

Wounds that don't heal

Long-term effects of childhood
adverse experiences

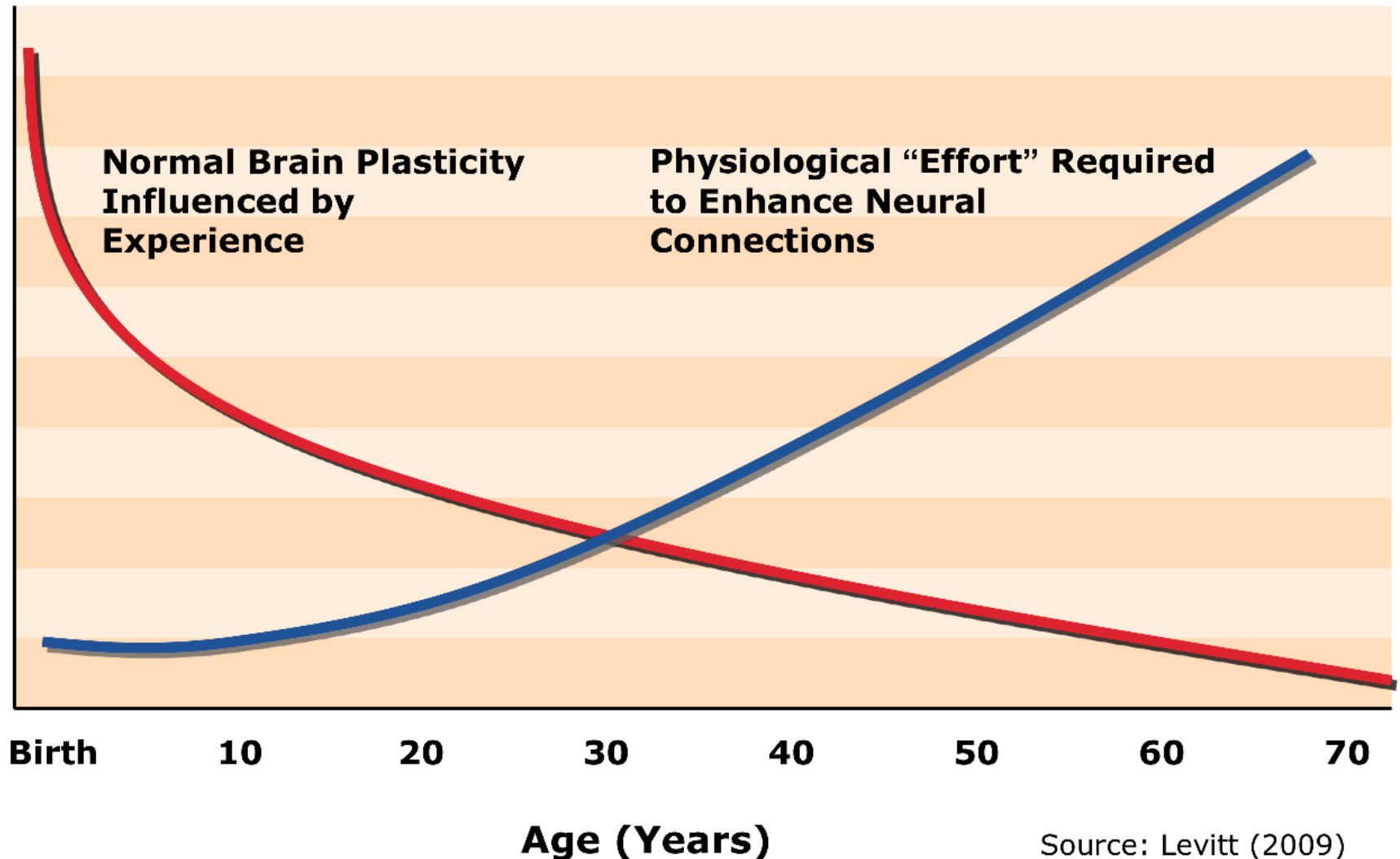
Dr. Nikita Bezborodovs
child psychiatrist



BĒRNU KLINISKĀ UNIVERSITĀTES SLIMNĪCA

Rīga , 2018

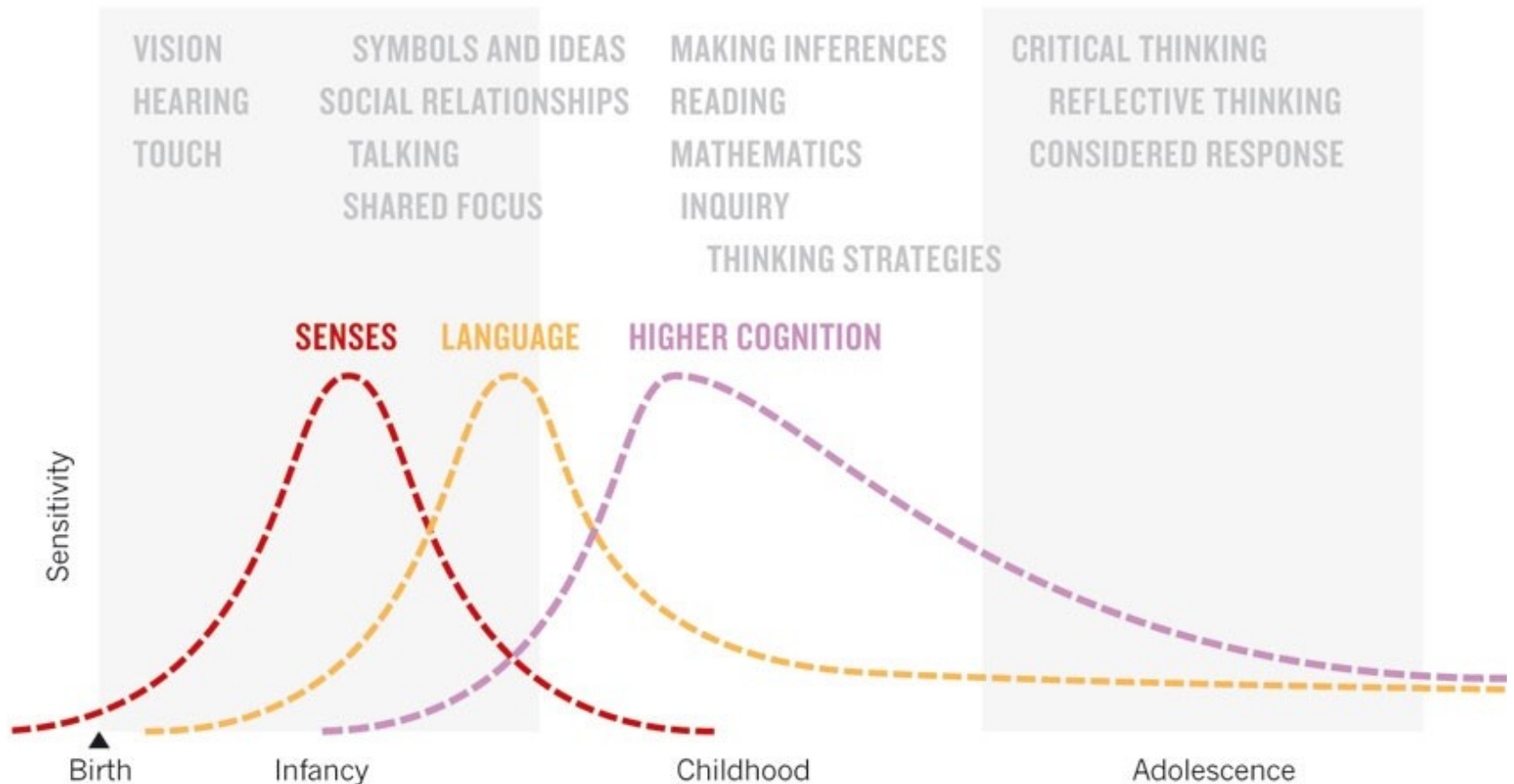
Normal brain development



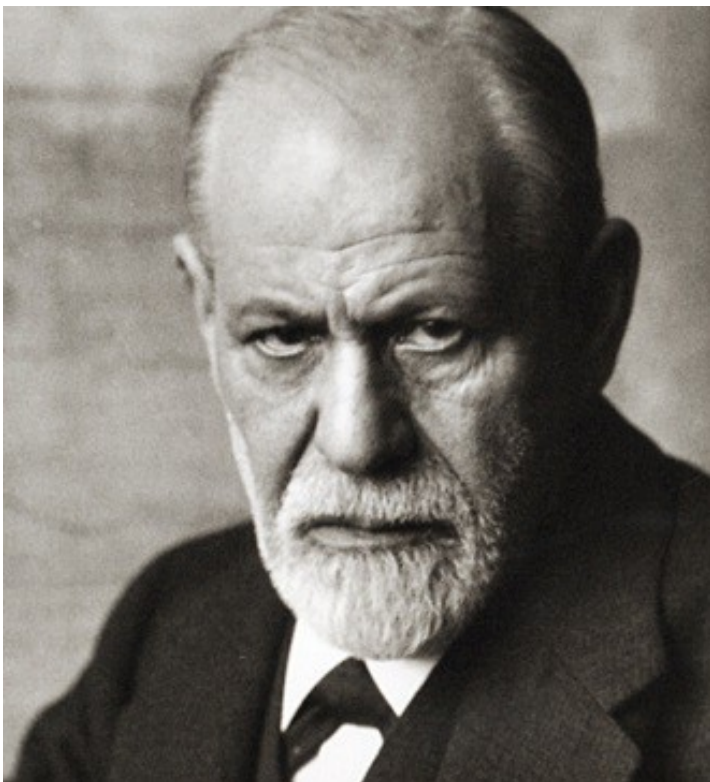
Critical periods of development

OPEN AND SHUT

The human brain's sensitivity to learning seems to crest in three broad waves. The critical periods for cortical regions devoted to vision and other senses (red) open in infancy, then close tightly. Those for language (yellow) and higher cognition (purple) open later, and never close entirely. The successive waves allow a child to acquire increasingly complex skills (grey text).



