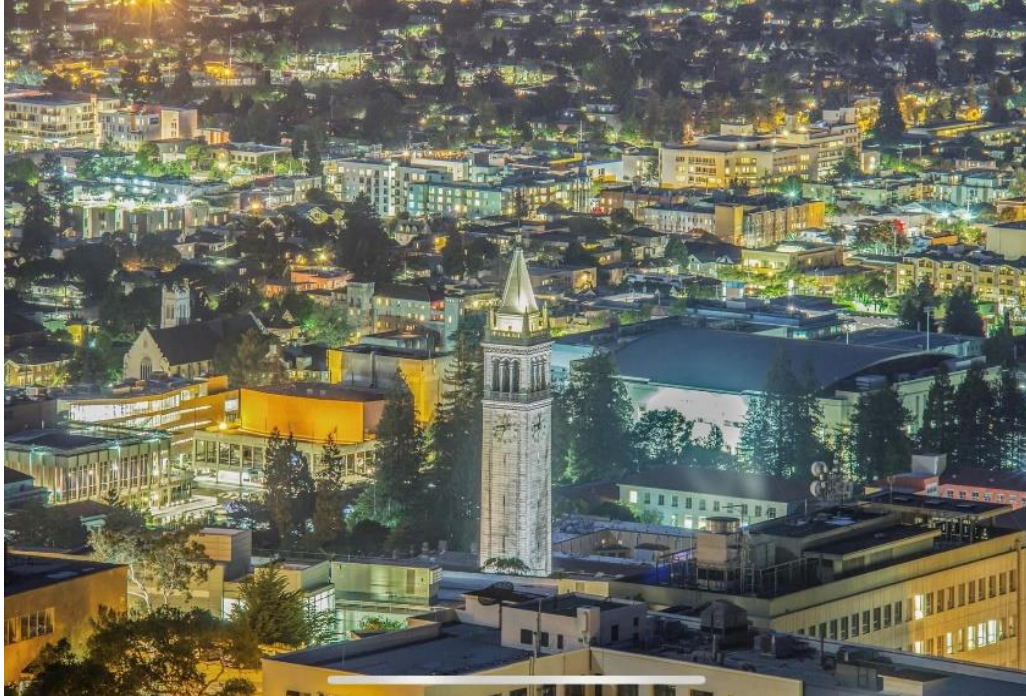


# Minneapolis Fed OIGI Conference



## Dionissi Aliprantis & Kristen Tauber: *Childhood Exposure to Violence & Nurturing Relationships*

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Long-run Effects on Black Males

Discussant Comments, Rucker C. Johnson

# Overview

- 1. Race and Place: examining the unequal geography of child opportunity**
- 2. How neighborhoods demonstrably shape the:**
  - a) Health of boys and young men of color**
  - b) Economic Opportunity of boys and young men of color**
- 3. Policy and Program Strategies and a Look at *Changing Places***

# Neighborhoods are Powerful Child Development Contexts

- **Neighborhoods shape opportunities for healthy child and young adult development.** They include:
  - **Cognitive development** tied to school outcomes
  - **Safe physical environments** that shape exposure to trauma and chronic stress
  - **Opportunities for economic mobility** (moving up the income ladder)
- **The type of housing one can afford is a powerful impediment to or the vehicle for accessing neighborhood developmental opportunities**

# Unequal Geography of Opportunity

## **FINDINGS:**

- COMPARE: neighborhoods White children live in in the 100 largest metro areas in 2000  
vs.  
Black and Latino children...
- **76% of Black and 69% of Latino children lived in poorer neighborhoods**  
vs.  
**neighborhoods of the 25 percent worst-off White children.**

# Unequal Geography of Child Opportunity

## **FINDINGS:**

- Using data for 2000 to 2009 for all metro areas in the U.S.:
- The **average African American and Latino family** earning more than **\$75,000 a year** lived in a neighborhood with a **higher poverty level** than the **average White family** earning less than **\$40,000 a year** (Logan, 2011)

# Unequal Geography of Child Opportunity

## **FINDINGS:**

(high poverty = 20% or higher)

### **For children born 1955-1970:**

- **62 percent** of Black children, compared to **4 percent** for White children grew up in high poverty neighborhoods.
- **49 percent** of Black children from middle class families compared to **less than 1 percent** of middle class White children grew up in high poverty neighborhoods (Sharkey, 2009)

# Unequal Geography of Child Opportunity

**For children born 1985-2000:**

- **66 percent** of Black children compared to **6 percent** of White children grew up in a high poverty neighborhood.

