Adverse Childhood Experiences: The Long Term Consequences

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Maryland Association of Counties Summer Conference
Large Counties Coalition Breakfast
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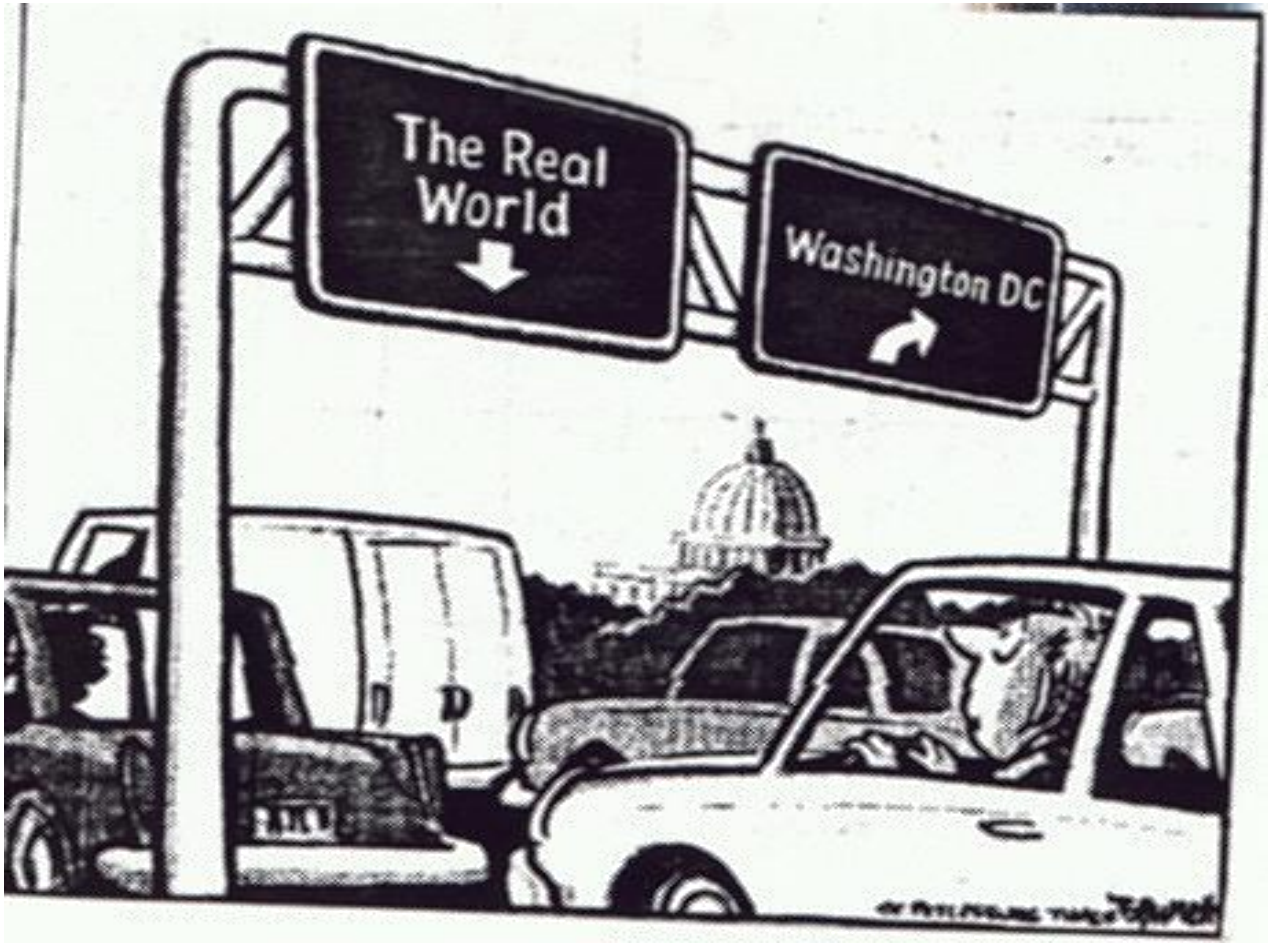
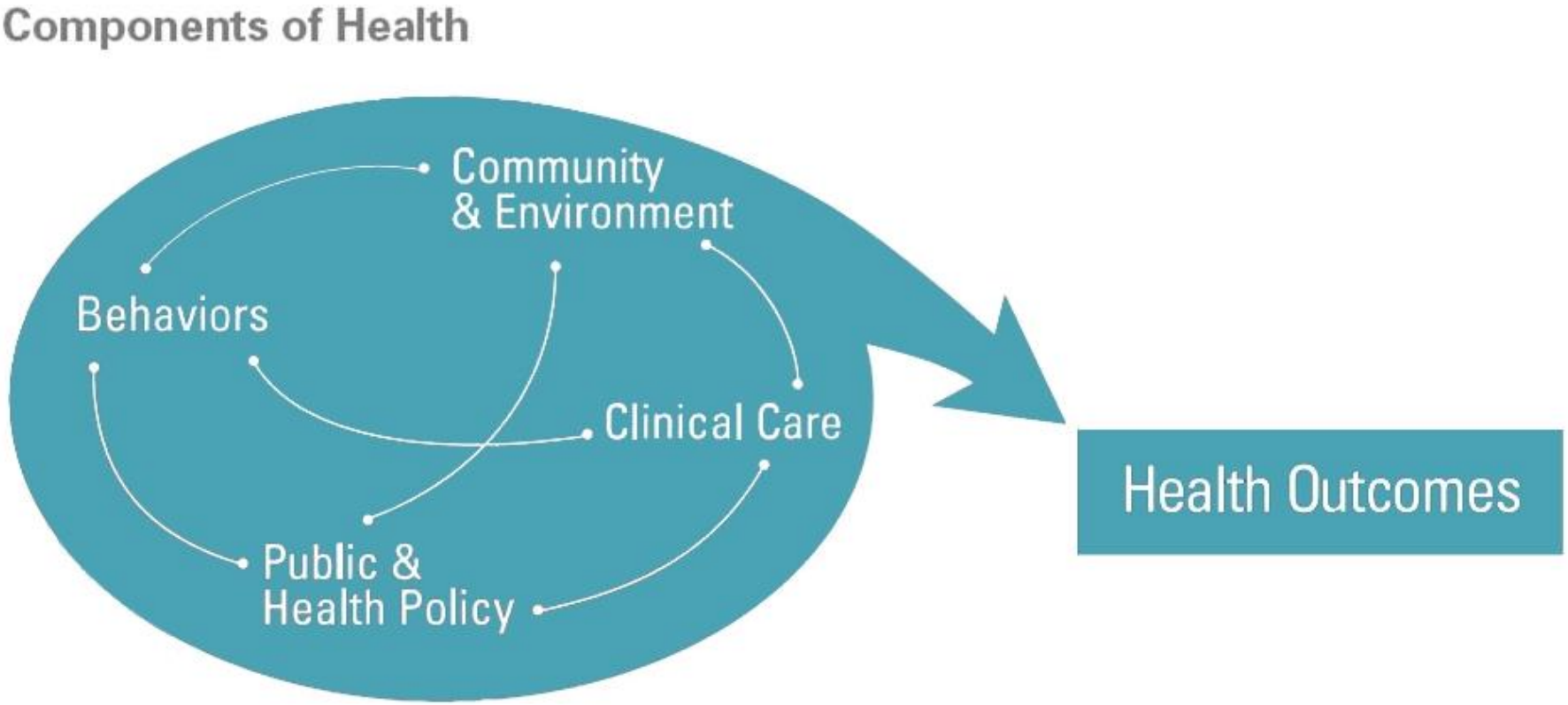