Childhood trauma



Terminology

- *Childhood trauma*
- *Adverse childhood experiences, ACE*
- *Child maltreatment*
- *Child abuse and neglect*

WHO definition

- ***Child abuse and child maltreatment*** - all forms of physical and/or emotional ill-treatment, sexual abuse, neglect or negligent treatment or commercial or other exploitation, resulting in actual or potential harm to the child's health, survival, development or dignity in the context of a relationship of responsibility, trust or power.

WHO, 2002

Types of ACEs

ABUSE



Physical



Emotional



Sexual

NEGLECT



Physical



Emotional

HOUSEHOLD DYSFUNCTION



Mental Illness



Incarcerated Relative



Mother treated violently



Substance Abuse

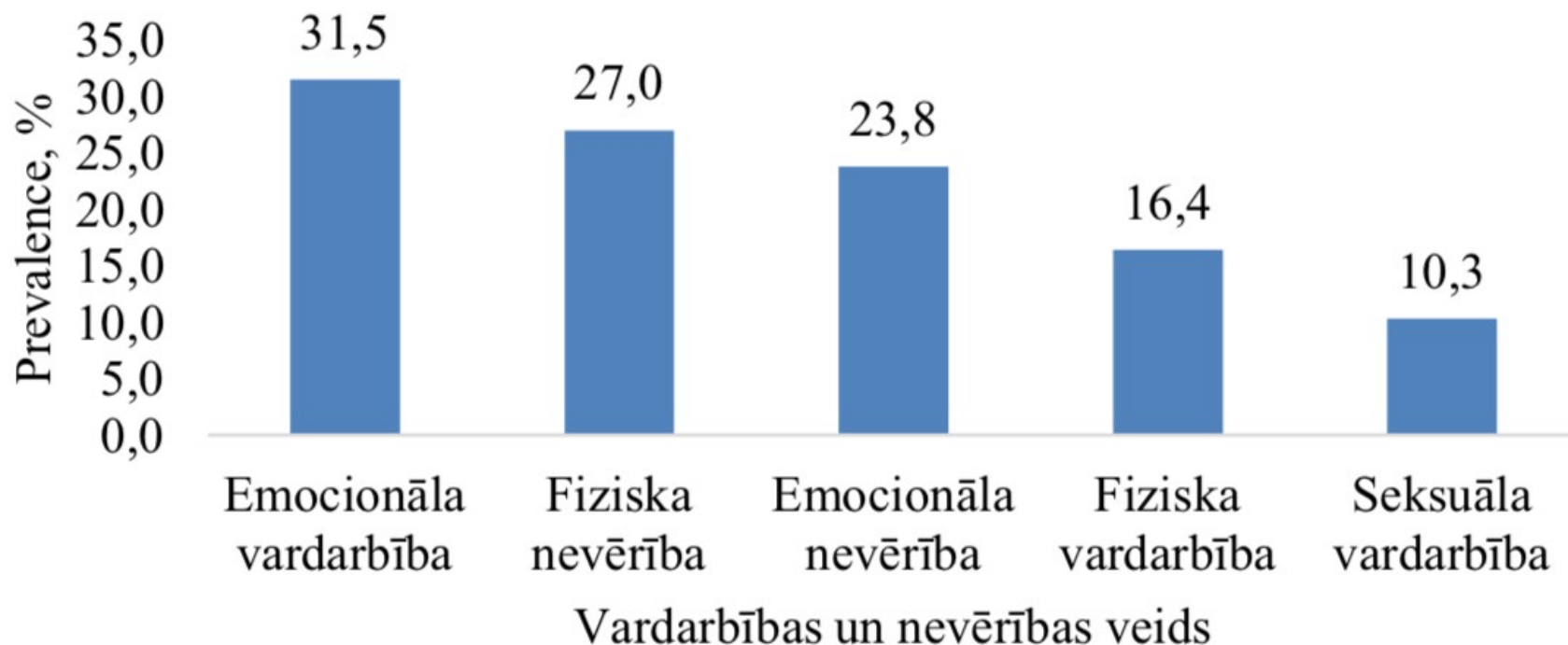


Divorce

How common is childhood maltreatment?

- Every year 850 children before 15 years of age die in a violent death in European region.
- In the US at least 1 of 4 children has been exposed to abuse or neglect during their childhood (and 1 in 7 during last year).
- Number of cases that are registered by child protection agencies is 10x lower than that reported by population surveys. *WHO, 2013*

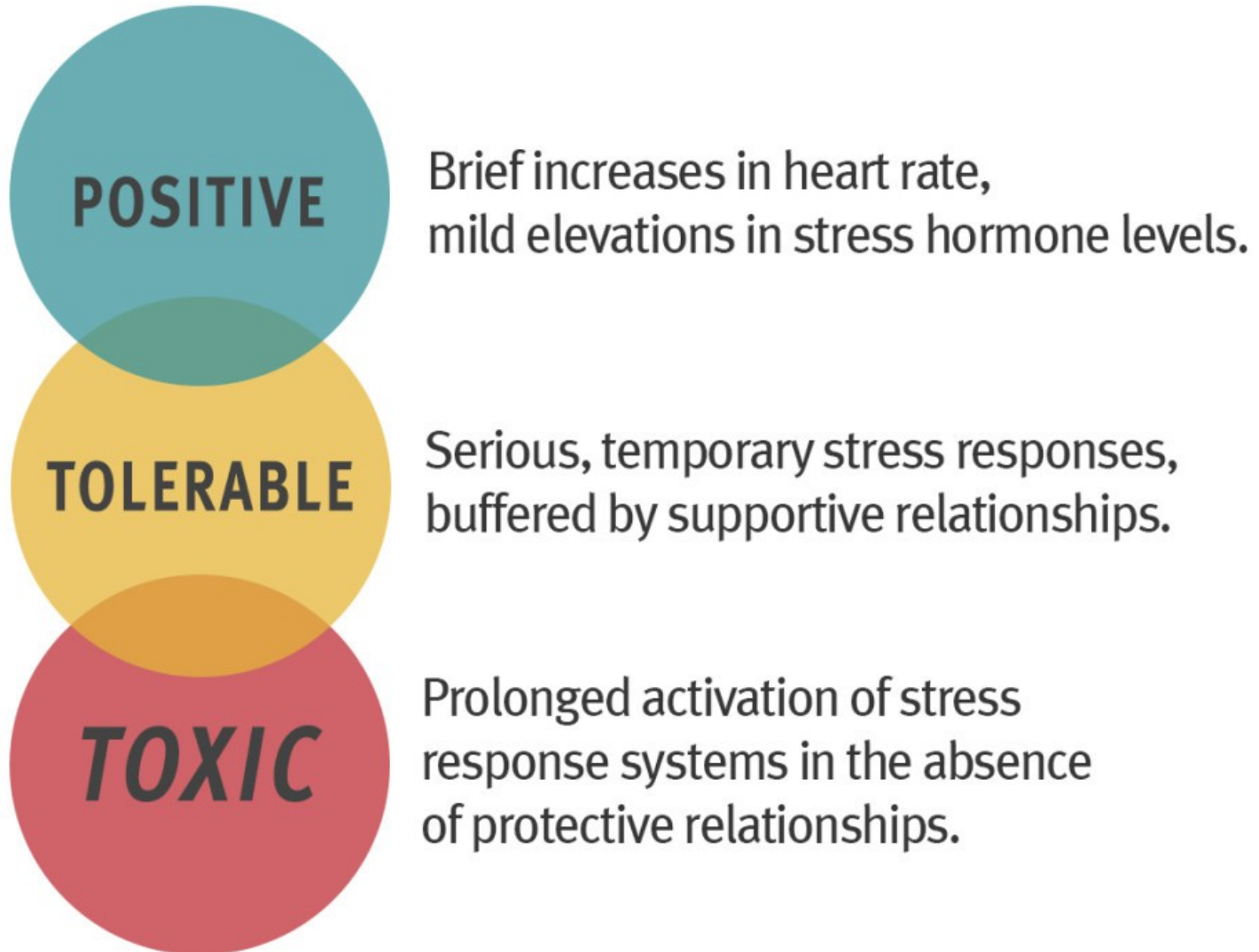
Experience of abuse among Latvian 18-25 y.o. youth (year