- **2 key areas** where neighborhoods are shown to negatively impact health in profound ways:
  1. **Cognitive development**
  2. **Exposure to violence, trauma and chronic stress**



# Exposure to Violence, Trauma, Toxic Stress

## Homicide Victimization (Center for Disease Control)

- For 10-24 year-old males, homicide is the **leading cause of death for Blacks**, and the **second-leading cause of death for Latinos**.
- The murder victimization **rate for Black males is almost 19 times that for White males**, while the rate for Latino males is 6 times the rate for their White peers. (CDC 2010)
- Among boys ages 1-14, **homicide is the second leading cause of death for Black boys**, while for Latino and white boys, it is cancer. (CDC 2008).

# Explaining Racial Disparities

**“Explaining the Race/Ethnicity-Violence Relationship: Neighborhood Context and Social Psychological Processes”, Joanne Kaufman, *Justice Quarterly* (2005)**

## **FINDINGS:**

- Neighborhood context , socioeconomic status and social psychological processes (specifically witnessing or being victimized by violence) **explains most of the relationship between race/ethnicity and violence.**

## Trauma and Cognitive Development

*Healing the Hurt: Trauma-Informed Approaches to the Health of Boys and Young Men of Color*, John Rich et al, Drexel University School of Public Health (2009)

### **FINDINGS:**

- **What is Trauma?:** Experiences or situations that are emotionally painful and distressing and that overwhelm an individual's ability to cope. This also includes chronic adversity such as racism, discrimination, oppression and poverty.

## Trauma and Cognitive Development

- **Trauma and Chronic Stress Physically Re-wire the Brain:** We now have a wide body of research indicating that the brains of children who are exposed to chronic trauma and stress are wired differently than children whose experiences have been more secure. (**National Scientific Council on the Developing Child 2007**)
  - ✓ Repeated stress or threat leads to an over-production of cortisol in the brain which in situations of chronic stress can occur at a toxic level that actually damages or kills neurons in critical regions of the brain
  - ✓ Cortisol over-production can lead to **Hyperarousal** (an elevated heart rate and constant anxiety) and **Dissociation** (“shutting down” and detachment).

# Trauma and Cognitive Development

- ✓ When trauma or neglect happen early in life and is left untreated, **the injuries sustained reverberate throughout the lifespan.**

## Trauma and Cognitive Development

**“The Acute Effect of Homicides on Children’s Cognitive Performance”, *Proceedings of the National Academy of Sciences*, Patrick Sharkey, 2010**

### **FINDINGS:**

- Using two separate longitudinal samples, the study shows an acute effect of violence on achievement scores. **The study showed that Black children taking assessment tests within a week of a homicide occurring within their neighborhood had achievement scores around one-half standard deviation lower than other children.** Importantly, the study compared children from the same neighborhoods of concentrated disadvantage.

## Trauma and Cognitive Development

- Another important finding in this study is that impact of cognitive performance of children is **not is not limited to those victimized or those who directly witness an act of violence** but is felt by children across a community who live in close proximity to extreme violent events.

# Concentrated Disadvantage and Cognitive Development

**Durable Effects of Concentrated Disadvantage on Verbal Ability among African-American Children, *Proceedings of the National Academy of Sciences*, Robert J. Sampson et al (2007)**

## **STUDY DESIGN:**

- Disparities in “verbal ability” are a major predictor of later life outcomes.
- The researchers wanted to see the effect of living in a neighborhood of concentrated poverty on the development of verbal ability in children.
- They looked at a data set containing over 2,000 children ages 6-12 living in Chicago and followed them wherever they moved in North America for up to 7 years.



## Concentrated Disadvantage and Cognitive Development

- The quasi-experimental study compared the experiences of children moving into neighborhood of concentrated disadvantage, out of neighborhoods of concentrated disadvantage, and those who remained in such neighborhoods over time.

### **FINDINGS:**

- They found that **living in a neighborhood of concentrated disadvantage has the same effect on the development of a child's verbal cognitive ability as missing one or two entire years of school.**
- They further found that **the strongest effects of living in concentrated disadvantage appear several years after children live in these areas.** The effects linger on even if a child leaves a severely disadvantaged neighborhood.

## Concentrated Disadvantage and Cognitive Development

**Title: “The Legacy of Disadvantage: Multigenerational Neighborhood Effects on Cognitive Ability”, Sharkey and Elwert, *American Journal of Sociology* (2011)**

### **STUDY DESIGN:**

- Using data from the Panel Study on Income Dynamics (PSID), this study joins a growing body of evidence showing that the effect of concentrated poverty on cognitive ability

### **FINDINGS:**

- A family’s exposure to high neighborhood poverty (>20%) **over two consecutive generations** is found to reduce the average child’s cognitive ability by **more than half a standard deviation**.

