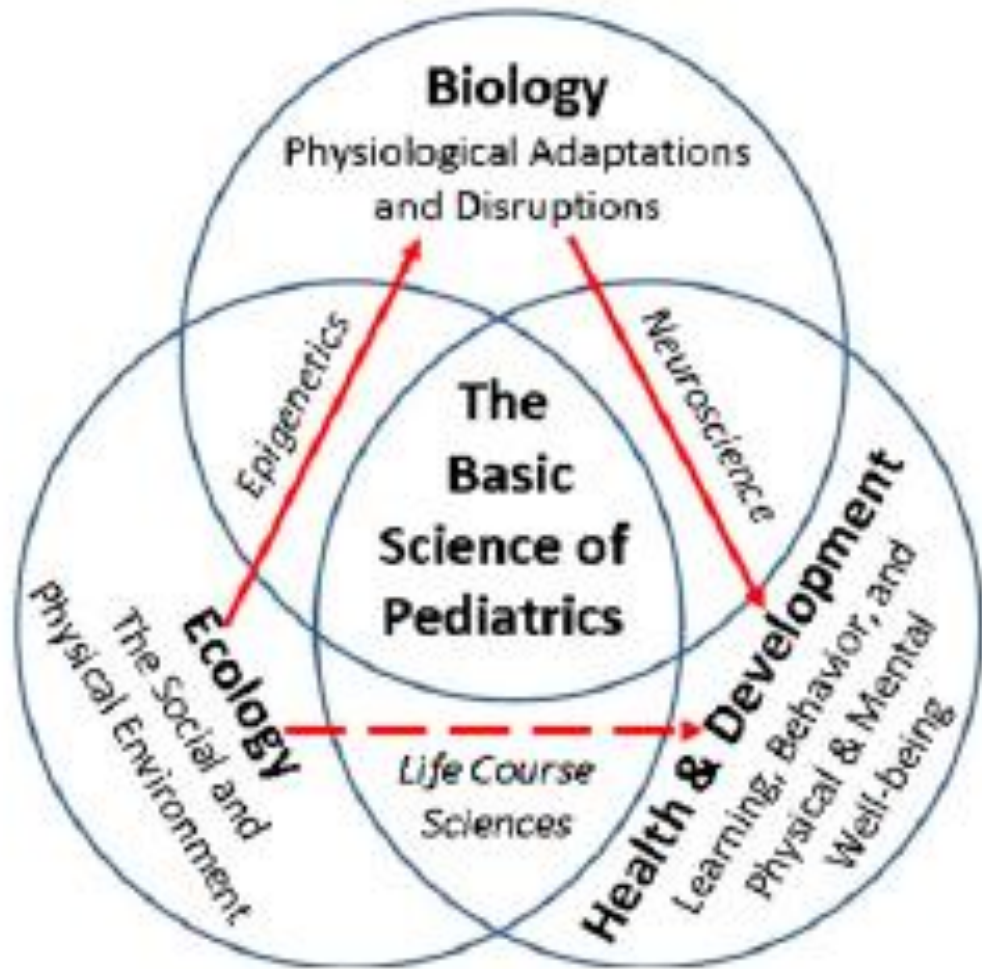


Adversity and Trauma Informed Care in Children and Adolescents

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- The basic science of pediatrics. An emerging, multidisciplinary science of development supports an EBD framework for understanding the evolution of human health and disease across the life span. In recent decades, epidemiology, developmental psychology, and longitudinal studies of early childhood interventions have demonstrated significant associations (hashed red arrow) between the ecology of childhood and a wide range of developmental outcomes and life course trajectories. Concurrently, advances in the biological sciences, particularly in developmental neuroscience and epigenetics, have made parallel progress in beginning to elucidate the biological mechanisms (solid arrows) underlying these important associations. The convergence of these diverse disciplines defines a promising new basic science of pediatrics.