The Real World
Washington DC

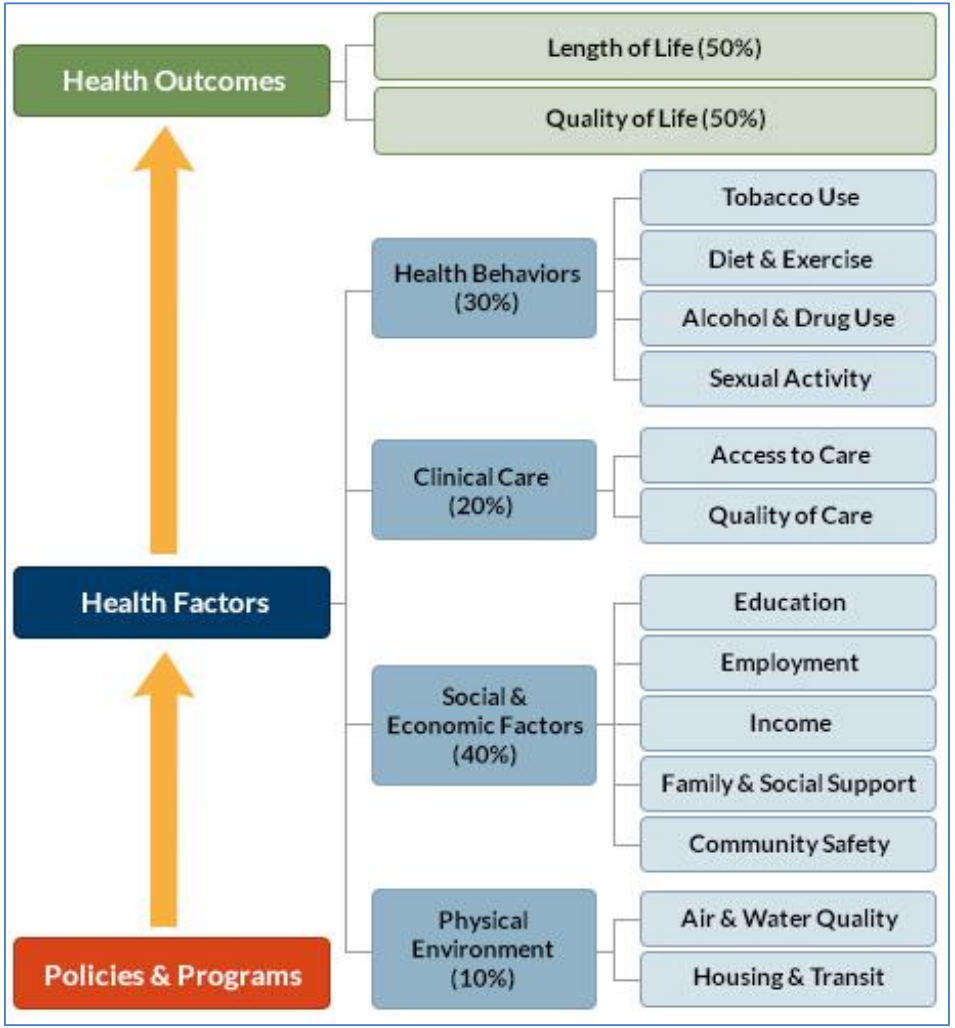
Healthcare in the 21st Century: Age of the New Morbidities



Social Determinants of Health

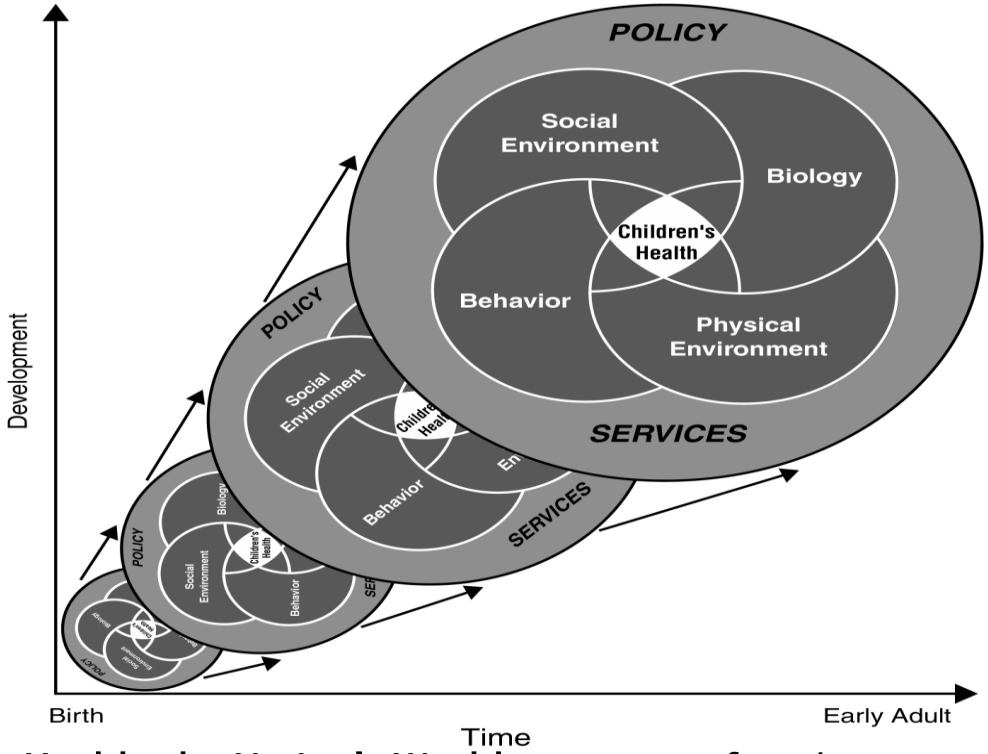
- Conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels and are mostly responsible for health inequities.