# Sobering statistics

- In 2007, 1 in every 8 black males in their twenties was in prison or jail as compared to 1 in 26 Latino males and 1 in 59 white males.
- Today, more black men receive their GED in prison than graduate from college.
- **More than 70 percent of African-American children who grow up in the poorest quarter of American neighborhoods remain in the poorest quarter of Americans neighborhoods as adults.** (Sharkey, '08)

- Neighborhoods demonstrably **impair child cognitive development**, the **effect is multi-generational** and is **related to trauma and chronically high stress levels**.
- **Poor Neighborhoods are Mobility Traps**: Even with a middle-class family income as a child, growing up in a poor neighborhood significantly increases the likelihood that an individual will be poorer than their parents as an adult

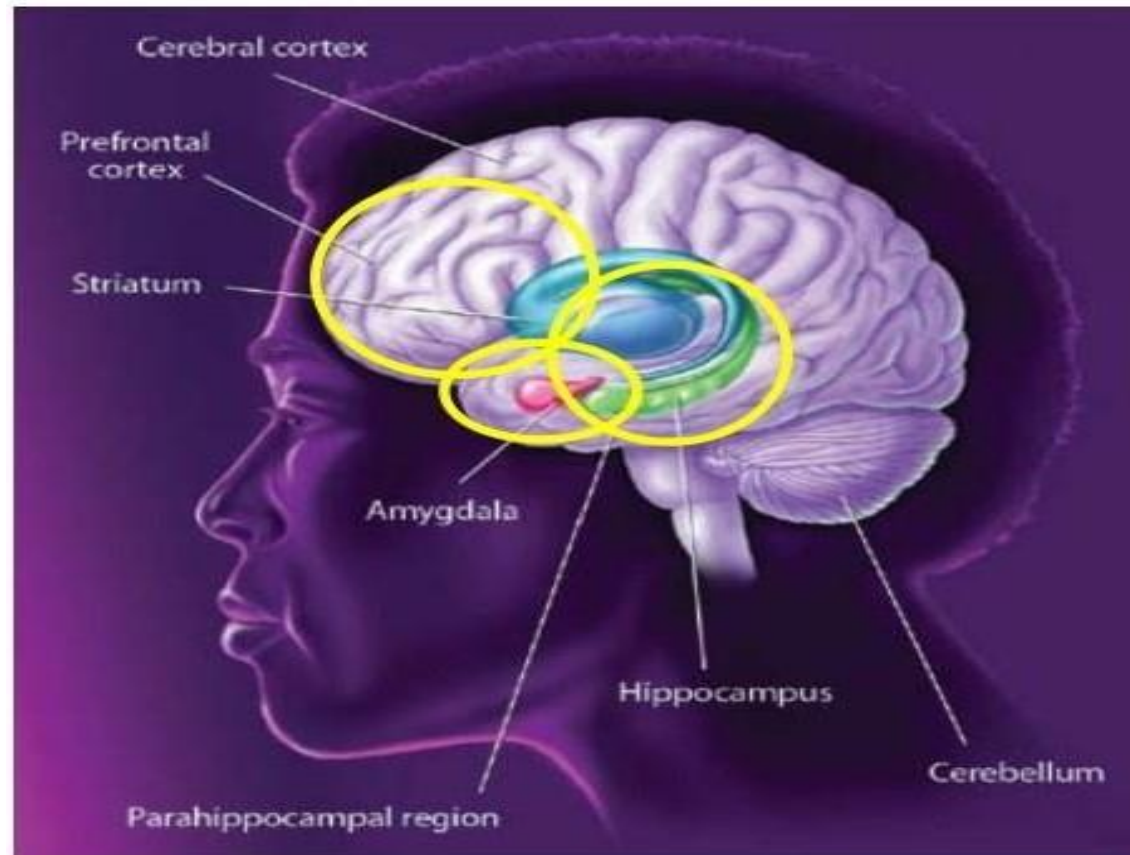
# Early Experiences Matter

We are all a product of our earliest experiences.