Understanding the Biology of Stress

- Genetic variability clearly plays a role in stress reactivity
- Early experiences and environmental influences can have considerable impact.
- In prenatal period, both animal and human, studies suggest that fetal exposure to maternal stress can influence later stress responsiveness; epigenetic modifications of DNA appears to play a role.
- A strong consensus that the ecological context modulates the expression of one's genotype
- Physiologic responses to stress are well defined (CRH axis)





Three Levels of Stress

Positive

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

Tolerable

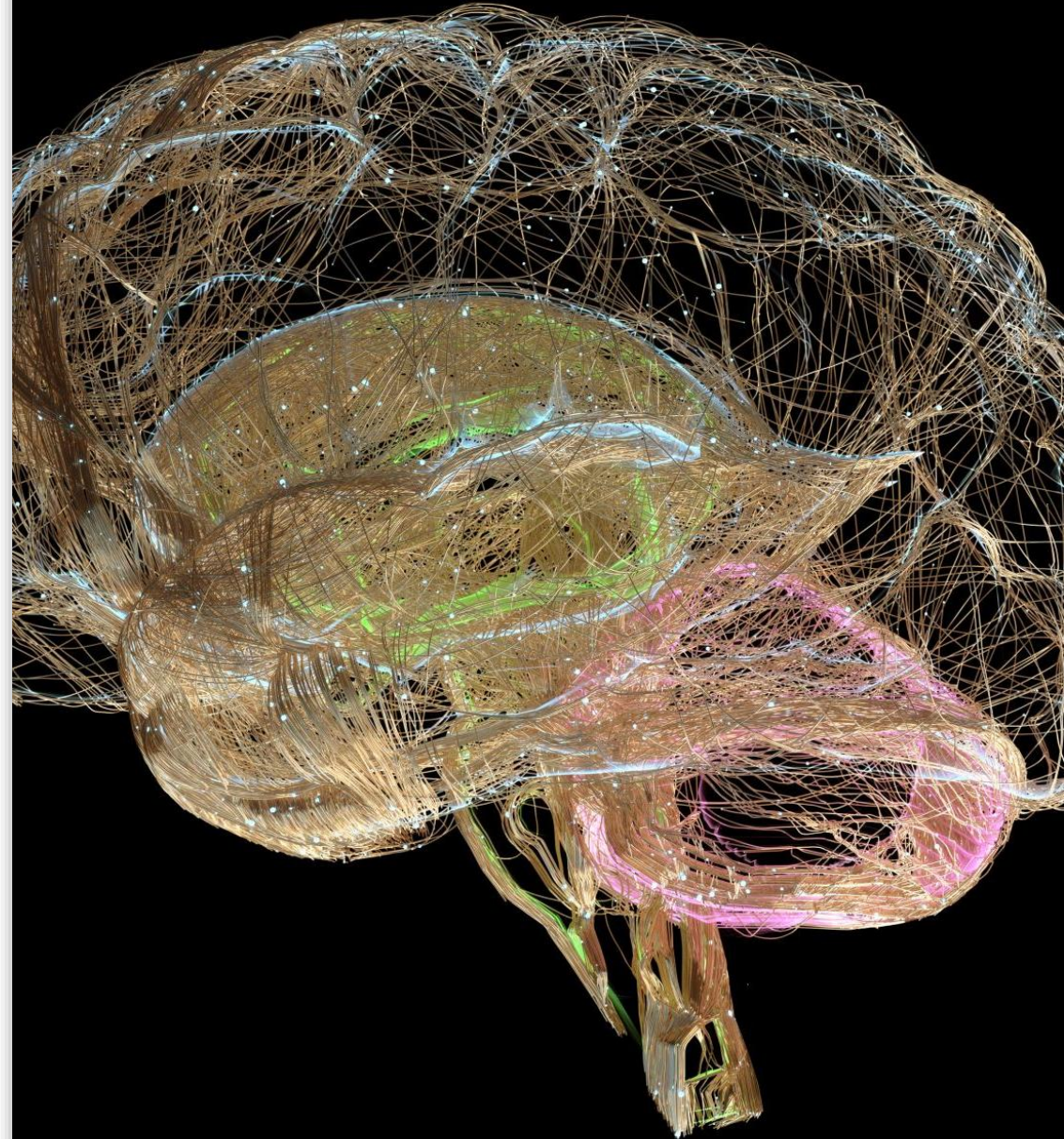
Serious, temporary stress responses,
buffered by supportive relationships.

