

Adverse Childhood Experiences - ACEs

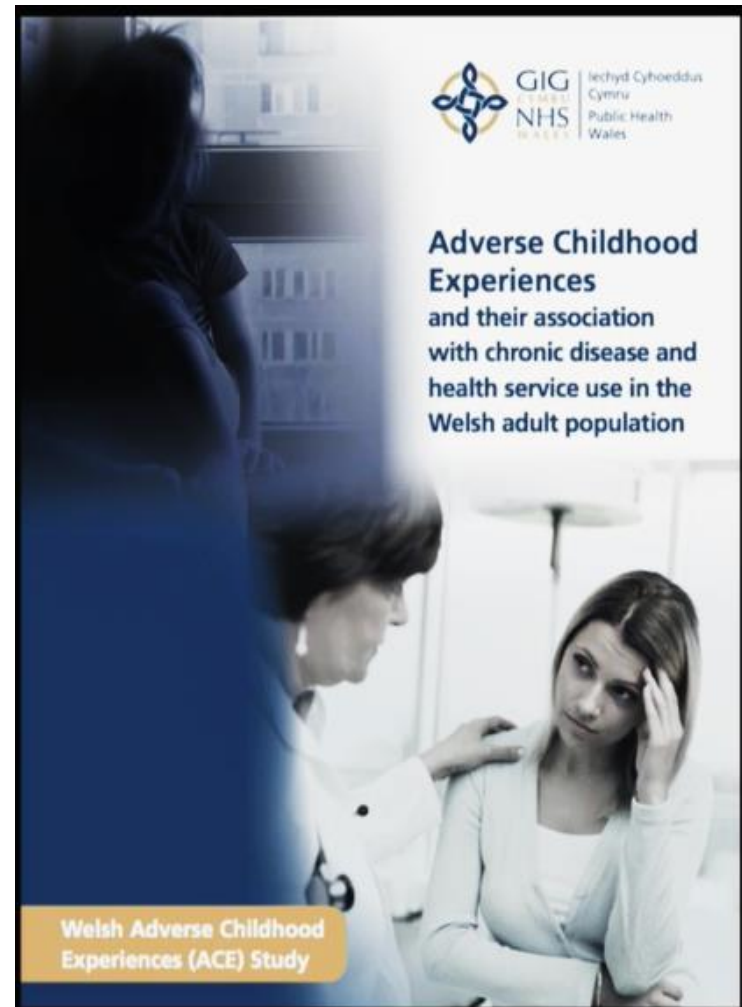
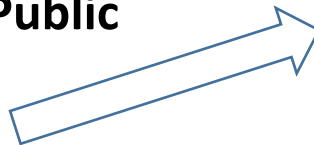


Paul Martin - Operational Manager FIP &
Priority Families
Nottingham City Council

- *Raising an awareness of Adverse Childhood Experiences - ACEs*
- *Introduction to how relational trauma impacts upon behaviour*