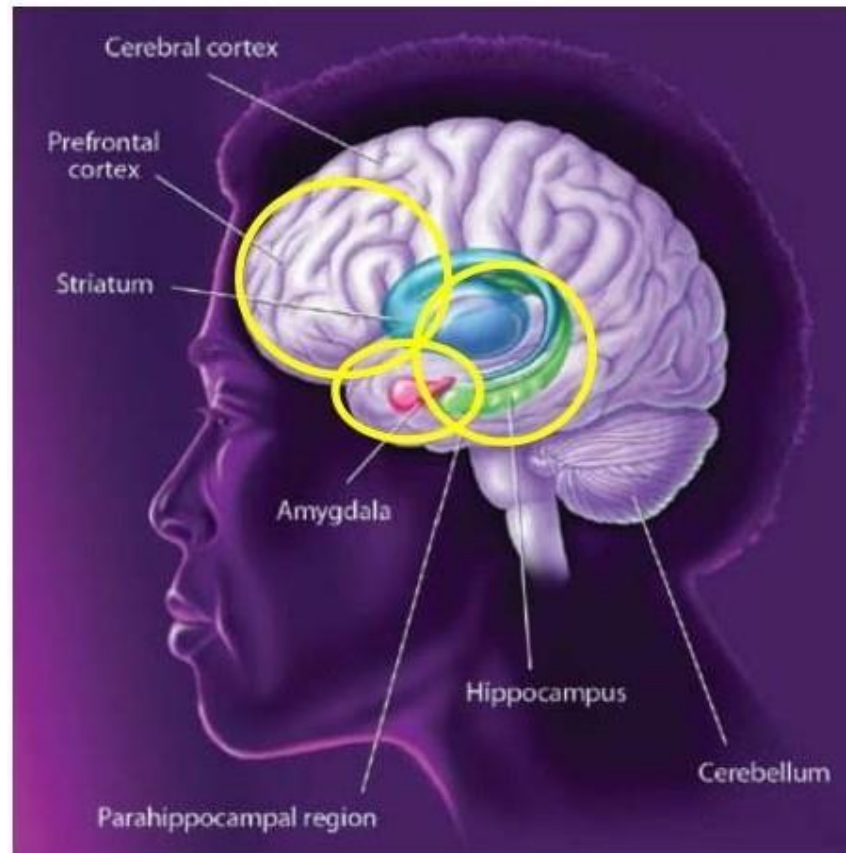


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# The Brain Architecture of Anxiety and Fear



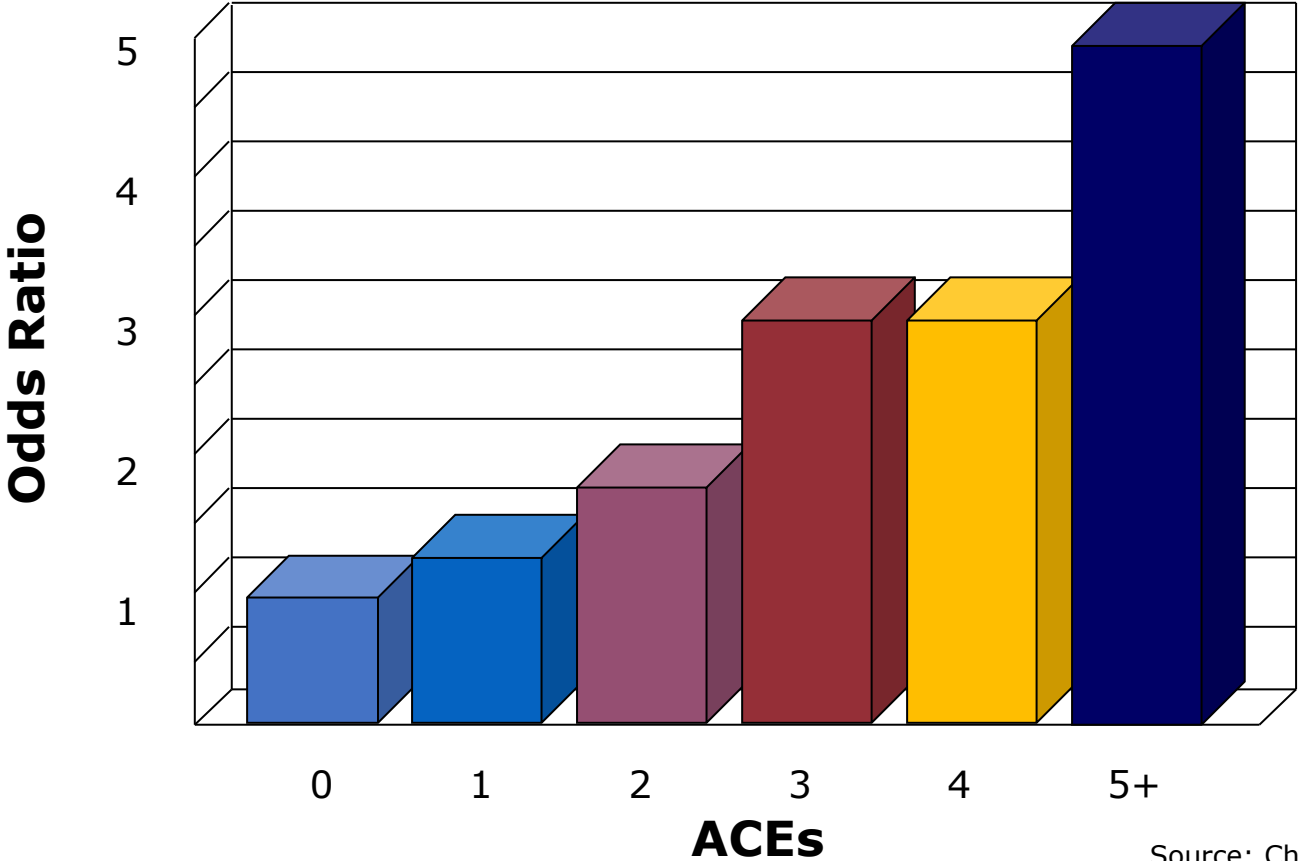
- **Cognitive, Emotional, and Social Capacities Are Inextricably Intertwined Within the Architecture of the Brain**