World Health Organization



Disparities: A Life Course Perspective

Model of Children's Health and Its Influences



Children's Health, the Nation's Wealth. Institute of Medicine. DC: National Academies Press, 2004.

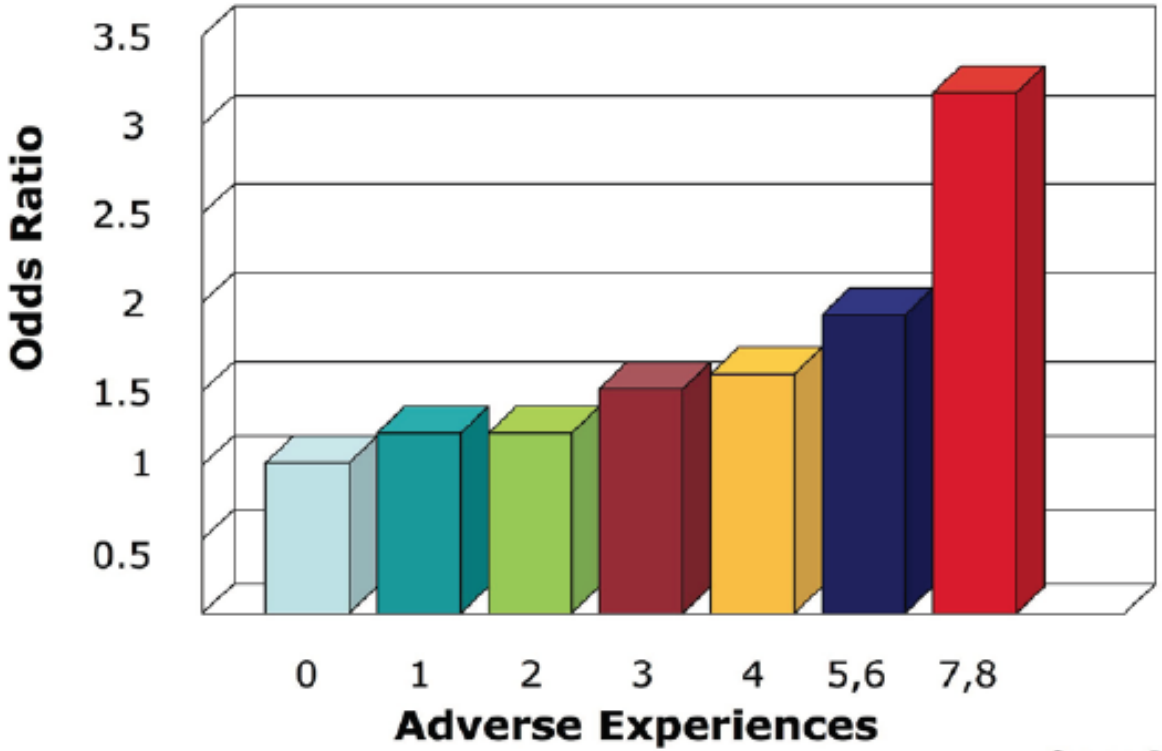
Adverse Childhood Experiences Study (ACEs)

- Published by CDC/Kaiser in 1998
- Surveyed 17,000 policy holders
- Understand relationship between childhood adversity & adult health outcomes

Felitti et al, 1998

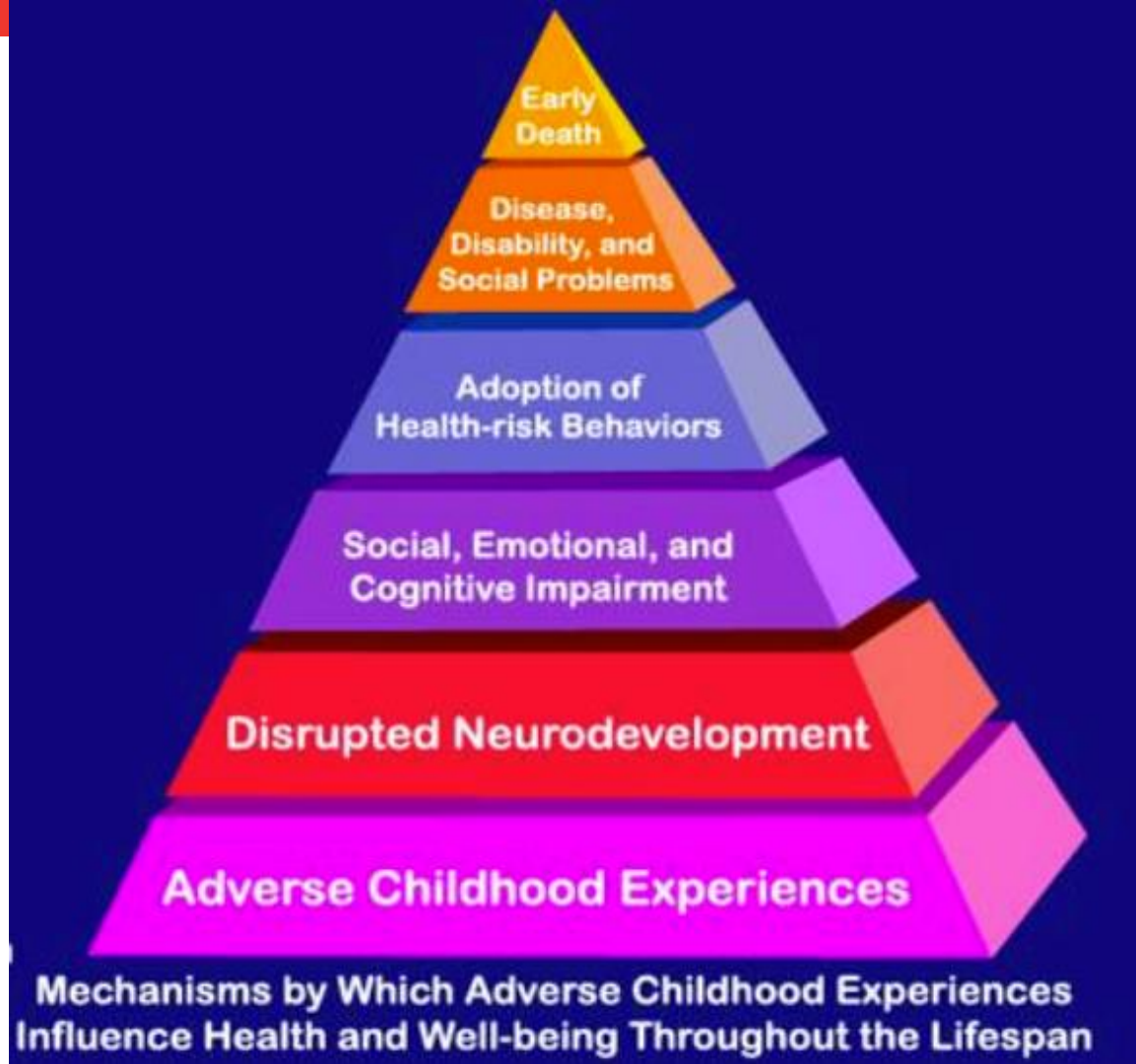
Childhood Exposure	Subcategory
Abuse	Psychological
	Physical
	Sexual
Household dysfunction	Substance abuse
	Mental illness
	Intimate partner violence
	Criminal behavior
	Divorce
Neglect	Emotional
	Physical