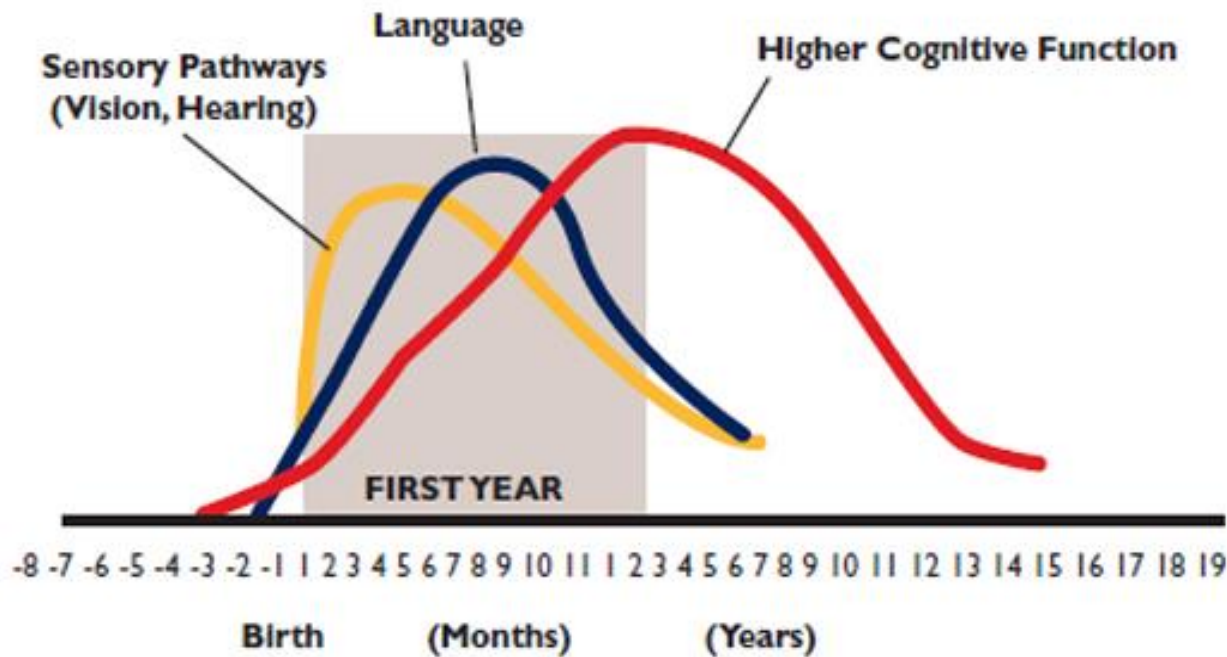
ACEs – Reference material

- **Professor Vincent Felitti (San Diego USA) 1998 (17,000 participants)**
- **Blackburn with Darwen (1,500 participants)**
- **Professor Mark Bellis (Public Health Wales) 2015 (2028 participants)**
- **Hertfordshire, Northamptonshire and Luton Research (Liverpool John Moores University) 2016 (5,454 participants)**



Brain Development – the critical years

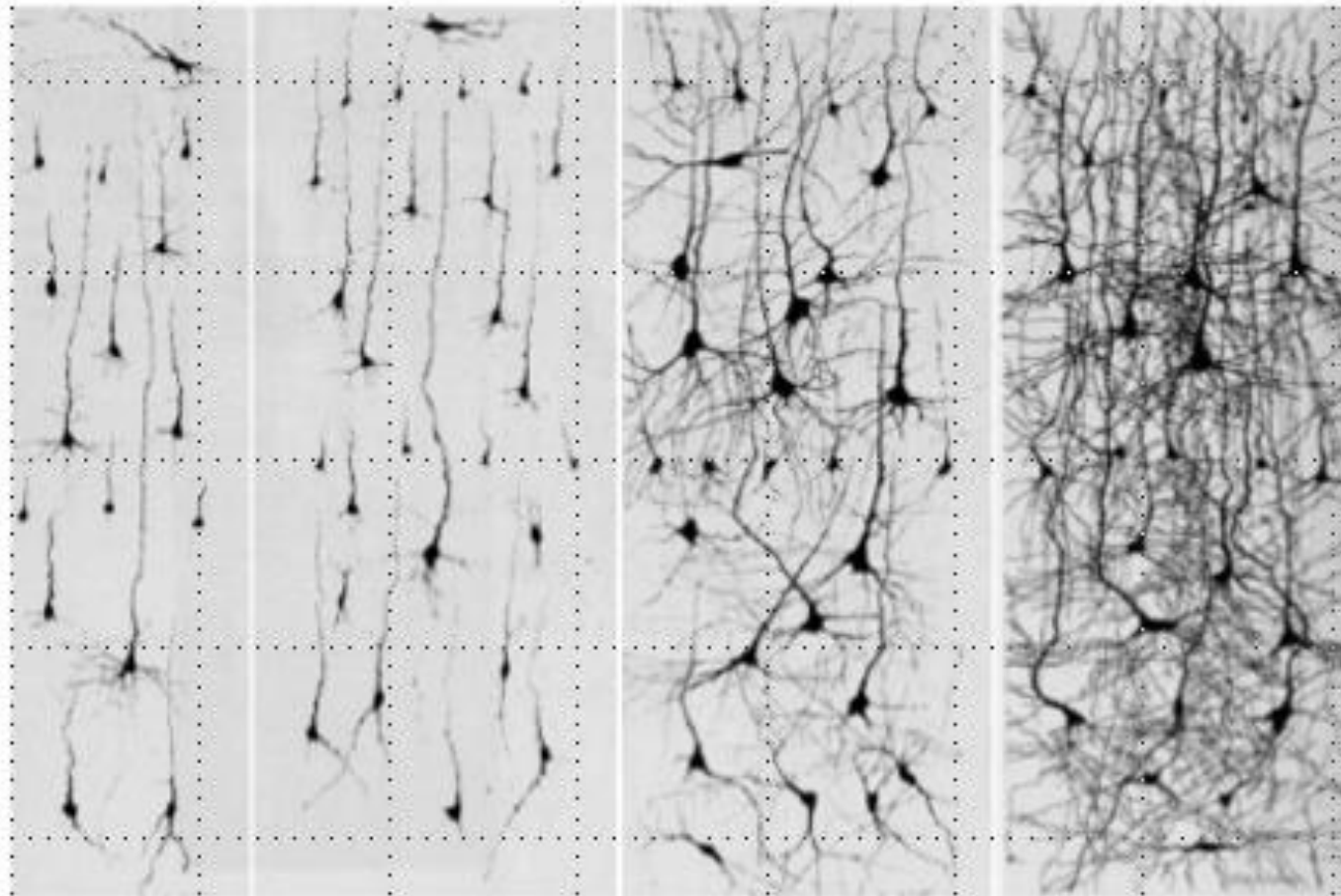
Human Brain Development
Synapse Formation Dependent on Early Experiences
(700 per second in the early years)