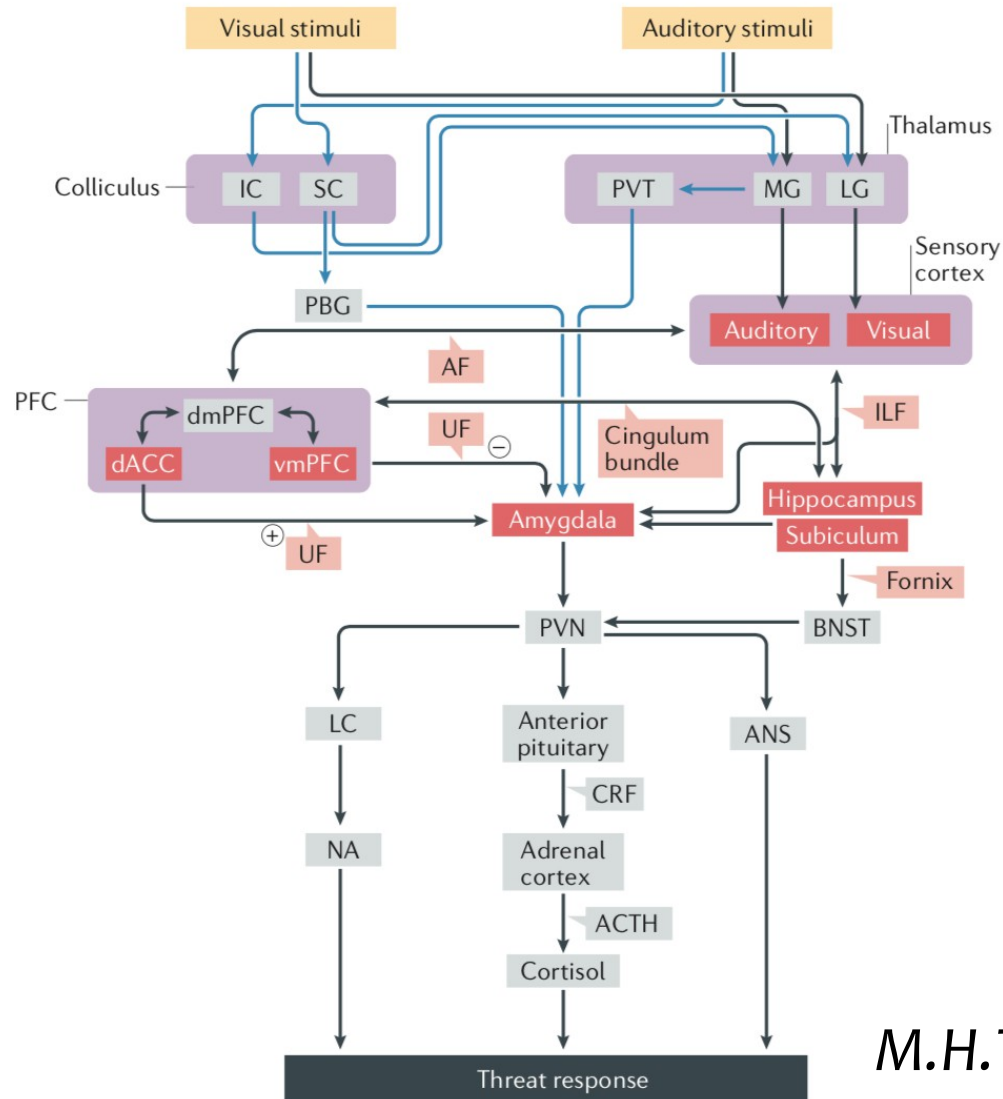
L.Springe, 2017

Neurobiological consequences of adverse childhood experiences

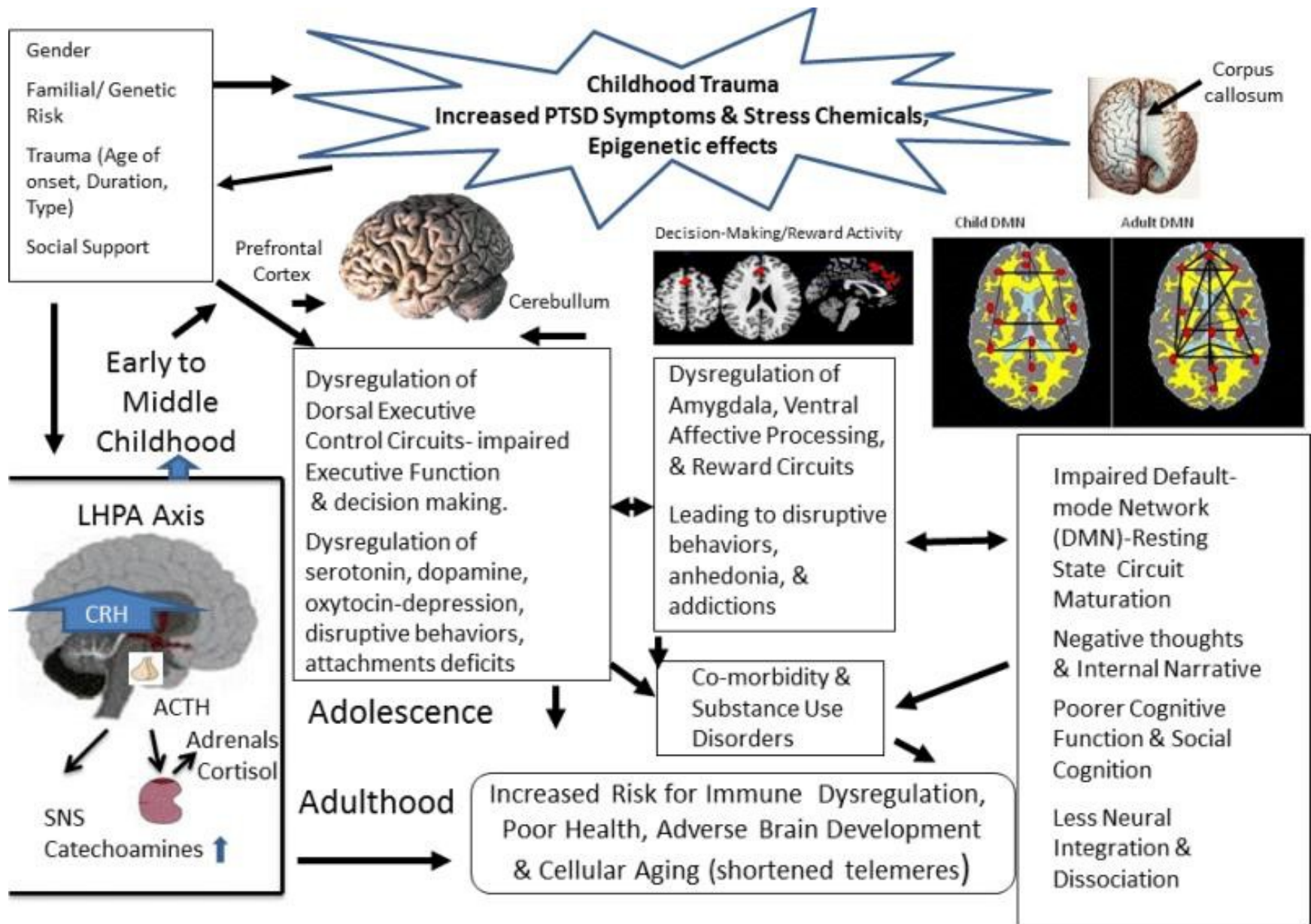
Typology of stress



Toxic stress



M.H. Teicher et al,
2016

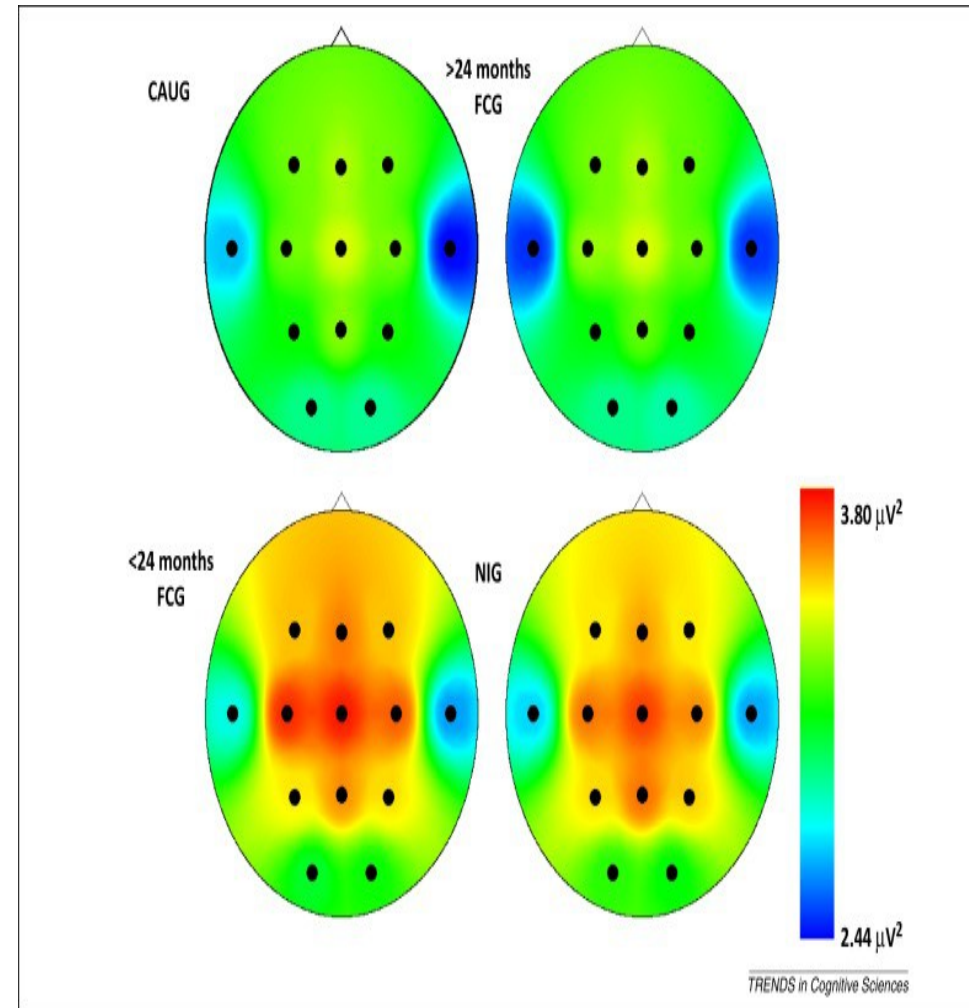
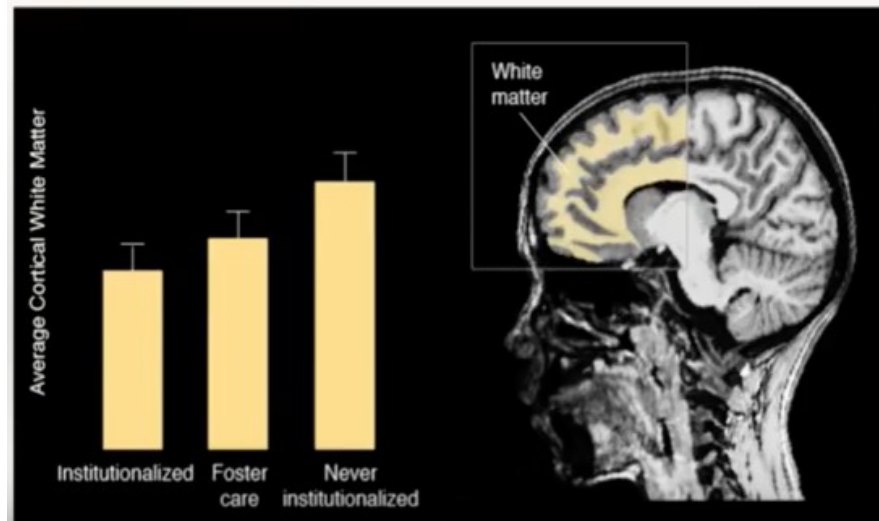