Risk for Cardiovascular Disease is Embedded in Adverse Childhood Experiences



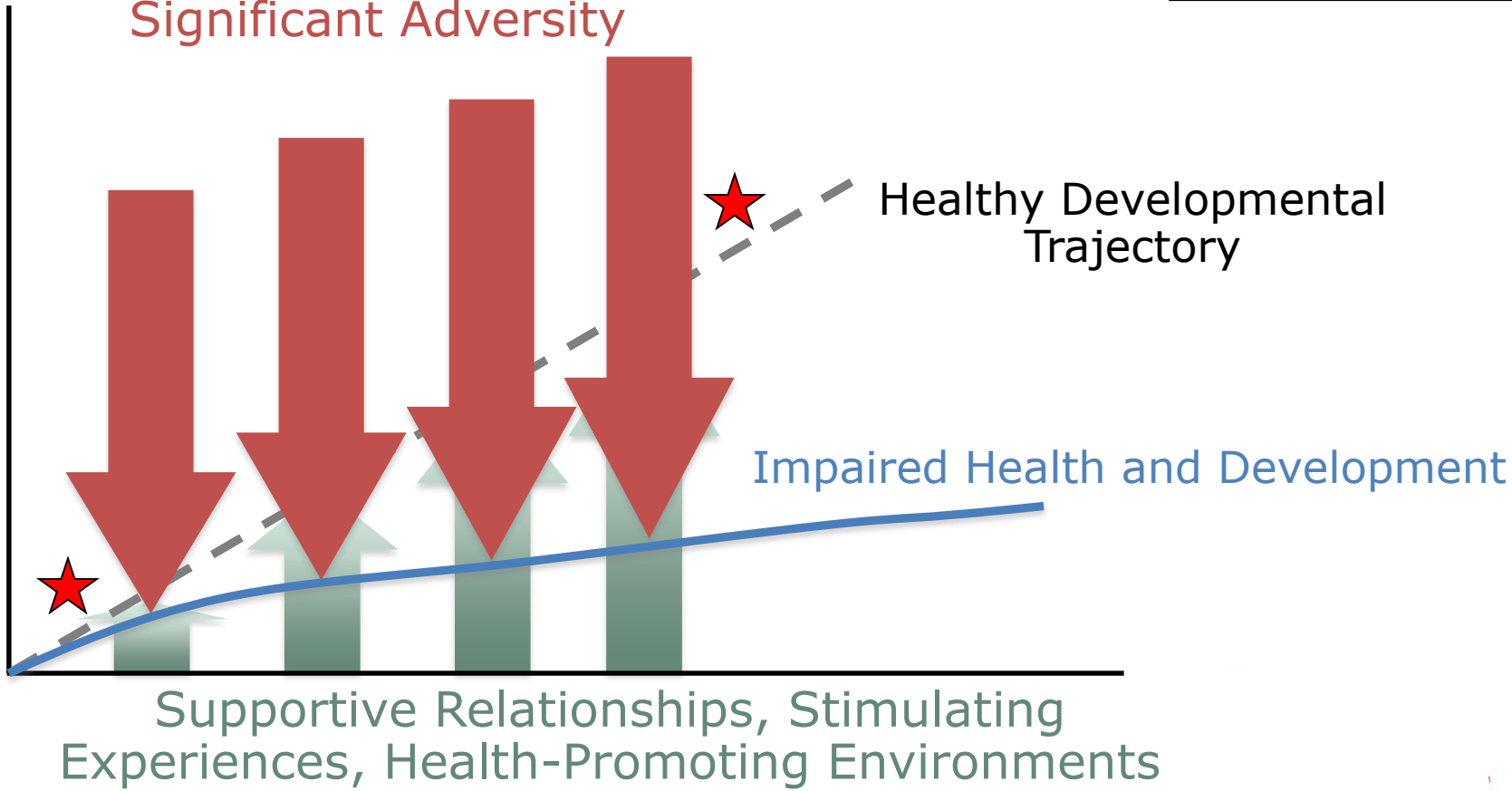
Source: Dong et al, 2004

Adverse Childhood Experiences



Childhood Developmental Trajectories

Adapted from Harvard Univ. Center on the Developing Child



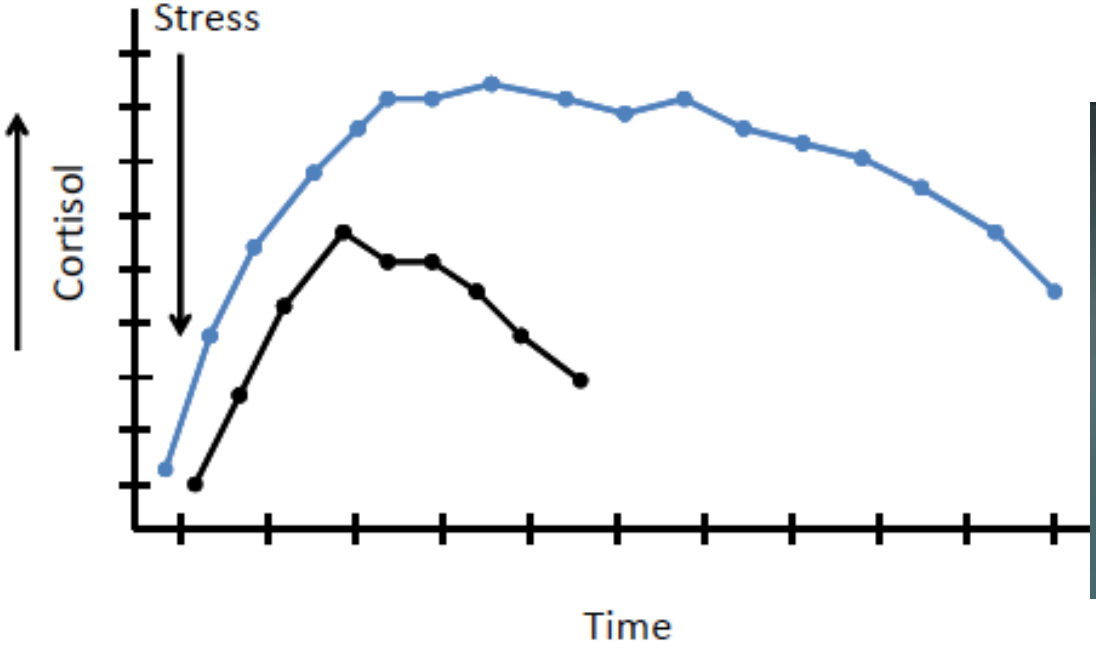
Levels of Stress

Brief increases in heart rate, mild elevations in stress hormone levels.

Serious, temporary stress responses, buffered by supportive relationships.

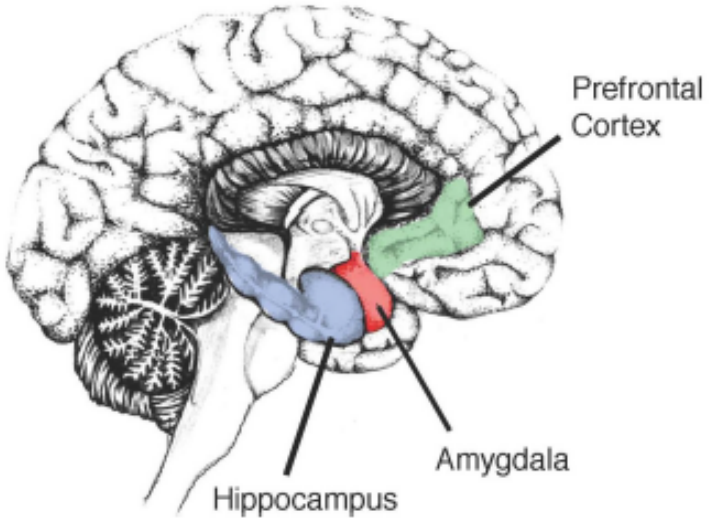
Prolonged activation of stress response systems in the absence of protective relationships.