First 3 years
- baby's
brain grows
from **25%**
to **80%** of
adult size

Brain Development – the critical years

700 Synapses formed per second in early years



Development continues in childhood learning empathy, trust and community

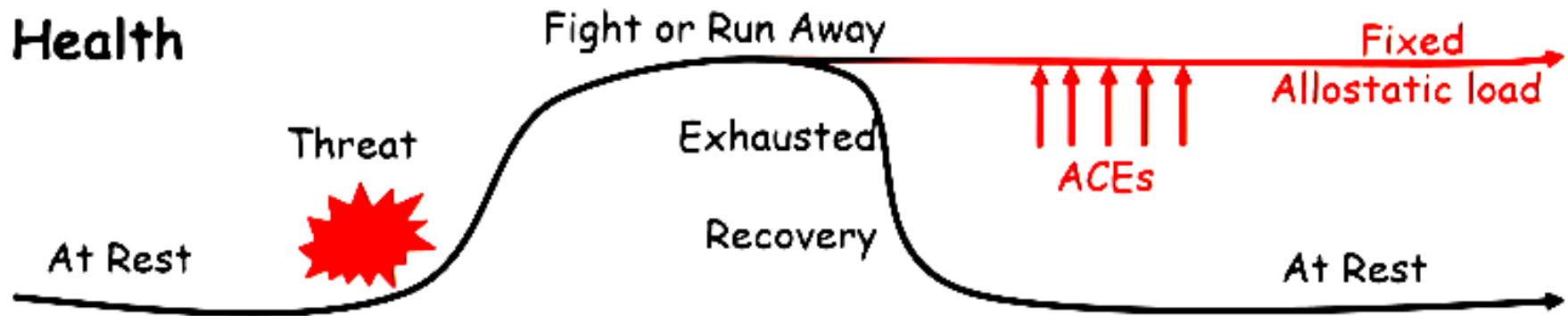
Newborn

1 Month

6 Months

2 Years

ACEs – Toxic Stress

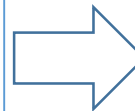


Childhood Adversity affects following parts of brain

Nucleus Accumens – Pleasure & Reward Centre

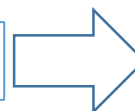
Prefrontal Cortex - Impulsivity & Executive Function