Toxic

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

Toxic stress and the developing brain

- The plasticity of the fetal, infant and early childhood brain makes it particularly sensitive to chemical influences,
- Growing evidence that persistently elevated levels of stress hormones can disrupt its developing architecture.
- Exposure to stressful experiences has shown to alter the size and neural architecture of amygdala, hippocampus and prefrontal cortex, has shown to alter the size and neuronal architecture of these areas, as well as lead to functional differences in learning, memory, and aspects of executive functioning, create a weak foundation for later learning, behaviour and health.
- Toxic stress responses can result in physical, mental and relational health, which adds an important physiological basis to understand trauma.
- Child maltreatment is a form of toxic stress



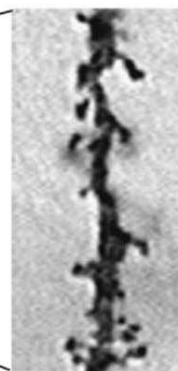


Toxic Stress Changes Brain Architecture

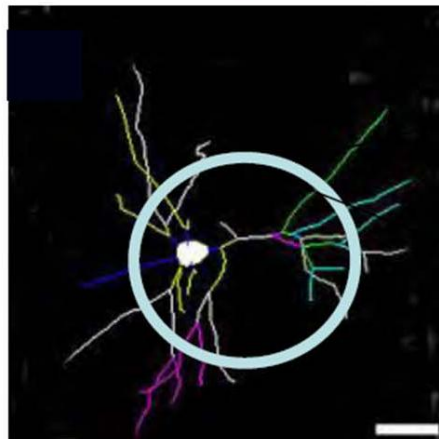
Normal



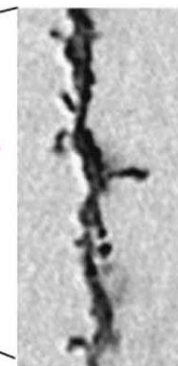
Typical neuron—
many connections



Toxic
stress



Damaged neuron—
fewer connections

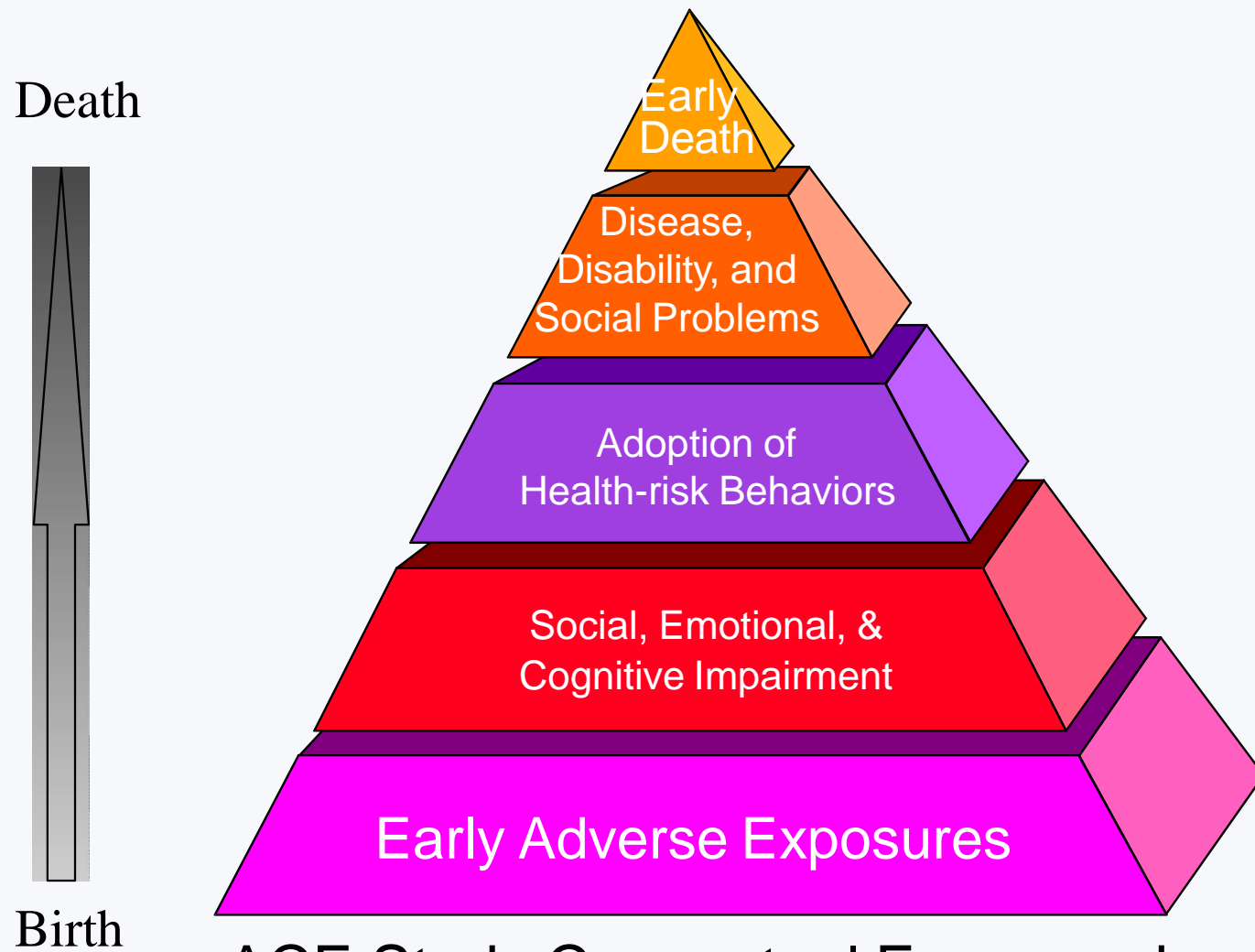


Prefrontal Cortex and
Hippocampus

Adverse Childhood Events

Are childhood experiences are childhood events, varying in severity and often chronic, occurring within a child's family or social environment that cause harm or distress, thereby disrupting the child's physical or psychological health and development.

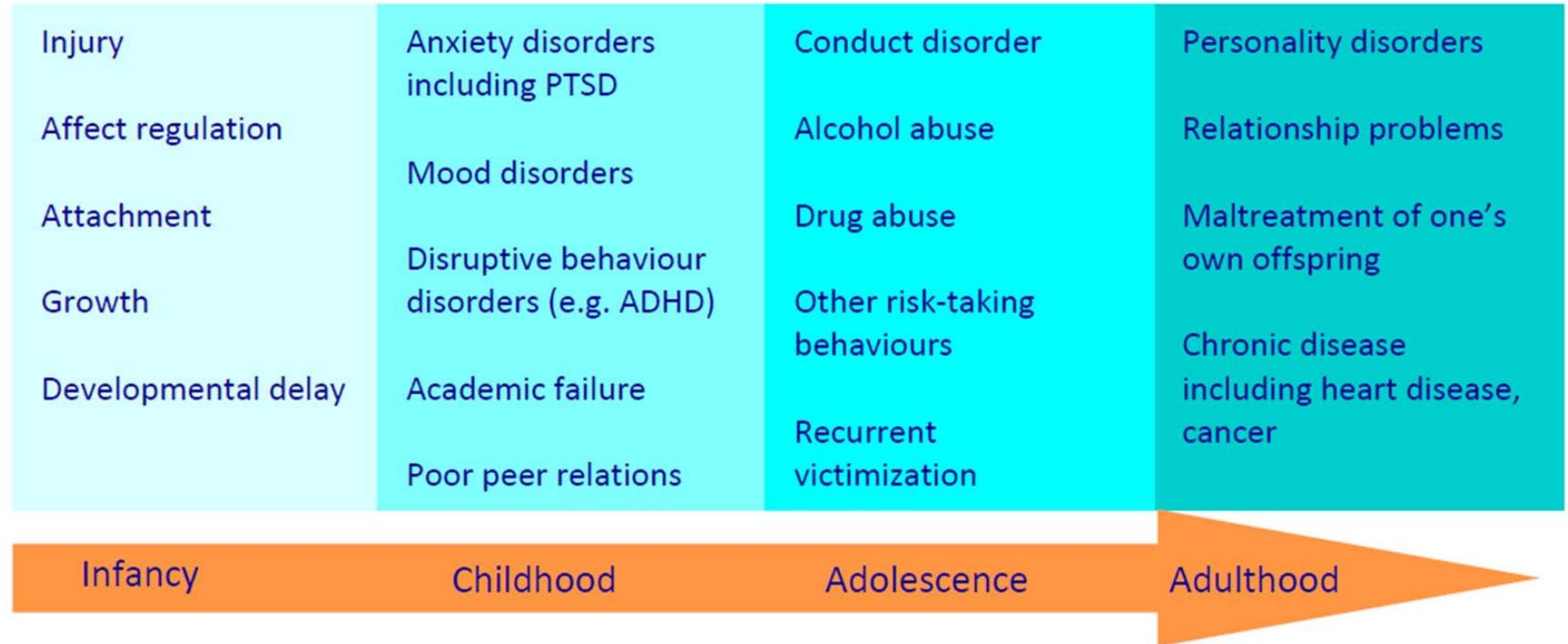
Ten most common adverse exposures: child physical, sexual, and emotional abuse; emotional and physical neglect; parental violence; household mental illness and substance use; parental separation or divorce; and incarcerated household member.



