer lasting stressor
 - Loss of a loved one, natural disaster, injury
- If buffered by relationship with supportive adult(s), brain and body can recover

■ Toxic

- Strong, frequent, prolonged adversity
 - Abuse, neglect, caregiver mental illness, poverty
- If no adult support, can disrupt brain and organ development long-term

Domains of Impairment in Children Exposed to Complex Trauma

I. Attachment	IV. Dissociation	VI. Cognition
Problems with boundaries Distrust and suspiciousness Social isolation Interpersonal difficulties Difficulty attuning to other people's emotional states Difficulty with perspective taking	Distinct alterations in states of consciousness Amnesia Depersonalization and derealization Two or more distinct states of consciousness Impaired memory for state-based events	Difficulties in attention regulation and executive functioning Lack of sustained curiosity Problems with processing novel information Problems focusing on and completing tasks Problems with object constancy Difficulty planning and anticipating
II. Biology	V. Behavioral control	Problems understanding responsibility Learning difficulties Problems with language development Problems with orientation in time and space
Sensorimotor developmental problems Analgesia Problems with coordination, balance, body tone Somatization Increased medical problems across a wide span (eg, pelvic pain, asthma, skin problems, autoimmune disorders, pseudoseizures)	Poor modulation of impulses Self-destructive behavior Aggression toward others Pathological self-soothing behaviors Sleep disturbances Eating disorders Substance abuse Excessive compliance Oppositional behavior Difficulty understanding and complying with rules Reenactment of trauma in behavior or play (eg, sexual, aggressive)	VII. Self-concept Lack of a continuous, predictable sense of self Poor sense of separateness Disturbances of body image Low self-esteem Shame and guilt
III. Affect regulation		
Difficulty with emotional self-regulation Difficulty labeling and expressing feelings Problems knowing and describing internal states Difficulty communicating wishes and needs		

Adverse Childhood Experiences (ACE)

- Physical, emotional, sexual abuse; mentally ill, substance abusing, incarcerated family member; seeing mother beaten; parents divorced/separated

--Overall Exposure: 86% (among 7 tribes)

	<u>Non-Native</u>	<u>Native</u>
Physical Abuse-M	30%	40%
Physical Abuse-F	27	42
Sexual Abuse-M	16	24
Sexual Abuse-F	25	31
Emotional Abuse	11	30
Household alcohol	27	65
Four or More ACEs	6	33

Am J Prev Med 2003;25:238-244

ACEs and Adult Health

■ ACE Score ≥ 4

- 4-12 x risk for alcoholism, drug abuse, depression and suicide attempt
- 2-4 x risk for smoking, teen pregnancy, STDs, multiple sexual partners
- 1.4-1.6 x risk for severe obesity
- Strong graded relationship at all levels of ACEs for almost all outcomes, including heart disease

Am J Prev Med 1998;14:245-258 and *Circulation* 2004;110:1761-6

- ## ■ Across 10 countries, adults who experienced ≥ 3 childhood adversities
- Hazard ratios 1.59 for diabetes, 2.19 for heart disease
 - Risk similar to the association between cholesterol and heart disease
 - Both in magnitude as well as population prevalence

Arch Gen Psychiatry 2011;68:838-844

What is the average ACE
score of:

- the patients in your clinic?
- the staff in your clinic?

What is *your* ACE score?

*“Where did you learn
how to do this?”*

Eduardo Duran, PhD



Legacy of Boarding Schools

“...many generations of Indigenous children were sent to residential schools. This experience resulted in collective trauma, consisting of ...the structural effects of disrupting families and communities; the loss of parenting skills as a result of institutionalisation; patterns of emotional response resulting from the absence of warmth and intimacy in childhood; the carryover of physical and sexual abuse; the loss of Indigenous knowledges, languages, and traditions; and the systemic devaluing of Indigenous identity.”

Lancet 2009;374:76-85 (p. 78)

Historical Trauma

- Trauma(s) that are often intentionally inflicted and occur at more or less the same time to a defined group of people—these traumas:
- Have effects like individual traumas, *plus*
- Because the traumas are so pervasive, affect caregivers and elders, affect community and cultural infrastructures and are targeted at a specific group—they have huge effects on:
 - People's/communities' abilities to cope with and adapt to traumatic event and aftermath
 - Abilities to interpret the meaning/psychologically incorporate the trauma
 - Patterns of trauma transmission to subsequent generations

Some Behaviors/Beliefs We Can Have as the Result of Trauma

- Distrust—of the government, institutions, our own leaders, supervisors, etc. even to our own detriment--“they” are out to get us
- Sense of never having “enough”
- Spend/eat/use what you have now as it may be taken from you
- We will not live to be old, so it doesn’t matter what we do now
- “Love” is not to be trusted and is often linked with emotional/physical/sexual abuse

Behaviors we can see in clinic

- Different threshold for “normal” behaviors
- Anger, rage “out of proportion” to situation
 - Escalation of emotions/voice if demands aren’t met
- Dissociation: can look like disinterest, “spaciness”
- Pain sensitivity—can appear either increased or decreased
- Desensitized to loss
- Distrust of providers
- Overly dependent on provider
- Patients say they are doing something (taking meds, controlling blood sugar, exercising, etc.) that they aren’t
- Patients deny doing something that they are (eating unhealthy foods, using traditional medicine, etc.)