Amygdala - Fear Centre



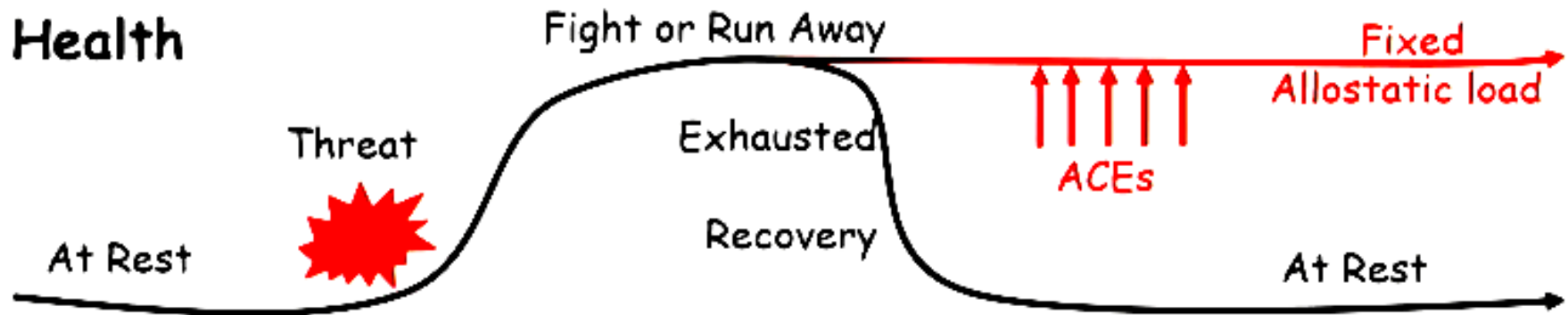
Health Harming Behaviours

Hypothalamic Pituitary Axis – Controls reaction to Stress



Immune System/Digestion

ACEs – Toxic Stress

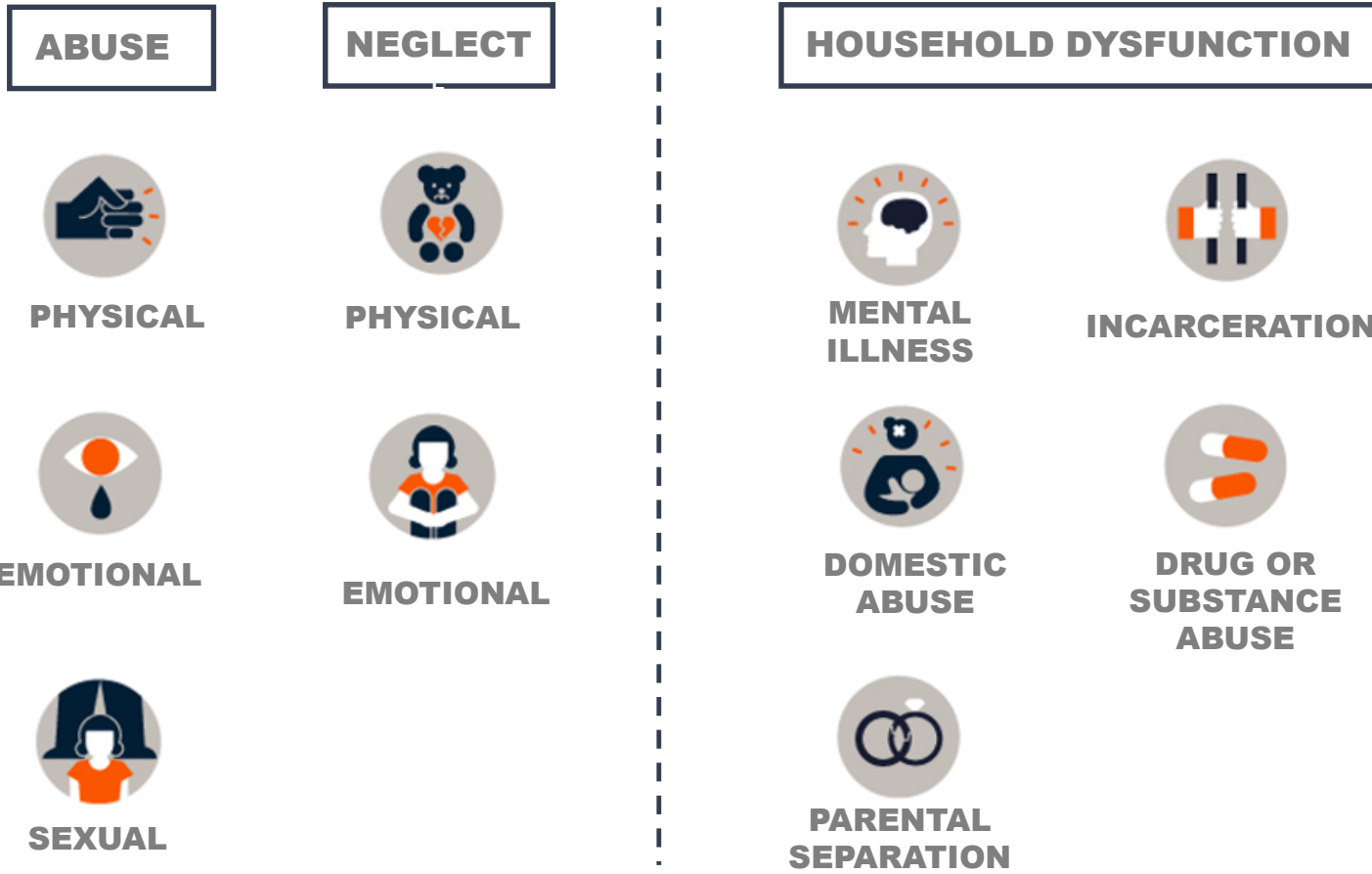


Chronic Stress from ACEs:-

- **Violence – over-develop ‘life-preserving’ brain**
NEUTRAL CUES LOOK THREATENING
- **School – anxious, disengaged, poor learners**



ACEs – What are they?



Experiences of children up to the age of 18 years

Dose effect!










ACEs – Questionnaire Exercise

All the questions are prefixed with:-

“While you were growing up and before you reached your 18th birthday.....”