Toxic Stress Alters Normal Cortisol Response



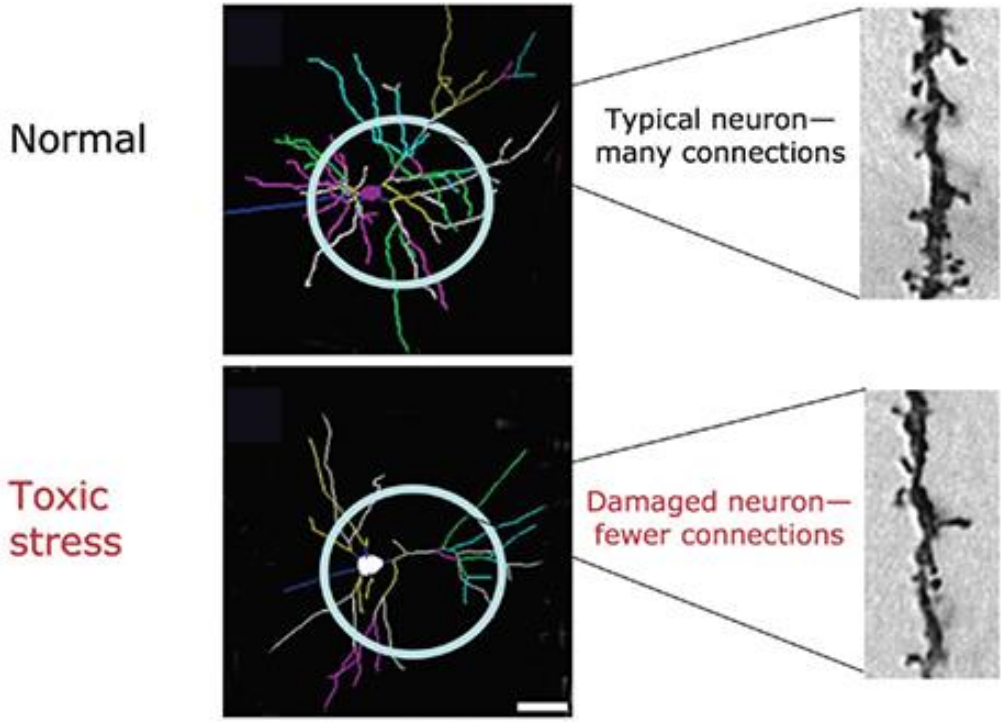
Cortisol Actions	Disease
Impair Immune Cell Function	Infections/Cancer
Change Fat Metabolism	Obesity
Hyperglycemia	Diabetes
Increased Blood Pressure	Hypertension
Decrease Bone Formation	Osteoporosis/Fractures
Toxic to Brain	Depression/Anxiety/Decreased Brain Volumes

Key Areas of Brain Impacted by Toxic Stress



- Prefrontal Cortex
  - Center of executive functioning
  - Regulates thoughts, emotions, and actions
- Hippocampus
  - Center of short term memory
  - Connects emotion to fear
- Amygdala
  - Triggers emotional responses