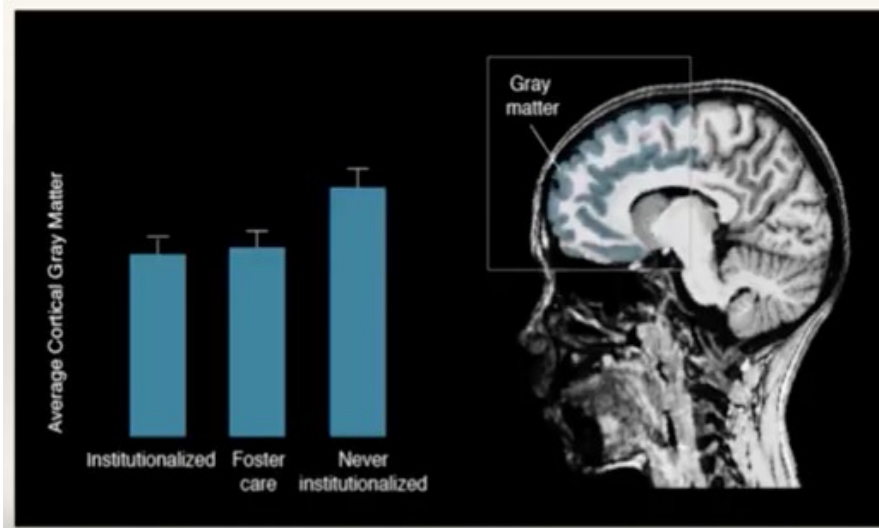


Bucharest orphan project

- Started in 2000
- 1st randomized intervention study of effects of institutionalization on developing brain
- 136 physically healthy institutionalized children



Bucharest orphan project

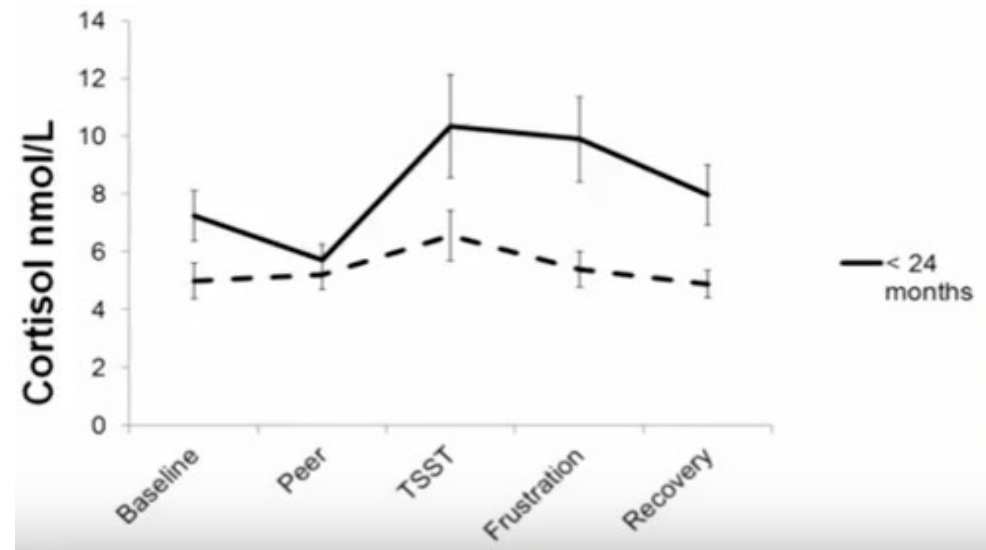
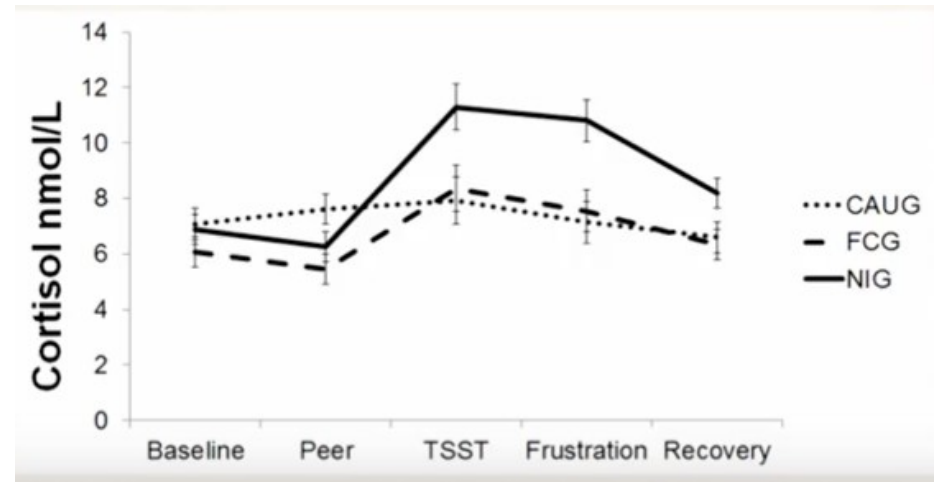