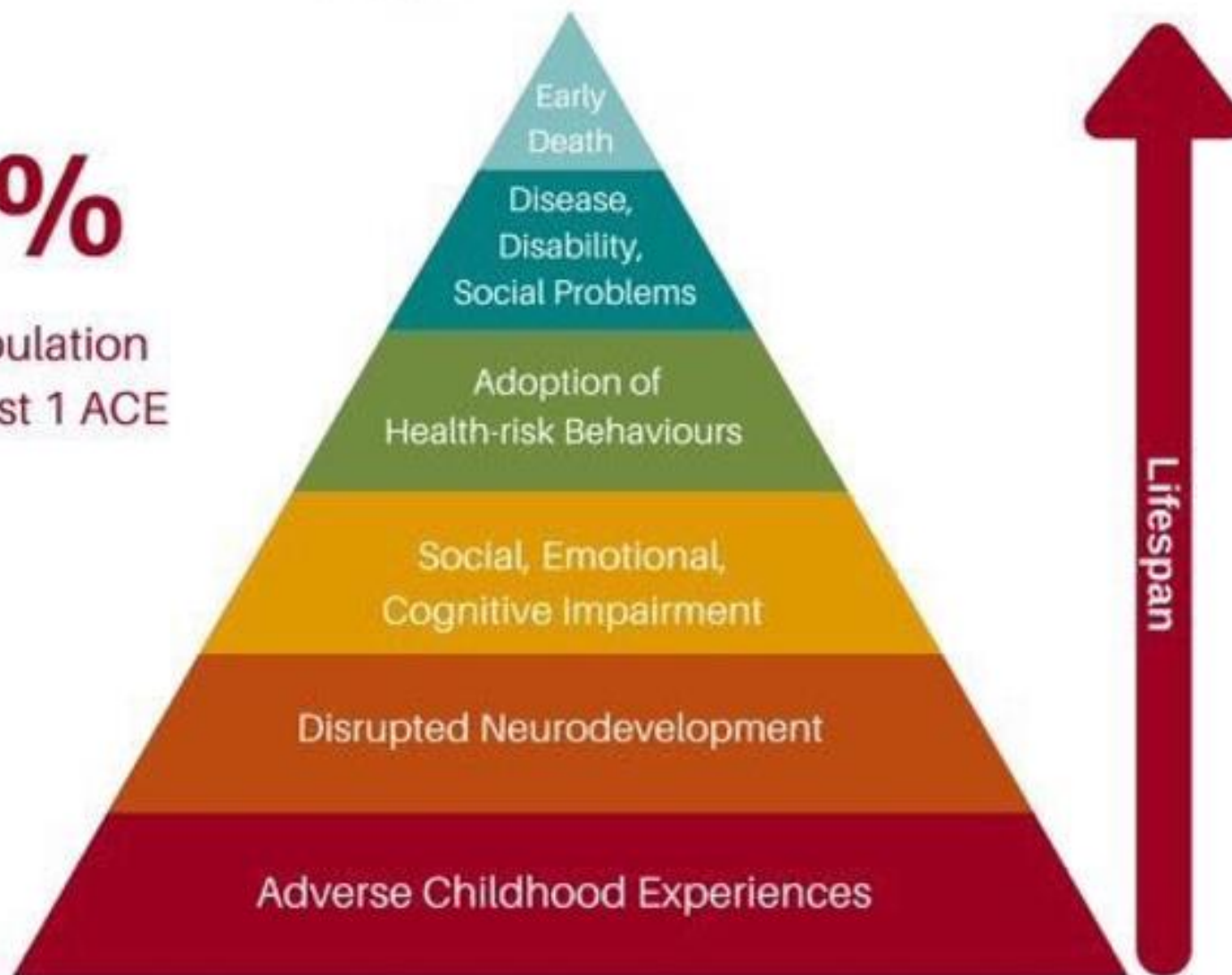
Adverse Childhood Experience (ACE) Questionnaire
Finding your ACE Score

“While you were growing up and before you reached your 18th birthday,”

ACE	Question	Qualifying Response	Score 1 for each qualifying response per section
 Sexual Abuse	How often did anyone at least 5 years older than you (including adults) try to make you touch them sexually? How often did anyone at least 5 years older than you (including adults) force you to have any type of sexual intercourse (oral, anal or vaginal)? How often did anyone at least 5 years older than you (including adults) ever touch you sexually?	Once or more than once to any of the three questions.	
 Physical Abuse	How often did a parent or adult in your home ever hit, beat, kick or physically hurt you in any way? (This does not include gentle smacking for punishment)	Once or more than once.	
 Verbal Abuse	How often did a parent or adult in your home ever swear at you, insult you, or put you down?	More than once.	
 Domestic Abuse	How often did your parents or adults in your home ever lap, hit, kick, punch or beat each other up?	Once or more than once.	
 Parental Separation	Were your parents ever separated divorced?	Yes	
 Mental Illness	Did you live with anyone who was depressed, mentally ill or suicidal?	Yes	
 Alcohol Abuse	Did you live with anyone who was a problem drinker or alcoholic?	Yes	
 Drug Abuse	Did you live with anyone who used illegal street drugs or who abused prescription medication?	Yes	
 Incarceration	Did you live with anyone who served time or was arrested to serve time, in a prison or a young offender's institution?	Yes	
TOTAL SCORE			