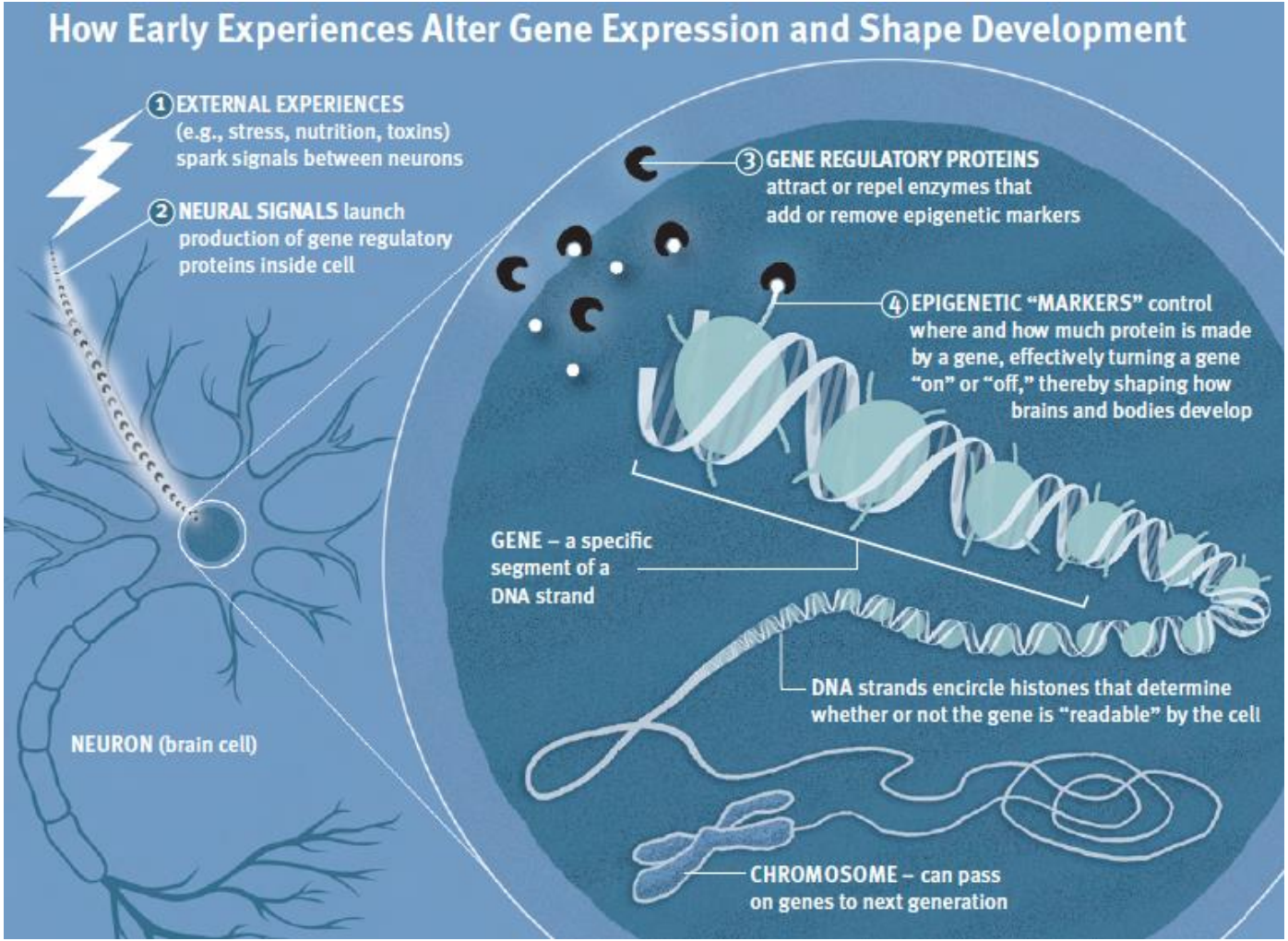
Persistent Stress Changes Brain Architecture