M.S.Sheridan et al,

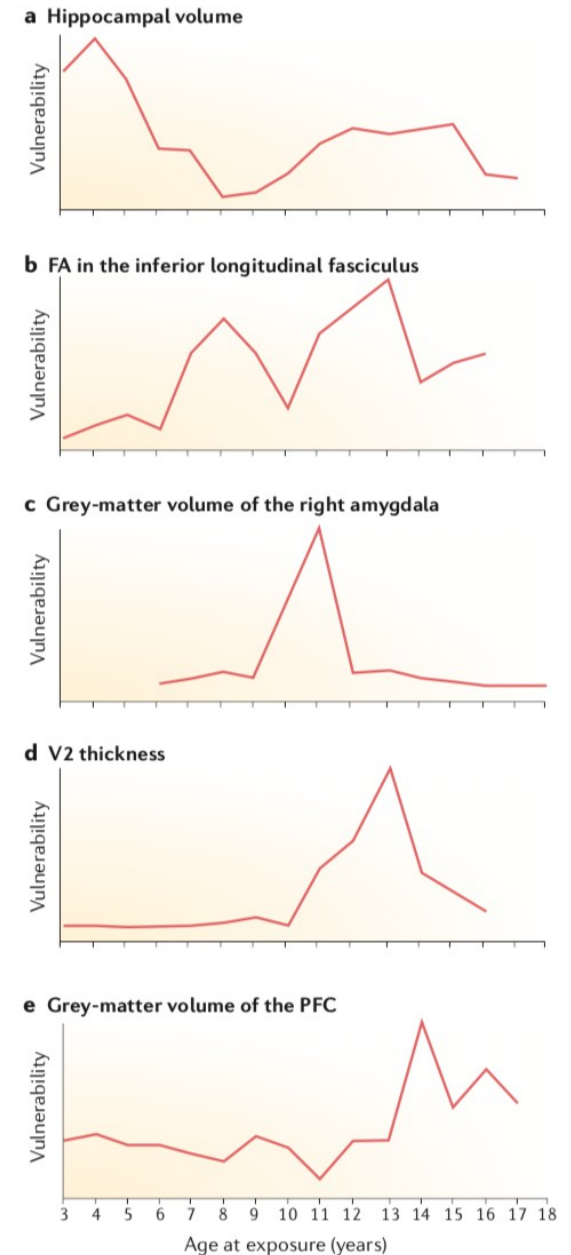
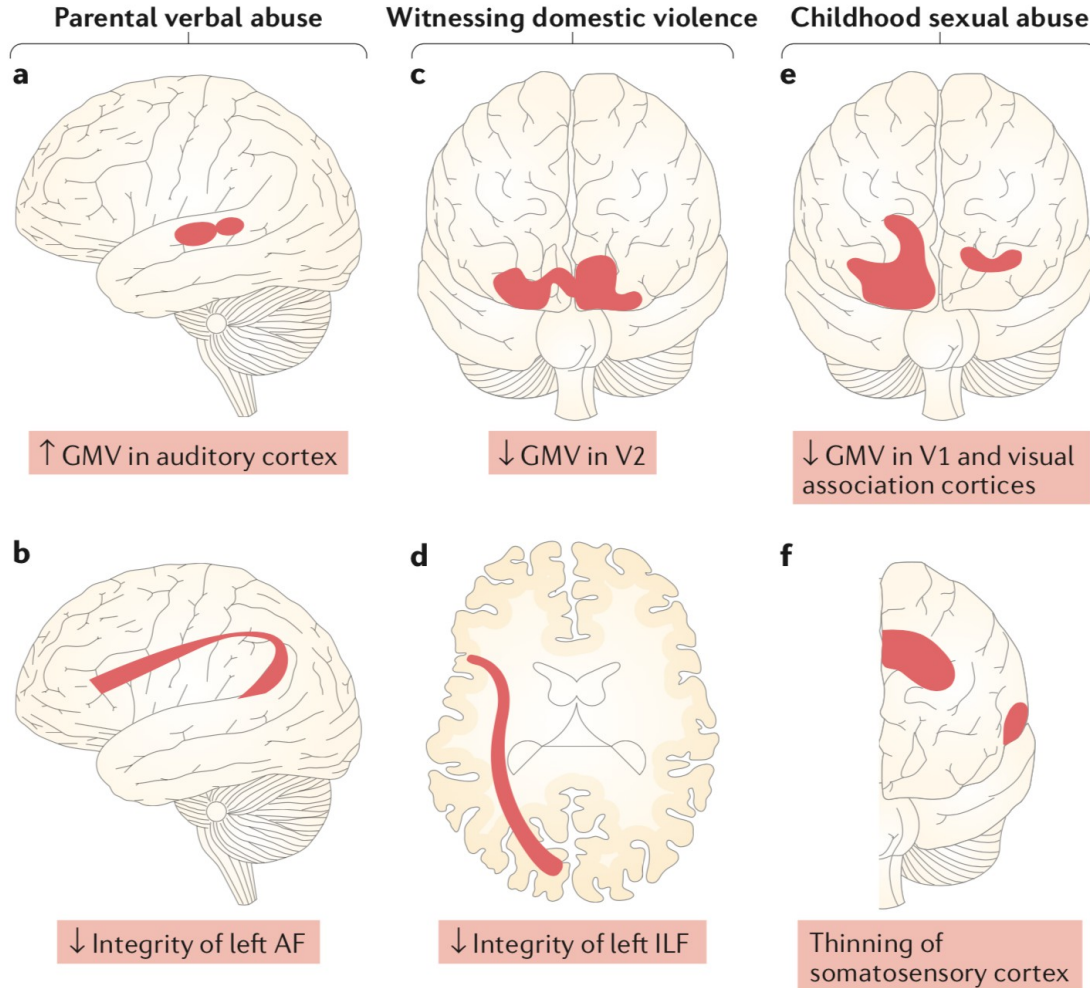
2012

Cortisol reactivity

- Variation between groups
- Effects of length of institutionalization



Neurobiological effects

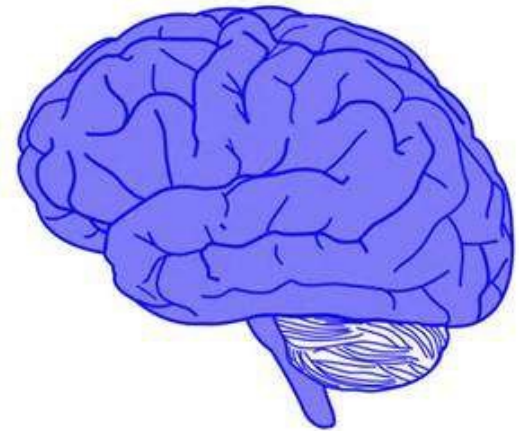


M.H. Teicher et al,
2016

Neurobiological effects

Structural changes (adaptations?) in the brain due to early maltreatment:

- *Hippocampus*
- *Corpus callosum*
- *Cortex cingularis anterior*
- *Cortex orbitofrontalis*
- *Cortex prefrontalis dorsolateralis*



Health consequences of adverse childhood experiences

ACE Study

- **ACE – Adverse Childhood Experiences**
- Study begun in the US in 1995. Cohort of 17000 people in the general population that is still being followed
- >40 health outcomes registered:
 - Health (obesity, diabetes, depression, suicide, STDs, cardiovascular disorders, cancer, stroke, COPD, fractures)
 - Behavior (smoking, alcohol, drugs)