ACEs – Impact over a lifespan

67%
of the population
have at least 1 ACE



ACEs – Prevalence

Number of adults in Wales reporting experienced an ACE during childhood

CHILD MALTREATMENT



Verbal abuse
23%

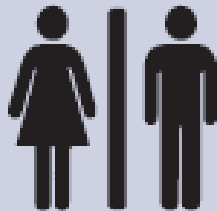


Physical abuse
17%



Sexual abuse
10%

CHILDHOOD HOUSEHOLD INCLUDED



Parental separation
20%



Domestic violence
16%



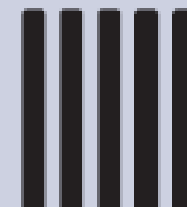
Mental illness
14%



Alcohol abuse
14%



Drug use
5%



Incarceration
5%

ACEs – Population prevalence

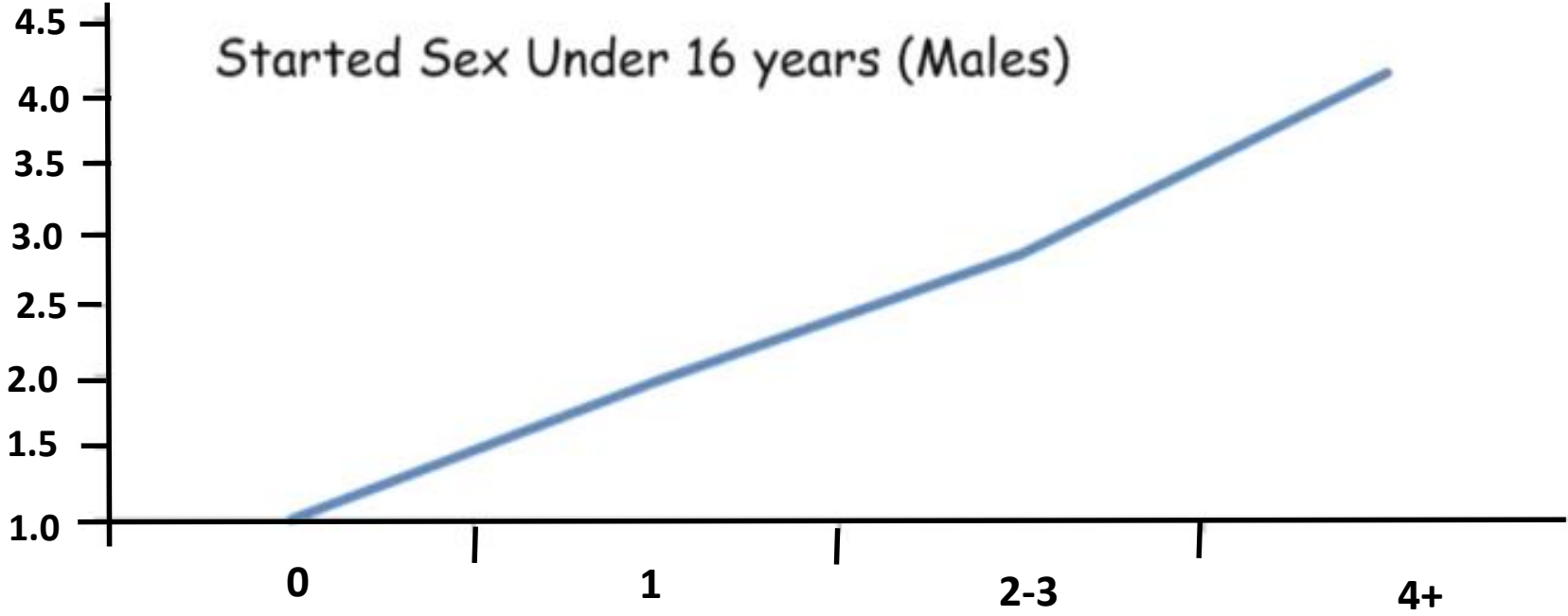
Prevalence of ACE's		
	English Study	Welsh Study
0 ACE's	56%	53%
1 ACE's	18%	20%
2-3 ACE's	17%	13%
4+ ACE's	9%	14%

ACEs – What is the impact of ACEs

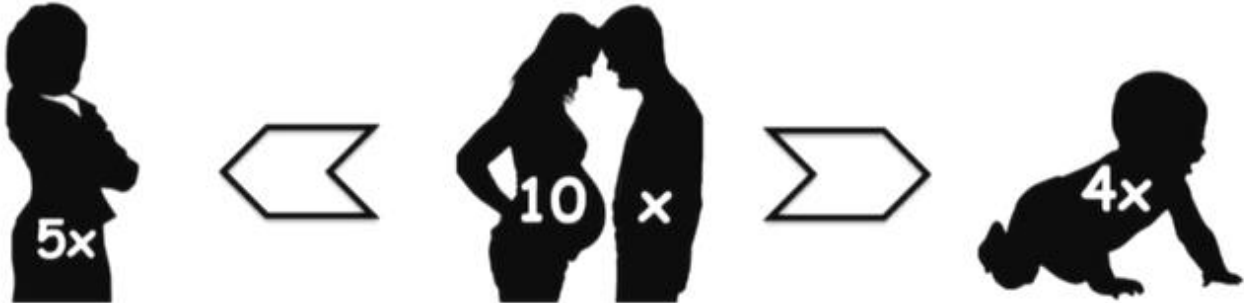
Compared with people with no ACEs, those with 4+ ACEs are:

- 4** times more likely to be a high-risk drinker
- 6** times more likely to have had or caused unintended teenage pregnancy
- 6** times more likely to smoke e-cigarettes or tobacco
- 6** times more likely to have had sex under the age of 16 years
- 11** times more likely to have smoked cannabis
- 14** times more likely to have been a victim of violence over the last 12 months
- 15** times more likely to have committed violence against another person in the last 12 months
- 16** times more likely to have used crack cocaine or heroin
- 20** times more likely to have been incarcerated at any point in their lifetime