**So how do we re-think
our care if we know
that many people are
dealing with trauma?**

How do we reduce the likelihood that
health care will trigger trauma
responses in patients?

Trauma-informed care: reflected in the shift from “What’s *wrong* with you?” to “What *happened* to you?”

The Integration of Trauma-Informed Care in the Family Partner
Program, Issues Brief, Massachusetts Dept. of Mental Health,
Children’s Behavioral Health Research and Training Center, 2012

“Trauma-informed services are those in which service delivery is influenced by an understanding of the impact of interpersonal violence and victimization on an individual’s life and development. To provide trauma-informed services, all staff of an organization, from the receptionist to the direct care workers to the board of directors, must understand how violence impacts the lives of the people being served, so that every interaction is consistent with the recovery process and reduces the possibility of retraumatization.”

J Community Psychology 2005;33(4);461-477

Trauma and Health Care

- Everyone loves going for medical care...
 - AI/AN children often were lined up for immunizations, dental work through school without parent present
- Lack of clinic appt availability at many Indian health sites
 - Patients sometimes have to come as walk-ins, may not get in that day—disempowering, frustrating
 - Patients often wait til problems arise, so harder to treat and may get lectured on how they should have come in sooner
- Medical and dental care can easily trigger trauma response
 - Interaction with authority figures and unequal power systems
 - Dental care: vulnerable position, uncomfortable/painful, invasive, patient can't talk during procedure, may feel suffocated
 - Experiences of family members (esp. if witnessed) affect patients
 - e.g., going to hospital, starting insulin

Trauma-informed Care

- During the exam/procedure
 - Encourage patient to do what helps them feel comfortable
 - Have a support person with them +/- holding their hand
 - Listen to music, wear their coat, keep the x-ray apron on
 - Negotiate the angle of the exam table/dental chair, whether door/curtain is open, closed, or ajar
 - Talk to pt while they are clothed/sitting up, explain procedure, show tools to be used; tell them what you're doing and why
 - State clearly that the patient is in control and can take a break or stop exam/procedure at any point (and then honor this...)
- Make the *relationship* with patient the primary goal, not just meeting a particular requirement
 - Positive interactions with authority figures like providers contribute to healing from trauma—the converse is also true, especially for kids

Trauma-informed Diabetes Care

- How would we set up our clinics if we assumed that most patients are dealing with trauma?
 - Make appointment process as easy as possible
 - Peaceful, cheerful diabetes clinic environment
 - Lighting: warm vs. harsh/fluorescent; furniture comfortable
 - Consider what is on walls, magazines in waiting room
 - Signs: positive, not negative (e.g. if pt late to clinic)
 - Staff who are calm, kind and give straight-forward directions and explanations—we all *think* we do this...
 - Caring, supportive, nonjudgmental clinical/educational care
 - Diabetes is associated with trauma for many people: “bad news”
 - We have often blamed people for their diabetes control, behaviors
 - Food security: be sure people have access to nourishing foods
 - Encourage questions, ask about and validate patient’s concerns

Trauma-informed Diabetes Care

- Find out what's going on in their lives, how their kids are doing, etc.—and then listen to their responses
- Find out if they're taking their meds at the dosages you think they're taking (esp. insulin), without judgment
 - Ask about hypoglycemia, hypotension, med side effects
 - Which may be why they're not taking their meds as scheduled
- Pay more attention to them than to computer
- Be careful not to use jargon, keep decision questions clear/straightforward
- Find something to praise/appreciate, thank them for coming to see you

Perhaps most of all...

- Recognize that we have our own wounds to heal that impact our ability to interact with patients the way we want to—it's about changing us

- What are ways we can heal ourselves?

- How can we avoid having our own traumas triggered by our patients?

- How can we be aware of when this happens anyway and avoid taking it out on them?

- How can we support our co-workers in this? How to be “mirrors” for each other?



How do we see our patients and ourselves?

- **Old Model**: Stereotyping, paternal
 - Patients are a bit lazy and must be reminded, motivated, coaxed, and even guilted/threatened into following our good medical advice (and not messing up our GPRA/Audit numbers!).
- **New Model**: Relationships, partnering
 - Given the context of their past and current life circumstances, patients are doing the best they can—clinicians can be important educators, counselors, cheerleaders, and non-judgmental supports to patients on their life journeys.

Walk through your clinic as if you were someone dealing with a lot of trauma. See what can be changed—it doesn't cost much to change the lighting, the posters on the wall, some clinic processes, the kindness we show.

Resources

- SAMHSA
 - National Center for Trauma-Informed Care
www.samhsa.gov/nctic
- Western Massachusetts Training Consortium
 - Great pamphlet for providers available free on web:
“Trauma Survivors in Medical and Dental Settings: Why Is This Important to Doctors and Dentists”

“Darkness cannot drive out darkness;
only light can do that.

Hate cannot drive out hate;
only love can do that.”

-Martin Luther King Jr.