V. J. Felitti et al,

1998

Types of ACEs

ABUSE



Physical



Emotional



Sexual

NEGLECT



Physical



Emotional

HOUSEHOLD DYSFUNCTION



Mental Illness



Incarcerated Relative



Mother treated violently

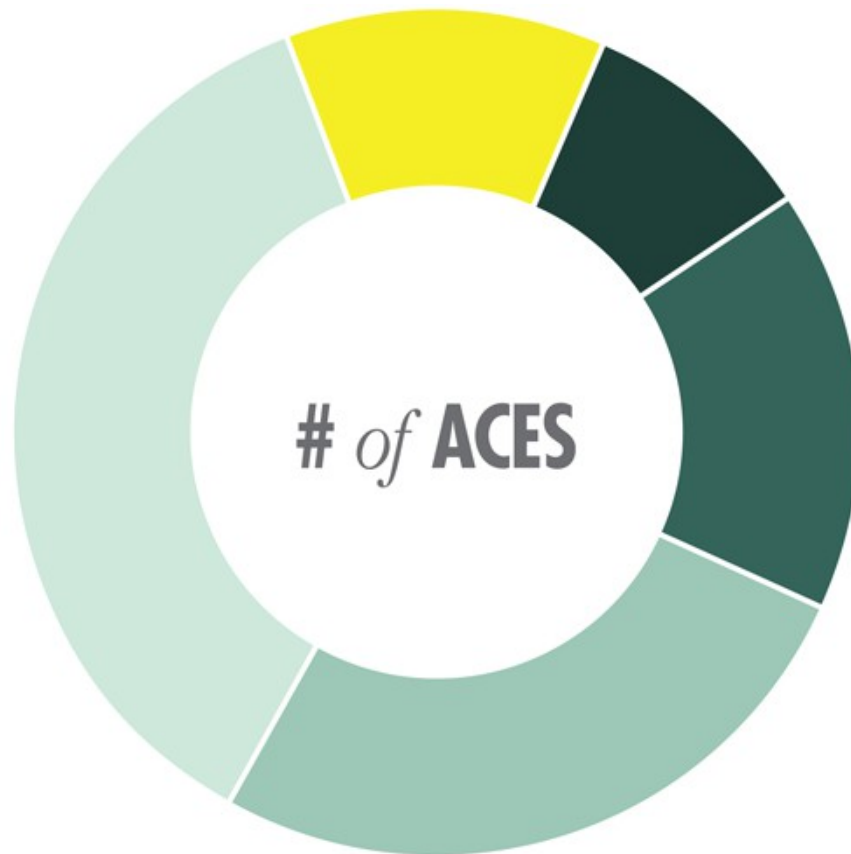


Substance Abuse

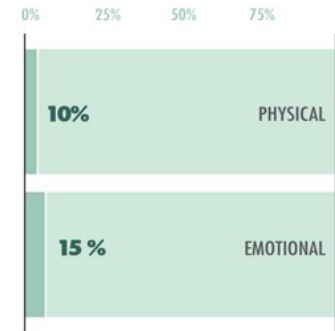


Divorce

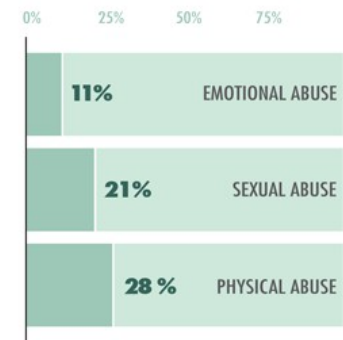
ACE Study



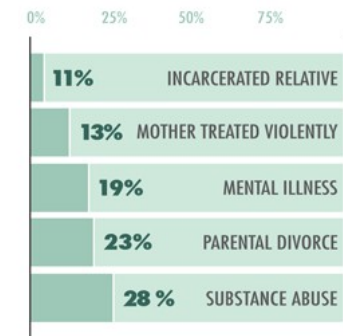
NEGLECT



ABUSE