ACE Study Conceptual Framework:
Whole Life Perspective

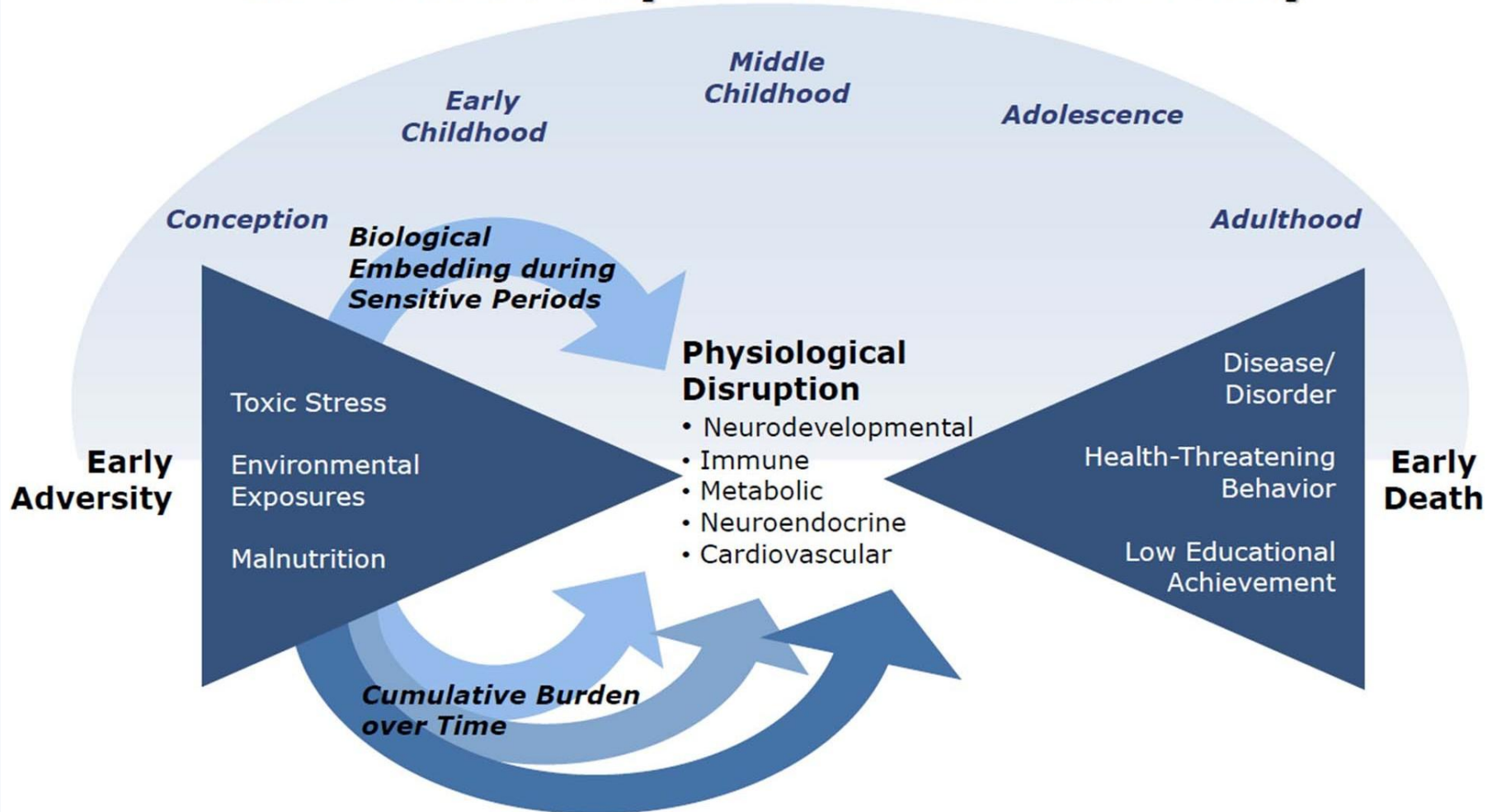
Effects of child maltreatment

Child maltreatment may not be directly causal, but it has been associated with the following:



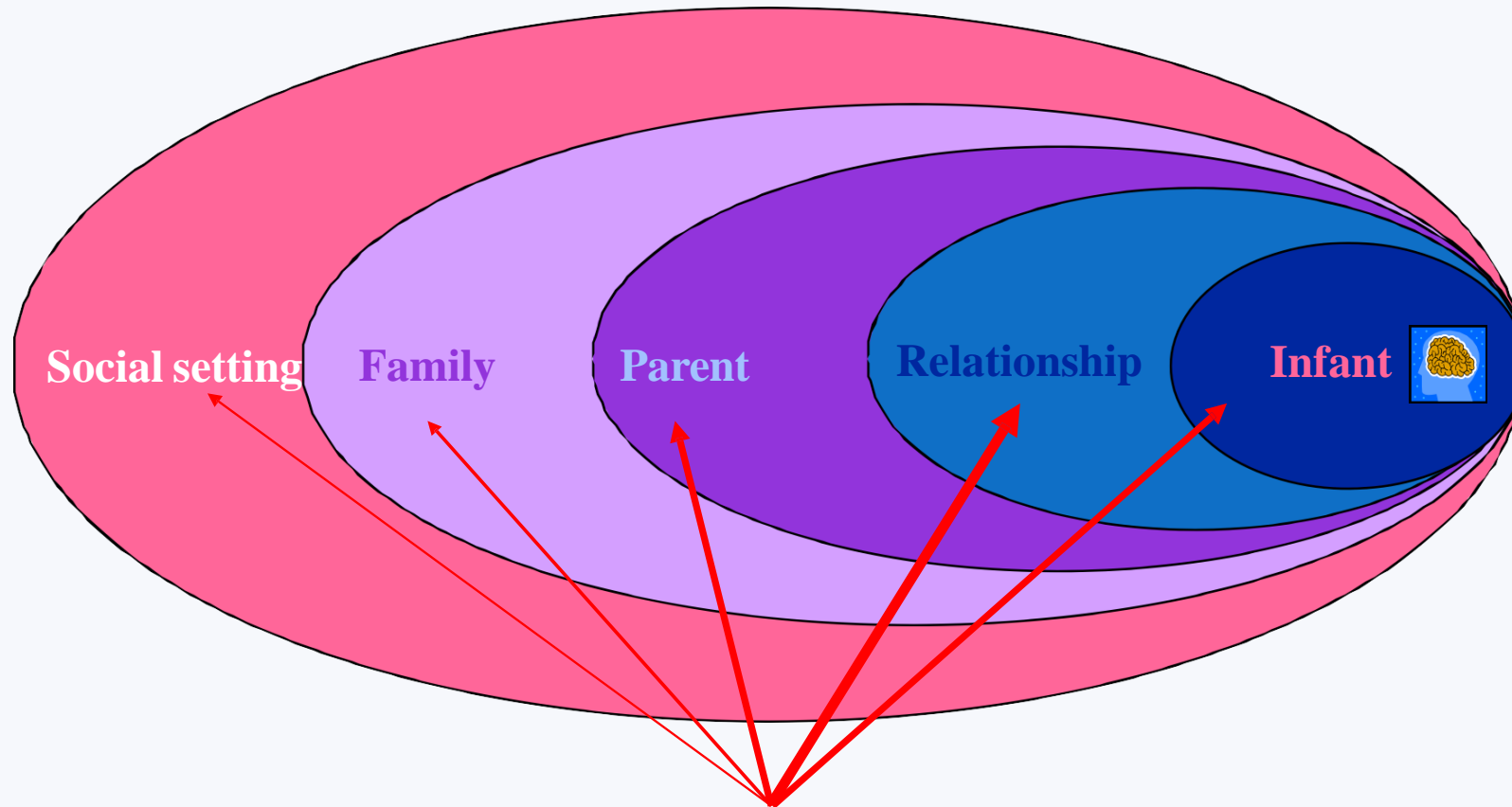


The Childhood Roots of Health Disparities: How Adversity is Built Into the Body



Clinical Implications.

It is easier to change a developing system than to reorganise and alter one that is established.



**Multi-disciplinary infant
mental health team.**

Trauma/ Resilience

- Trauma is defined as an event, series of events, circumstances experienced by a person as physically or emotionally harmful that can have long lasting adverse effects on the person's functioning and well-being.
- Resilience is the dynamic process of adaptation to or despite significant adversity by using protective factors and learned skills to manage stressful circumstances, resilience may allow a person to experience tolerable rather than toxic stress in response to adversity.



Complex Trauma

Refers to a dual problem of exposure and adaptation

Complex trauma exposure is the multiple or chronic and prolonged, developmentally adverse traumatic events most often of an interpersonal nature (e.g sexual or physical abuse, war)and early onset.

These exposure often occur within the child's caregiving systems including physical, emotional, educational neglect and child maltreatment.

Psychiatric Annals 35;5. May 2005

Trauma Informed Care (TIC)

- TIC is a philosophy that involves addressing the needs of individuals with histories of trauma, whether they are the ones seeking care, or providing care

Fallot & Harris, 2009

- Medical care in which all parties involved assess, recognize and respond to the effects of traumatic stress on children, caregivers and health care providers
- TIC also includes attending to secondary traumatic stress, the emotional stain that results when an individual, whether a health care worker or parent, hears about or witnesses the traumatic experiences, past or present, of children.