**Science Tells Us that Early Life  
Experiences Are Built Into  
Our Bodies**

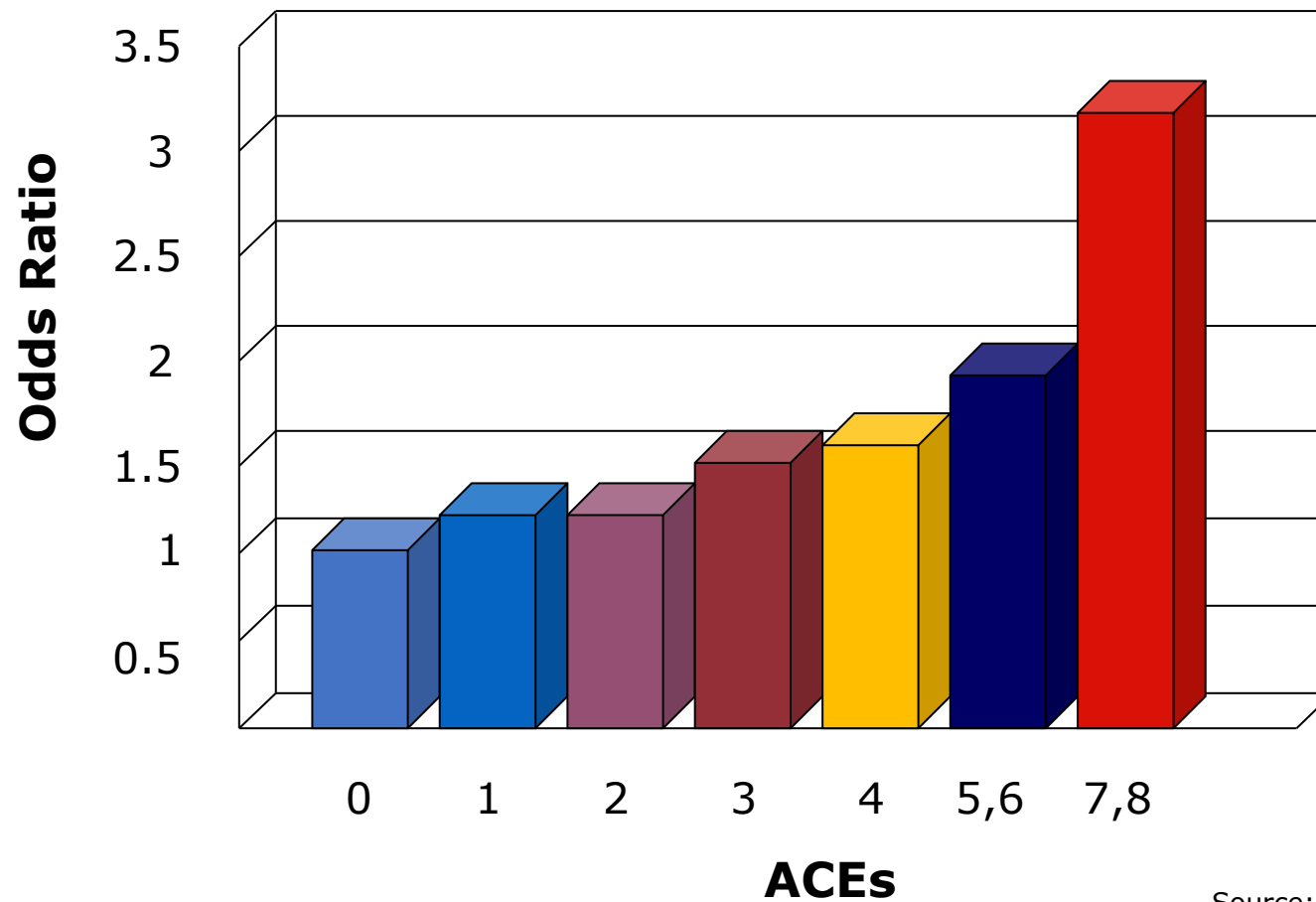


# Risk Factors for Adult Depression are Embedded in Adverse Childhood Experiences



Source: Chapman et al, 2004

## Risk Factors for Adult Heart Disease are Embedded in Adverse Childhood Experiences



Source: Dong et al, 2004

# **Early Childhood Adversity Can Influence a Range of Lifelong Outcomes**

Research on the biology of stress helps explain some of the underlying causal mechanisms for differences in learning, behavior, and physical and mental health.

## **Positive Stress**

A necessary aspect of healthy development that occurs in the context of stable, supportive relationships.

Brief increases in heart rate and mild changes in stress hormone levels.

## **Tolerable Stress**

Stress responses that *could* disrupt brain architecture, but are buffered by supportive relationships.

Allows the brain an opportunity to recover from potentially damaging effects.

## **Toxic Stress**

Strong, prolonged activation of the body's stress response systems in the absence of the buffering protection of adult support.

Can damage developing brain architecture and create a short fuse for the body's stress response systems, leading to lifelong problems in learning, behavior, and both physical and mental health.

# A Continuum from Stress to Trauma



Normative,  
Developmentally  
Appropriate Stress

Emotionally Costly Stress