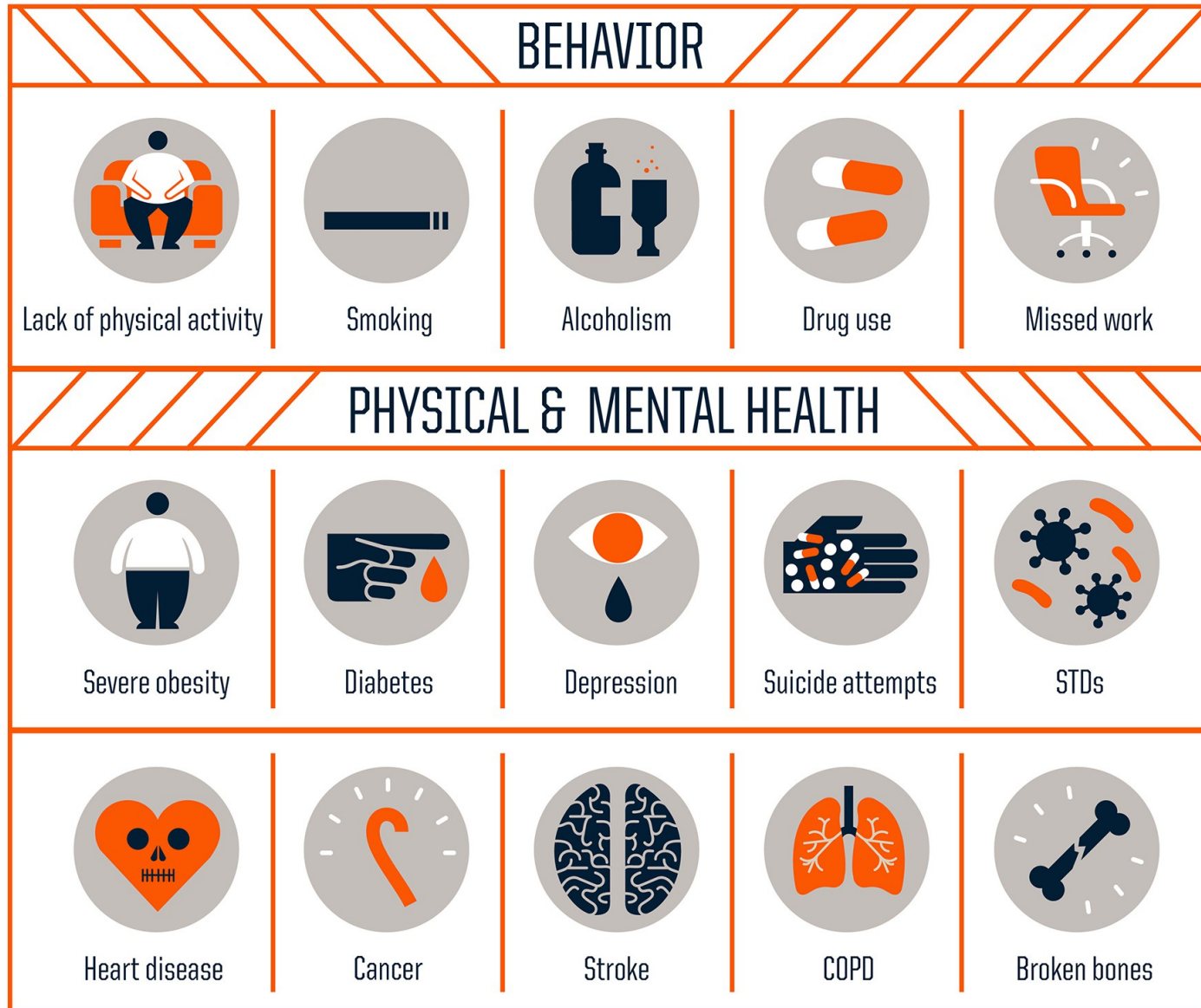


FAMILY DYSFUNCTION

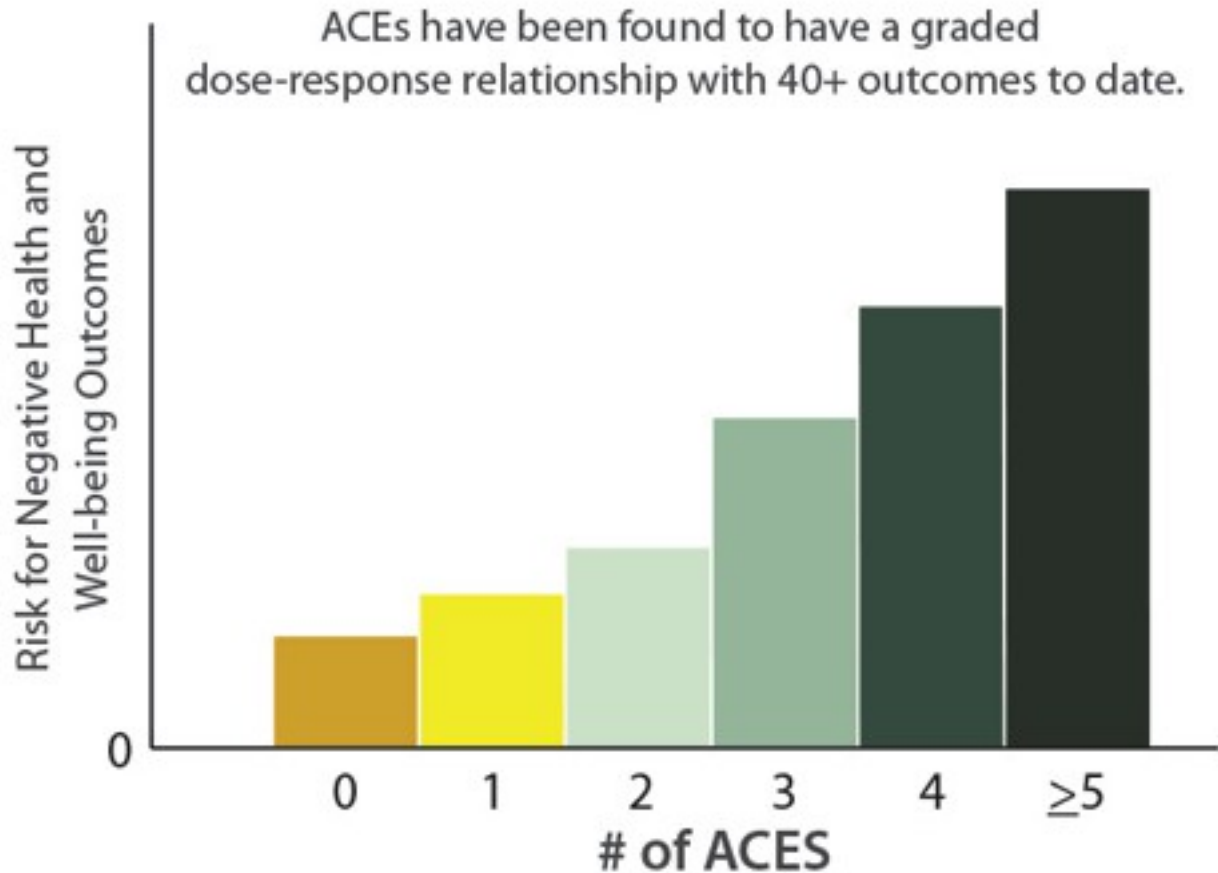


V. J. Felitti et al,
1998

Health consequences



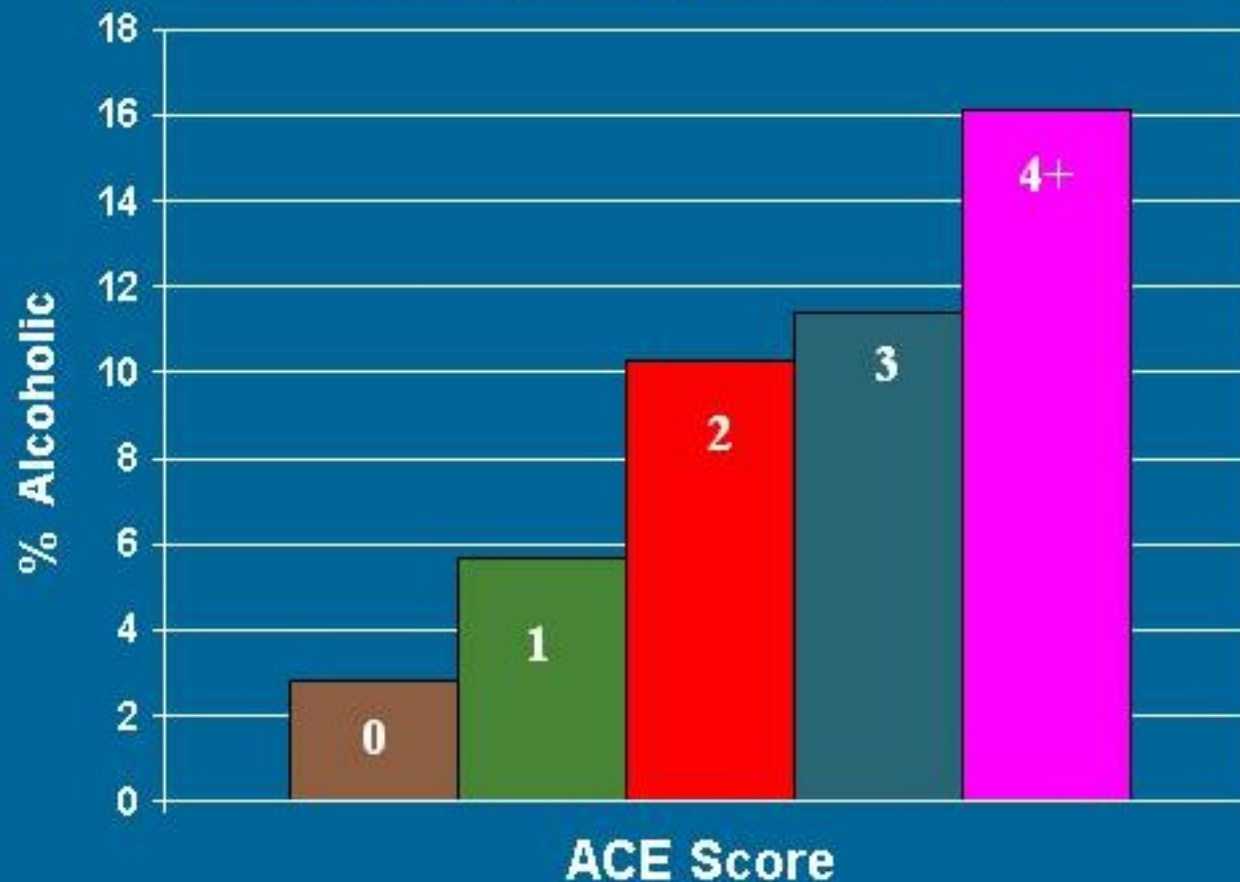
ACE Study



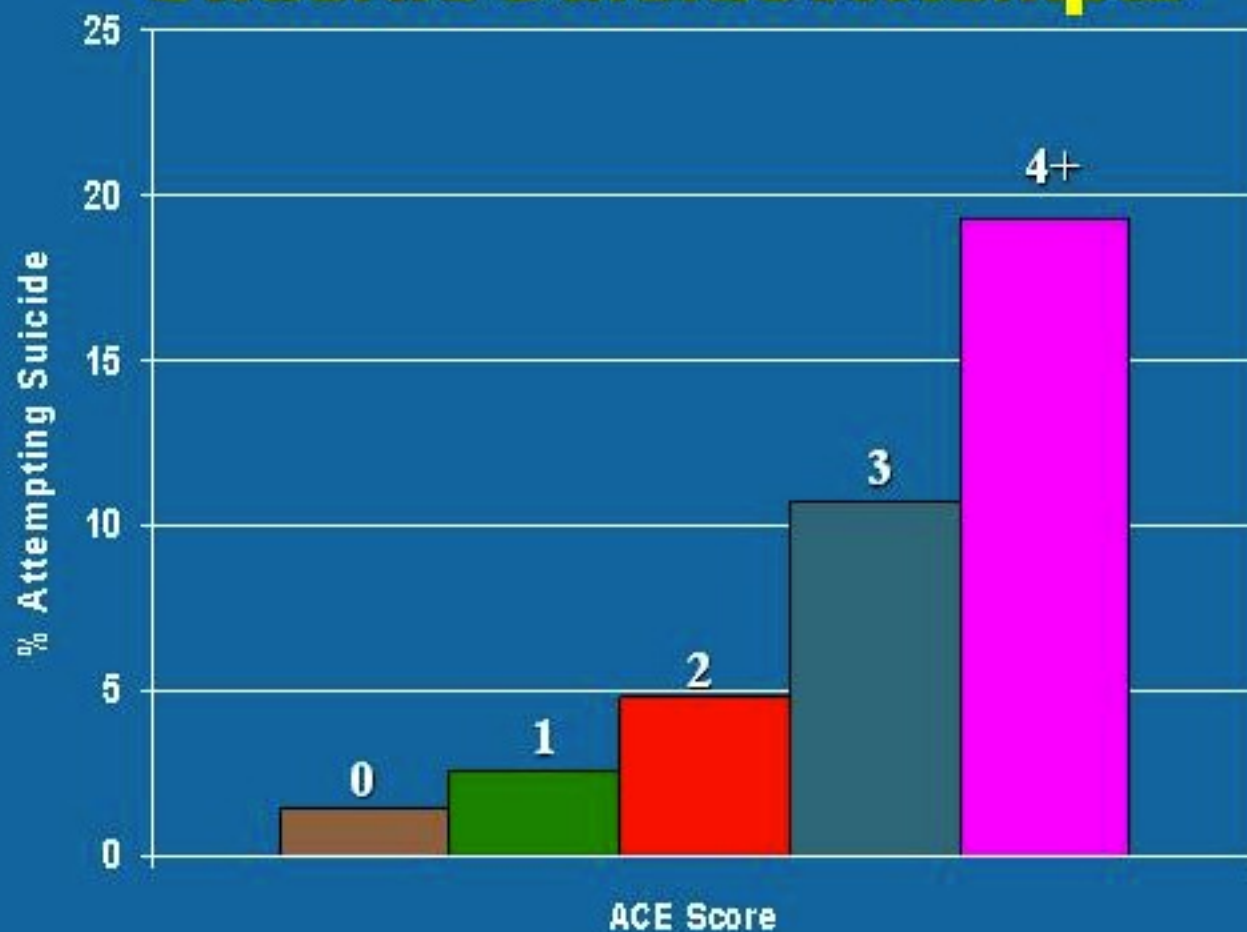
*This pattern holds for the 40+ outcomes, but the exact risk values vary depending on the outcome.

*V. J. Felitti et al,
1998*

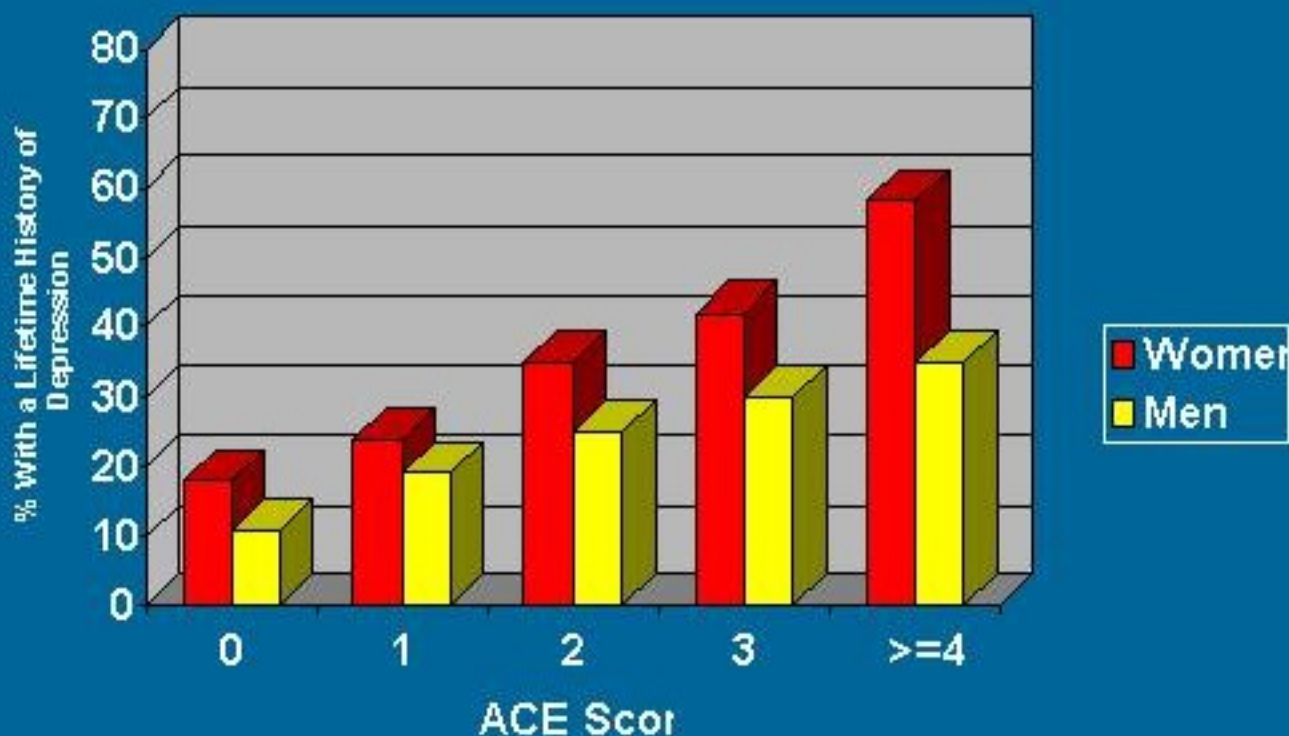
Childhood Experiences vs. Adult Alcoholism