The Environment and Epigenetics

Neuro-developmental and Behavioral Health Impact

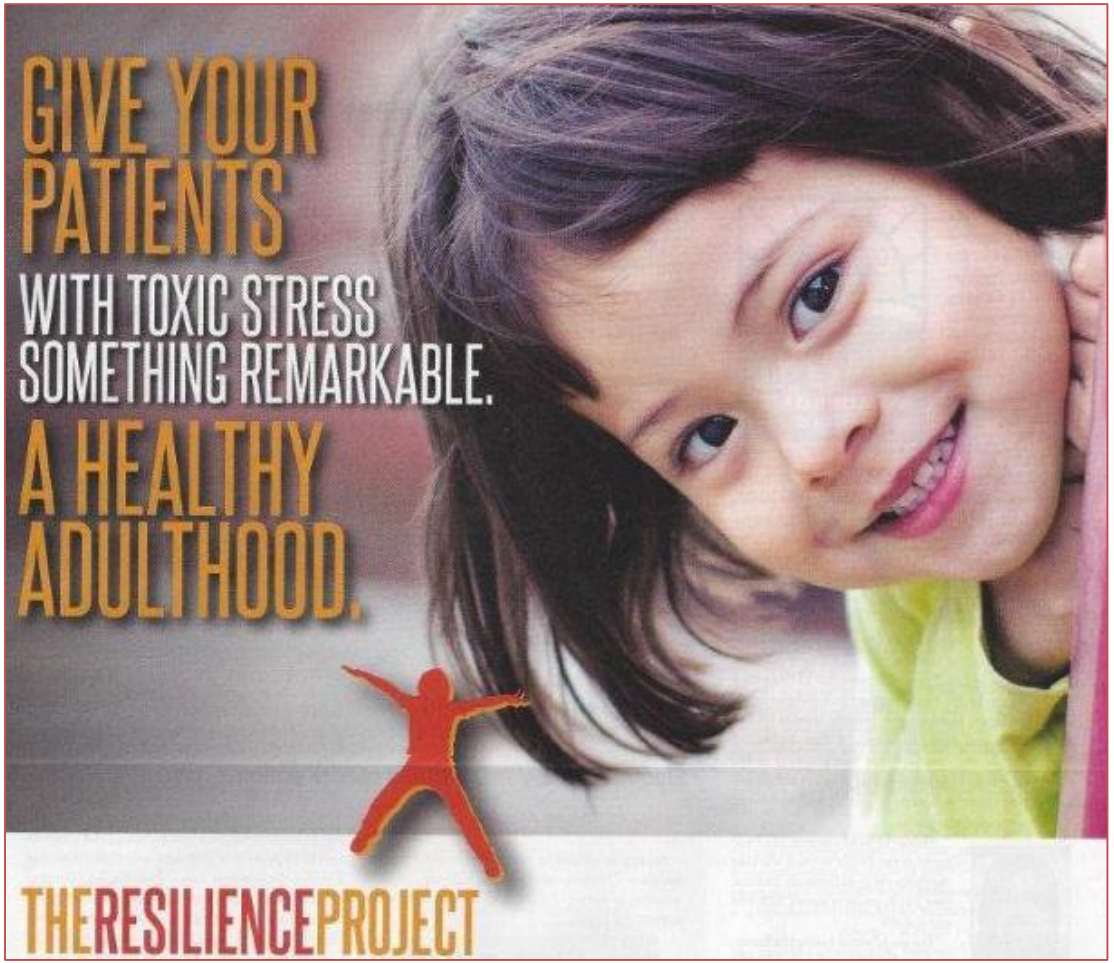
Adverse Childhood Experiences



- ACEs spark neuronal signaling
- Production of gene regulatory proteins
- Enzymatic impact on epigenetic markers
- Turning 'on or off' of gene expression
- DNA/chromosomal incorporation

Adapted from the Harvard Center on the Developing Child

Plasticity and Resilience



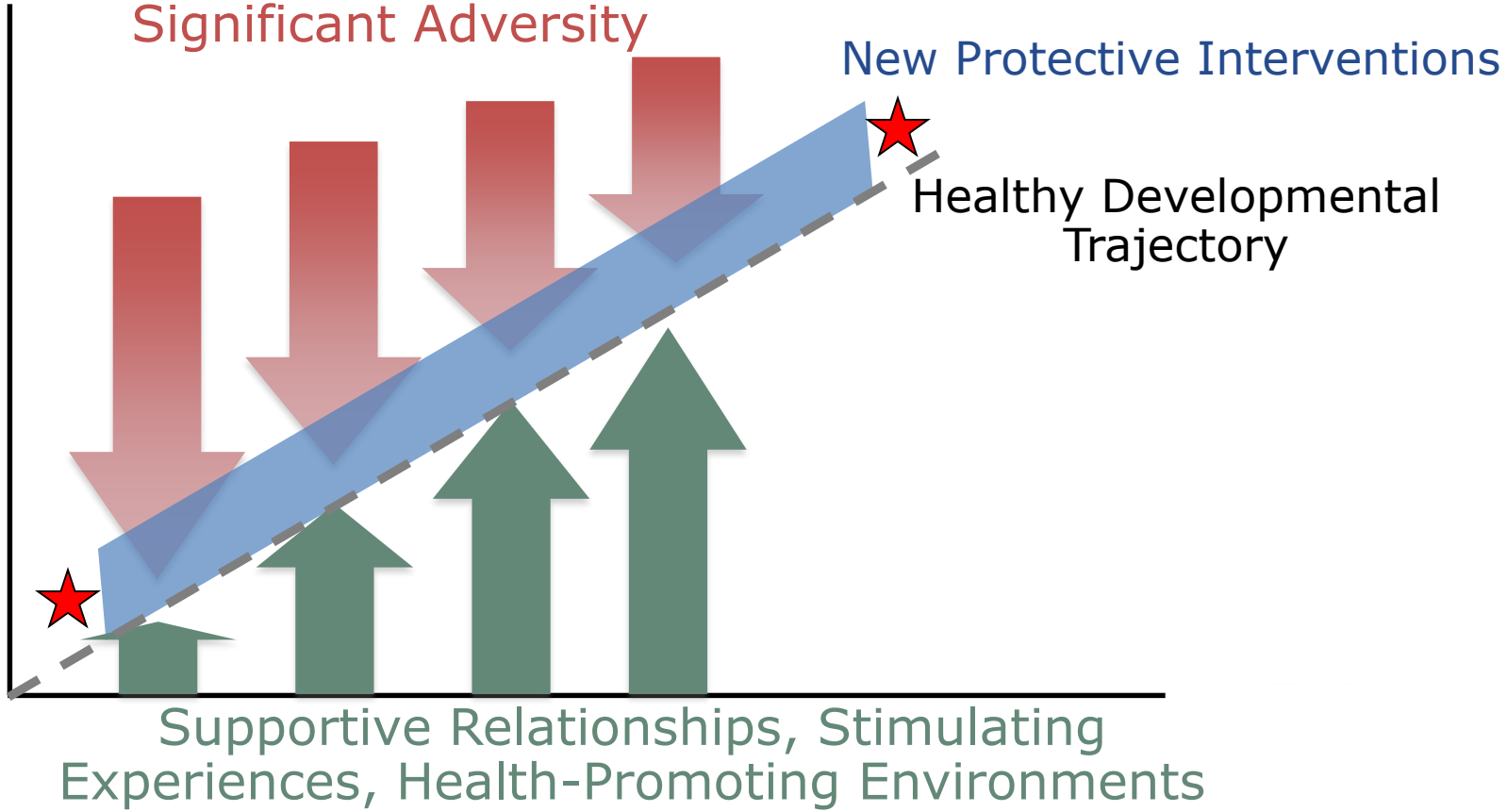
Disparities: Life Course Perspective

- Focus on the life span emphasizes the fact that early life disadvantage need not lead to later negative outcomes, provided there are compensating experiences in the intervening years.