Traumatic Stress

Early Adversity and Trauma: Derailing Healthy Growth (1/26/07)  
Presented by Alicia F. Lieberman, Ph.D., Irving B. Harris Professor of Infant Mental Health  
and Vice Chair for Academic Affairs, University of California San Francisco Dept. of  
Psychiatry  
Director, Child Trauma Research Project at San Francisco General Hospital

# Stresses.....



**POSITIVE**

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

**TOLERABLE**

Serious, temporary stress responses,  
buffered by supportive relationships.

***TOXIC***

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

# Types of stress responses

## POSITIVE

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Anormal and essential part  
of healthy development

### EXAMPLES

*getting a vaccine,  
first day of school*

## TOLERABLE

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Response to a more severe  
stressor, limited in duration

### EXAMPLES

*loss of a loved one,  
a broken bone*

## TOXIC

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Experiencing strong, frequent  
and/or prolonged adversity

### EXAMPLES

*physical or emotional abuse,  
exposure to violence*



# **Investigating the Biology of Disparities in Health Outcomes**

Increased levels of cytokines and the pathogenesis of depression.

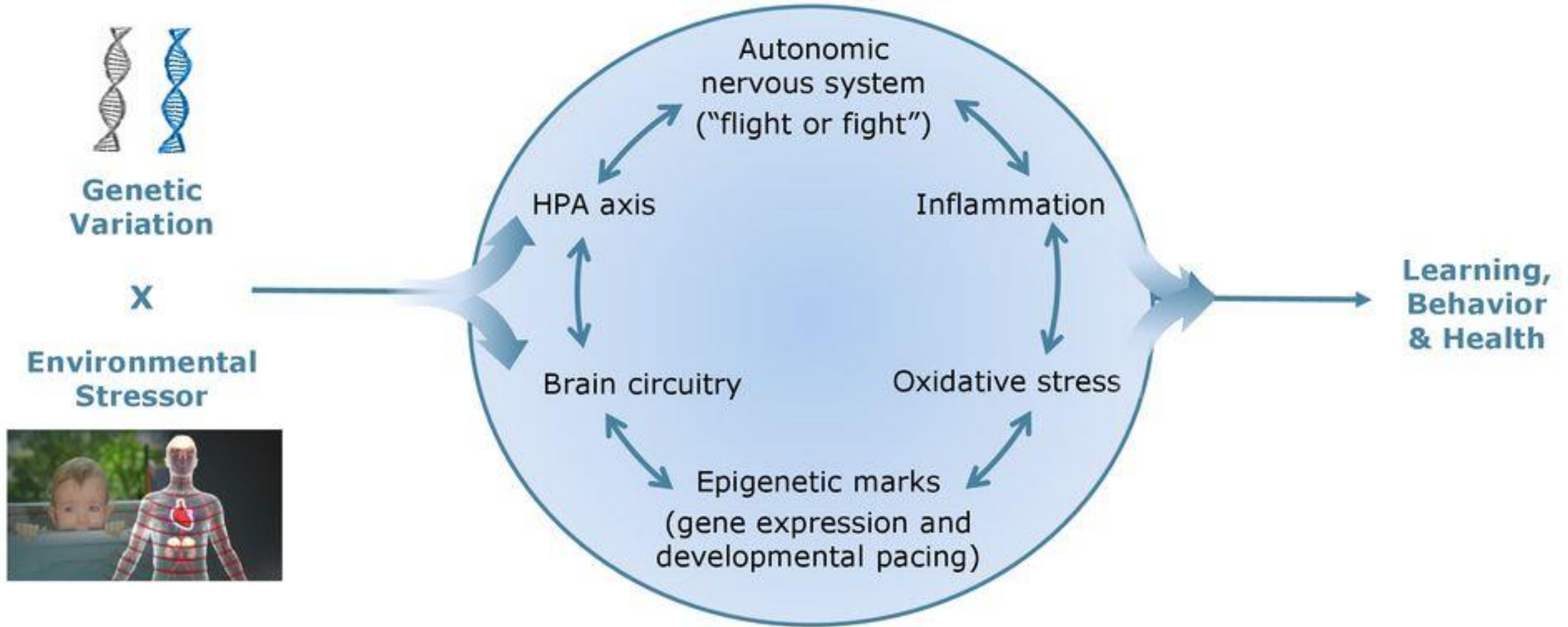
Chronic activation of the inflammatory response and the development of cardiovascular disease and diabetes.