Childhood Experiences Underlie Suicide Attempts

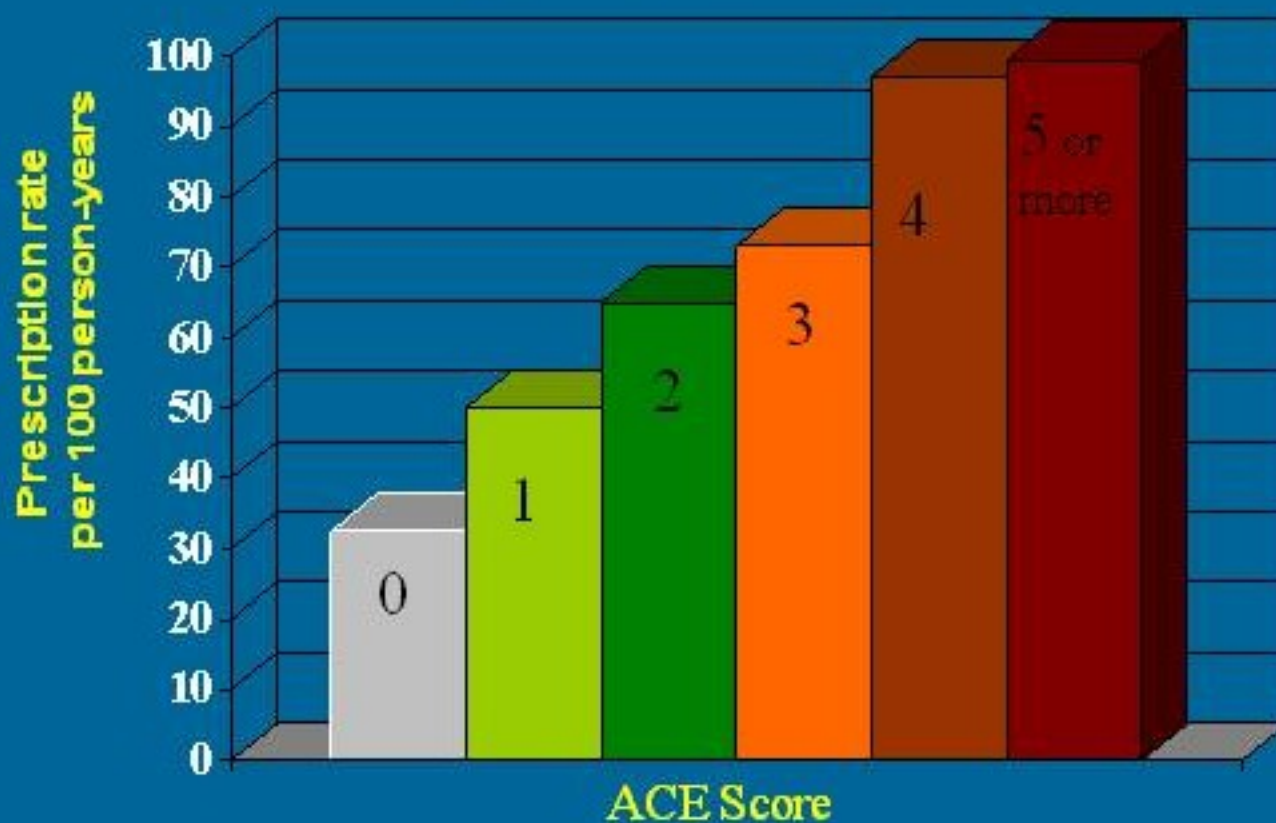


Childhood Experiences Underlie Chronic Depression

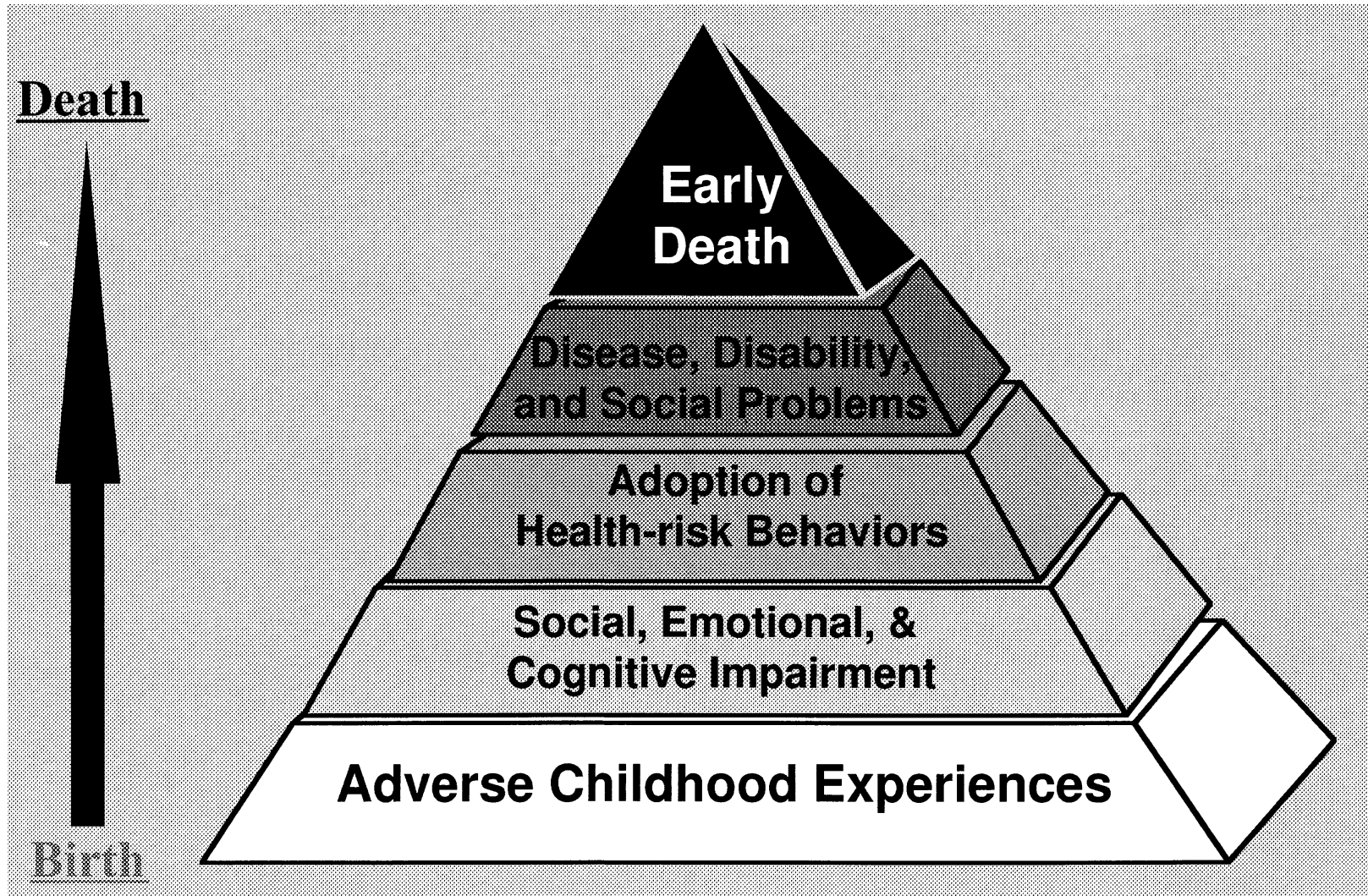


ACE Score and Rates of Antidepressant Prescriptions

approximately 50 years later



Health consequences



V. J. Felitti et al,
1998

Experience of abuse among Latvian 18-25 y.o. youth (year

2010/2011)
Young people that have experienced abuse as
children had:

- 1,2–2,2 x higher odds of poor health
- 1,2–1,4 x higher odds of alcohol abuse
- 2,1–2,6 x higher odds of developing psychological disorders
- 2,2–4,0 x higher odds of suicide attempts

L.Springé, 2017

What can we do?

- Notice and stop abuse!
- Concentrate on prevention!
- Ask about adverse childhood experiences to patients/clients.
- Change the paradigm [“What’s wrong with you?” -> “What happened to you?”].
- Treat the trauma (psychosocial interventions!).

Synopsis

- Childhood abuse is widely prevalent.
- It is linked to long-term [ir]reversible changes in the structure of the brain.
- It is linked to a plethora of negative health outcomes (mental and physical).
- We can (and should) recognize and stop child abuse and treat the trauma.
- If you don't ask you won't know!

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

- Frederick Douglass