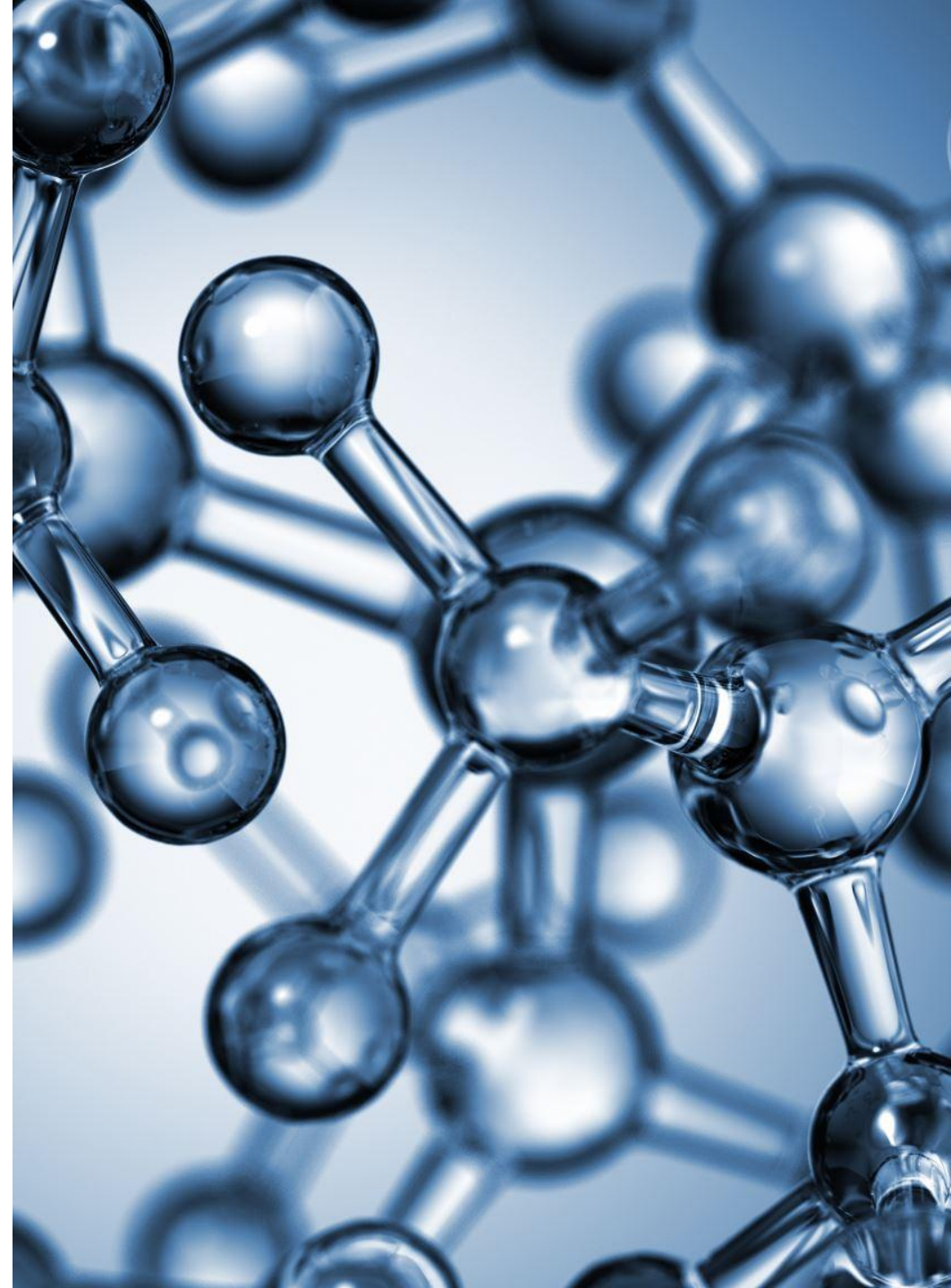
The National Traumatic Stress Network




Trauma Informed Care : Primary Prevention

Address the social determinants of health (such as poverty and violence) that are root causes of community trauma

Promote relational health and resilience factors (such as strong executive function and self efficacy)





Trauma- informed care: Secondary prevention

- **Four RS**
- **Realizing the prevalence of trauma**
- **Recognizing manifestations of trauma**
- **Responding appropriately to trauma**
- **Resisting Re-traumatization**

Trauma Informed Care: Tertiary prevention

Trauma-focused cognitive therapy
for symptomatic children and
youths

Other evidence based intervention
like attachment-based dyadic
therapies such as parent-child
interaction therapy may serve to
prevent development of persistent
traumatic stress symptoms in high
risk families

Trauma-informed care (TIC) – 7 principles (Fallot & Harris, 2009, SAMHSA 2014)

Safety (physical and psychological)

Trustworthiness and transparency

Peer support

Collaboration and mutuality

Empowerment

Voice and choice

Cultural, historical and gender considerations

Attachment, self-regulation and competency (ARC) model

One of the trauma-informed models using in out-of-home settings

- ARC Focuses on
 1. building healthy attachments between children and their care-givers, particularly family members
 2. Supporting children to develop skills to manage their emotions and physiological states and thus increasing the child's self regulation.
 3. Building the child's competency, by increasing their capacity and skills.
 4. working with children to integrate experiences of trauma, thereby increasing their self-understanding

(Kinniburgh,2005: A comprehensive intervention framework for children with complex trauma)

<https://doi.org/10.3928/00485713-20050501-08>

Initial evidence suggests that the application of trauma-informed care models may have significantly positive outcomes for children in out-of-home care settings.

Future research is required to provide empirical evidence for organization-wide, trauma-informed models.

Trauma- informed Care in Paediatric Mental settings

- Child and adolescent inpatient psychiatric and residential settings (Bryson et al, 2017)
- 5 primary Factors related to successful TIC implementation
 1. senior leadership
 2. Aligning organizational policies and practices(formal and informal)
 3. Listening to patients' and families' experiences, needs and priorities
 4. Supporting staff through training and providing ongoing supervisions, coaching and debriefing
 5. Reviewing data and outcome indicators to foster continuous improvement

Useful references and website

- Shonkoff J P, Garner A S. (2012).The Lifelong Effects of Early Childhood Adversity and Toxic stress. Pediatrics, 129(1) , pp.e232-246.
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Thank You!