## **Early Life Experiences Are Built Into Our Bodies (For Better or For Worse)**

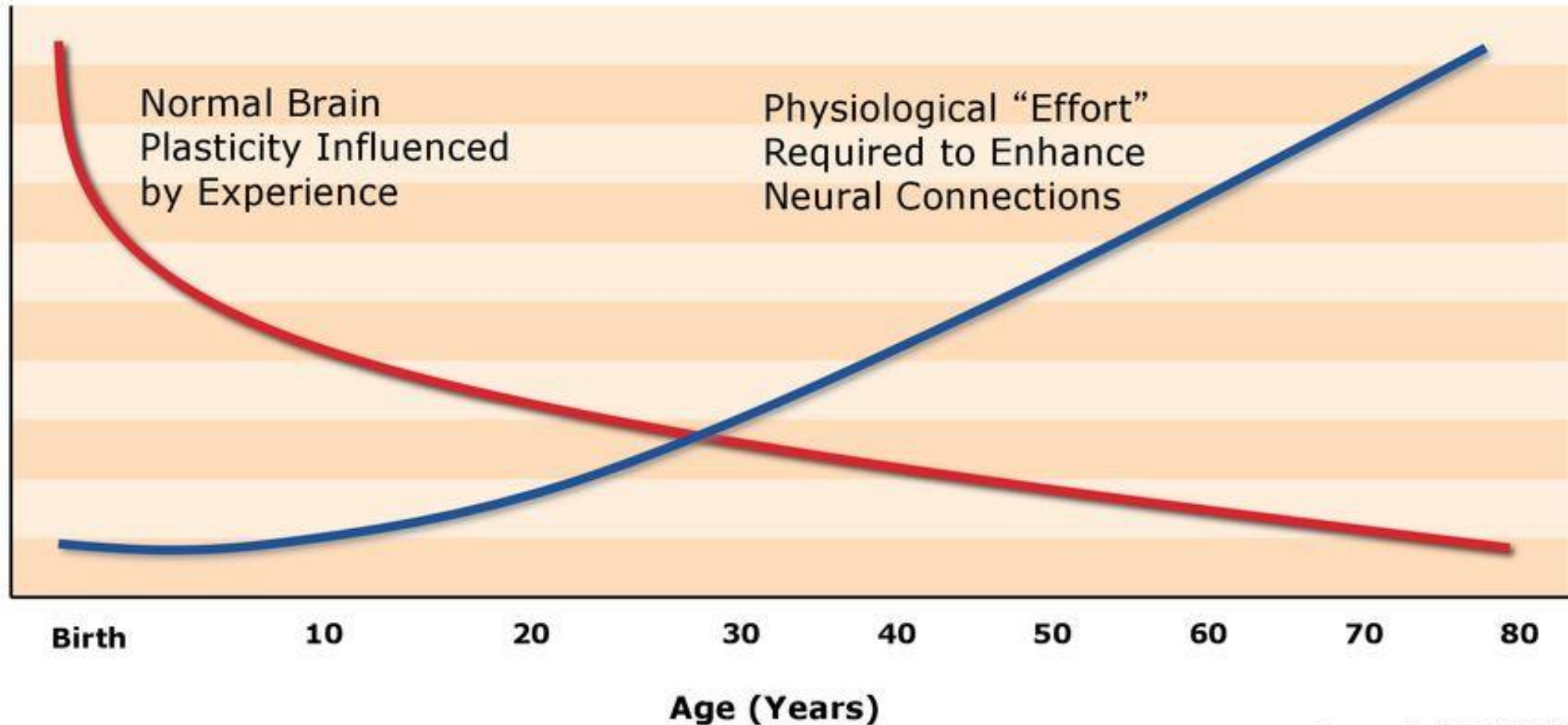
Stable and supportive relationships, mutually responsive “serve and return” interactions, and opportunities to deal with manageable stressors promote sturdy brain architecture and healthy biological systems...