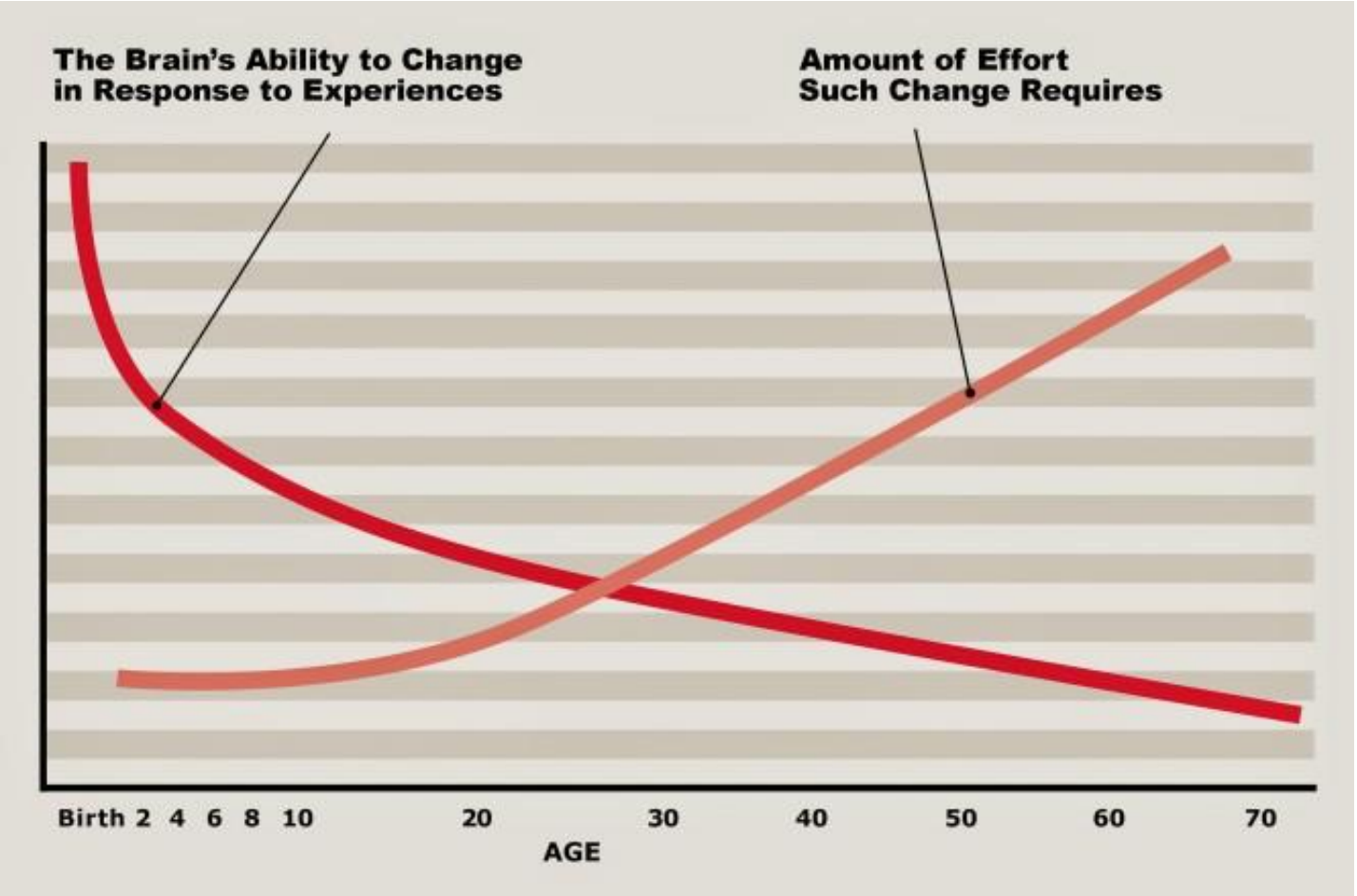
Behavioral and Social Science Research on Understanding and Reducing Health Disparities (R01) http://grants.nih.gov/grants/guide/pa-files/PA-13-292.html

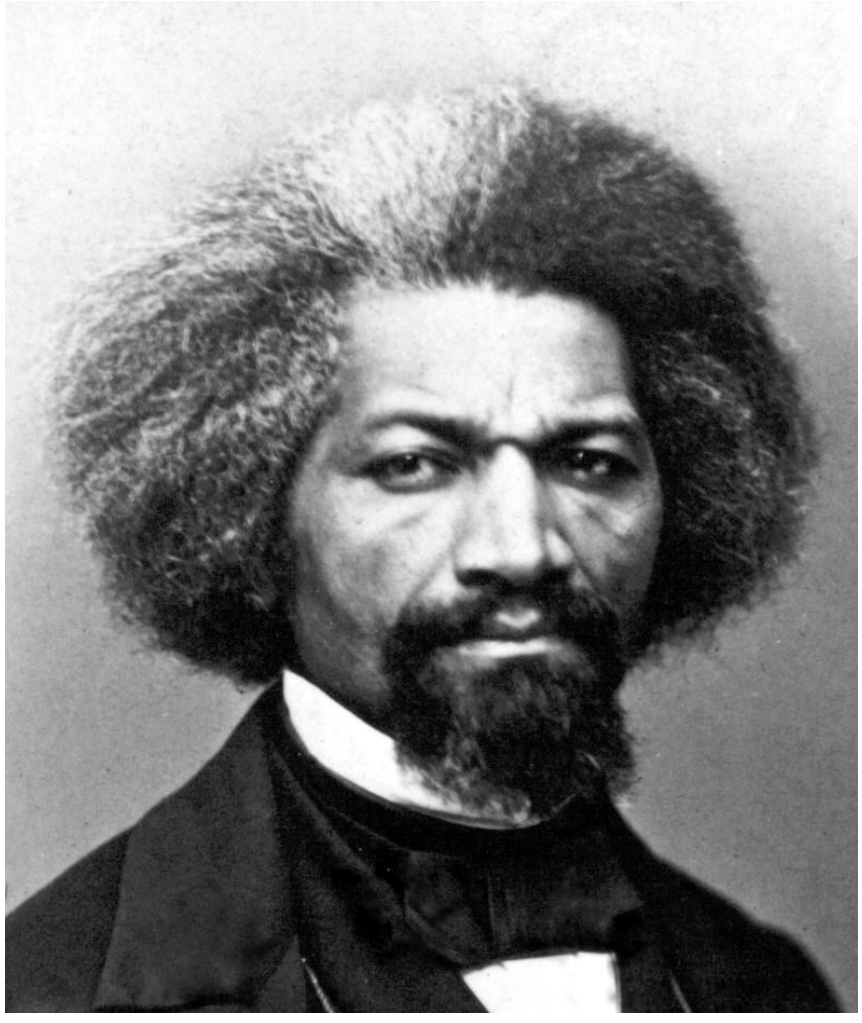
Protective Interventions: Building Resilience

Adapted from Harvard Univ. Center on the Developing Child



Brain Malleability





"It is easier to build strong children than to repair broken men."

Frederick Douglass

1817-1895