...but excessive or prolonged activation of stress response systems in the absence of the buffering protection of supportive relationships can lead to long-term disruptions in brain circuitry, immune status, metabolic systems, cardiovascular function, and gene expression.

# The Biology of Adversity is Reflected in Multiple Effects at the Molecular, Cellular and Systems Levels



# Early Matters Because the Brain's Ability to Change Decreases Over Time



# **Implications for Policy and Practice**

## **Science Points Toward a Two-Tiered Approach to Health Promotion and Disease Prevention in the Early Years (Pending the Elimination of Poverty and Discrimination)**

Basic medical services and good quality early care and education to facilitate early detection of problems in all children.

Targeted interventions for young children experiencing tolerable or toxic stress to reduce disruptions of the developing nervous and immune systems that lead to later problems in learning, behavior, and both physical and mental health.

# **Public Health Thinking Should Extend Beyond Traditional Policy Boundaries**

If we really want to promote better health outcomes, then we must apply the science of early childhood and early brain development to a broader range of policies ...

including child welfare services, adult mental health treatments, and workforce development programs for low income mothers, among others.

## **Using the Science of Child Development As a New Lens for Public Health Policy**

Greater focus on causal links between toxic stress in the early years and susceptibility to physical and mental health impairments in later adulthood.

Increased investment in a skilled early childhood workforce and evidence-based interventions to reduce significant adversity affecting young children.

Leveraging an expanded science base to harness the power, resources, and sustainability of bipartisanship and public-private collaboration.



**POLICY AND PROGRAM  
STRATEGIES: WHAT  
WORKS?**

# Improve Early childhood Development

## Chicago Child Parent Centers

(source: Reynolds et al, 2007)

- In existence in the Chicago public school system since 1967 ; has enrolled tens of thousand of black children
- Engages parents as learners and collaborators
- **High school graduation rates were 32% higher** for male program participants over control group
- **Incarceration rates were 27% lower** than for control group
- **Depressive symptoms were 57% lower** than for control group

# Reduce High School Dropouts for Boys of Color

## Baltimore City Public Schools

- Knocked on the doors of students who dropped out and encouraged them to return
- Expanded middle and high school options so that more students have an easier middle-to-high school transition
- Increased access to advanced academic, alternative and accelerator programs
- Reduced dropouts by **57 % over 3 years (2007-2010)**
- Black males account for **62% of the increase** in high school graduates over the last 3 years

# Eliminate “Zero Tolerance” in favor of Trauma-Informed School-Based Approaches

## Cognitive Behavioral Intervention for Trauma in Schools (CBITS)

(Source: Ngo et al, 2008)

- A skill-based intervention that was initially developed for ethnic minority and immigrant low-income youth in Los Angeles.
- In individual and group settings, children learn skills in relaxation, challenging upsetting thoughts, social problem solving, and processing traumatic memories and grief
- Randomized control trials have demonstrated that **youth who participate in CBITS show a significant reduction in post-traumatic stress (PTSD) and symptoms of depression** in comparison to youth assigned to a control condition.

# Trauma-Informed Emergency Medical Care

## Violence Intervention Program (VIP), University of Maryland

(Source: Cooper et al, 2008)

- Victims who were admitted to the Baltimore Shock Trauma Center with violent injuries and were also on probation or parole, were randomly assigned social workers or a control group
- Jointly devised service plans involving patients and social workers included: substance abuse rehabilitation, employment training, educational services, conflict resolution, and family development
- Follow-up visits and check-ins after discharge
- Compared to randomized control group, **participants in the program were 3 times less likely to be arrested for a violent crime and 4 times less likely to be convicted for a violent crime following participation**