ACEs – Children having children



ACE Count

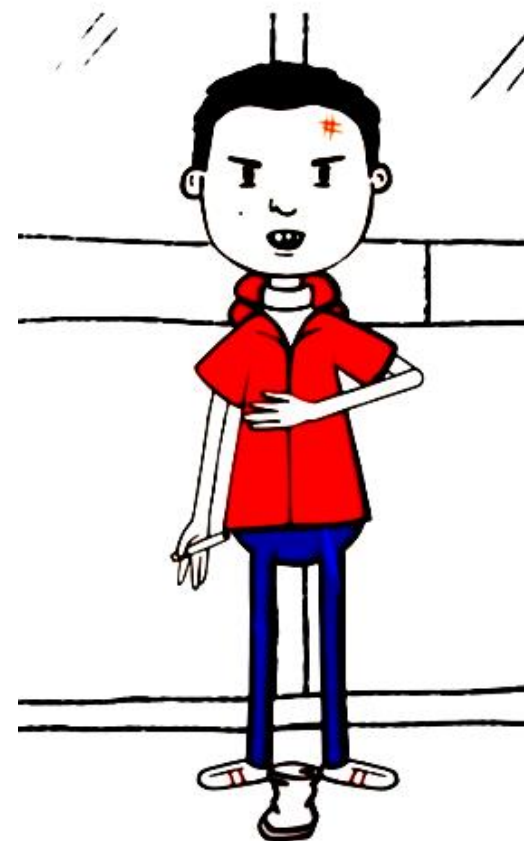


ACEs – Violence towards others

18-29 year olds

With no ACEs 3%
had hit someone in
the last 12 month

With 4 or more
ACEs 30% had hit
someone in the last
12 month



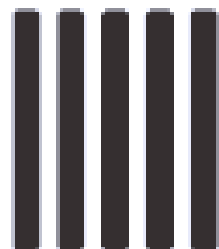
England & Wales data

Preventing ACES

Preventing ACEs in future generations could reduce levels of:



Heroin/crack cocaine use (lifetime) by 66%



Incarceration (lifetime) by 65%



Violence perpetration (past year) by 60%



Violence victimisation (past year) by 57%



Cannabis use (lifetime) by 42%



Unintended teen pregnancy by 41%



High-risk drinking (current) by 35%



Early sex (before age 16) by 31%

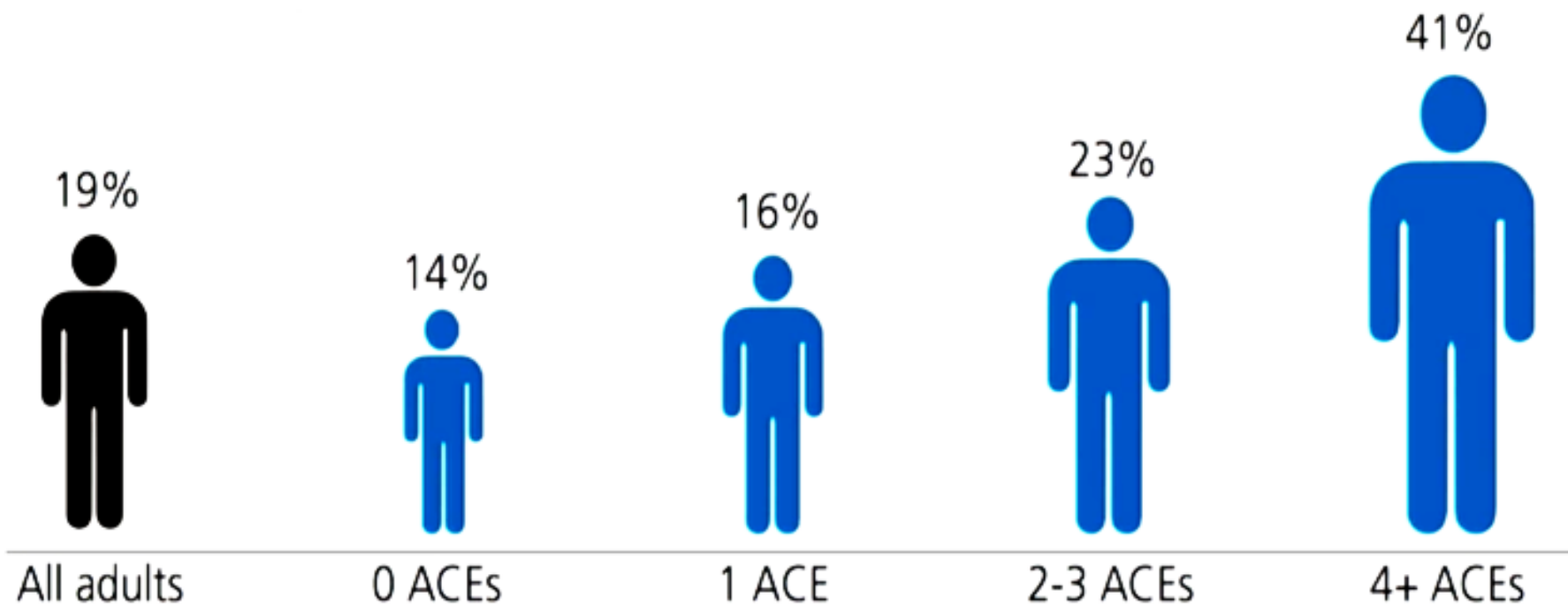


Smoking tobacco or e-cigarettes (current) by 24%



Poor diet (current <2 fruit & veg portions daily) by 16%

ACEs – Adult mental well-being



Using a WEMWEBS score

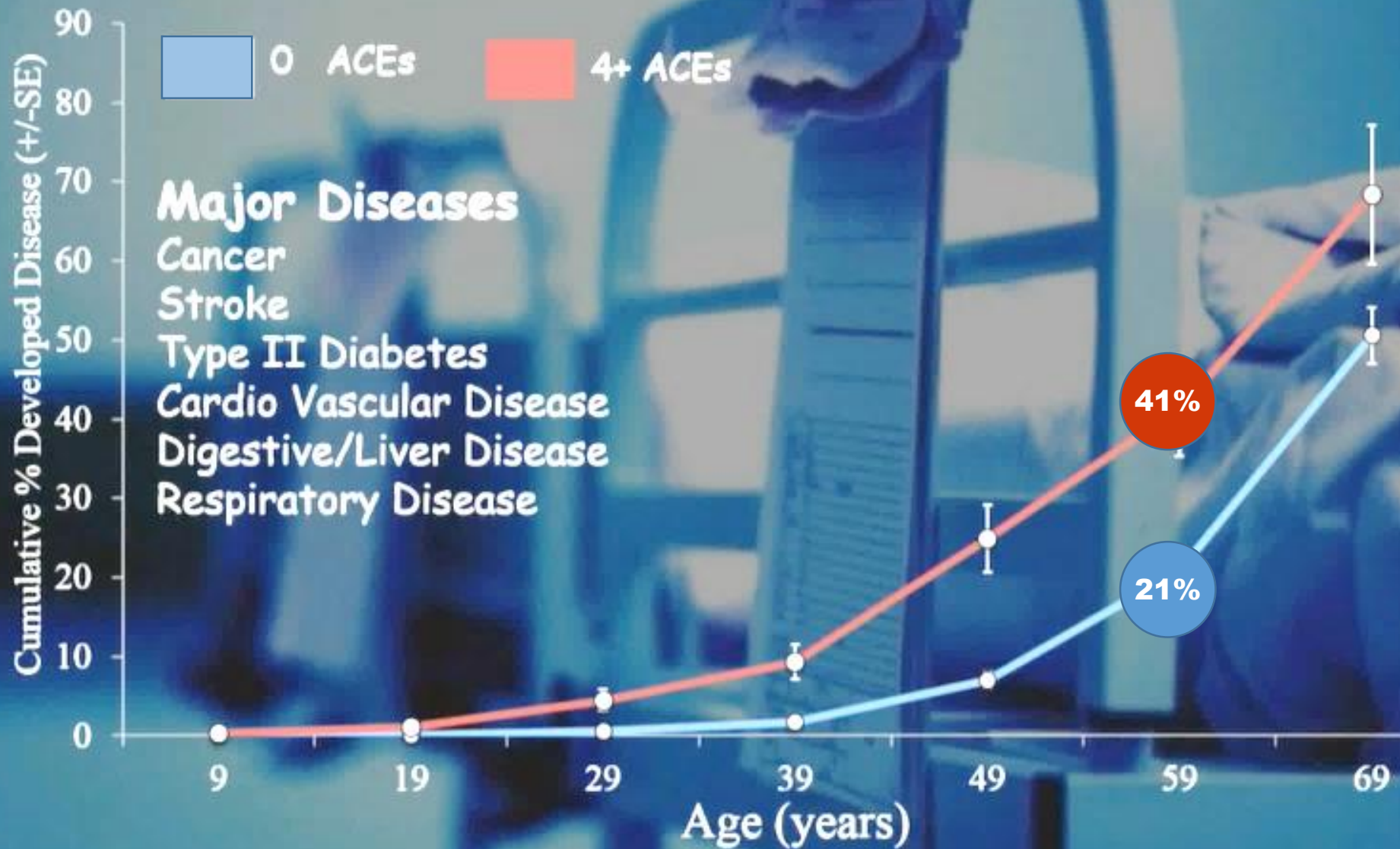
ACEs – Adult mental well-being

Over the past two weeks, compared to people with no ACEs, those with 4+ ACEs were also:

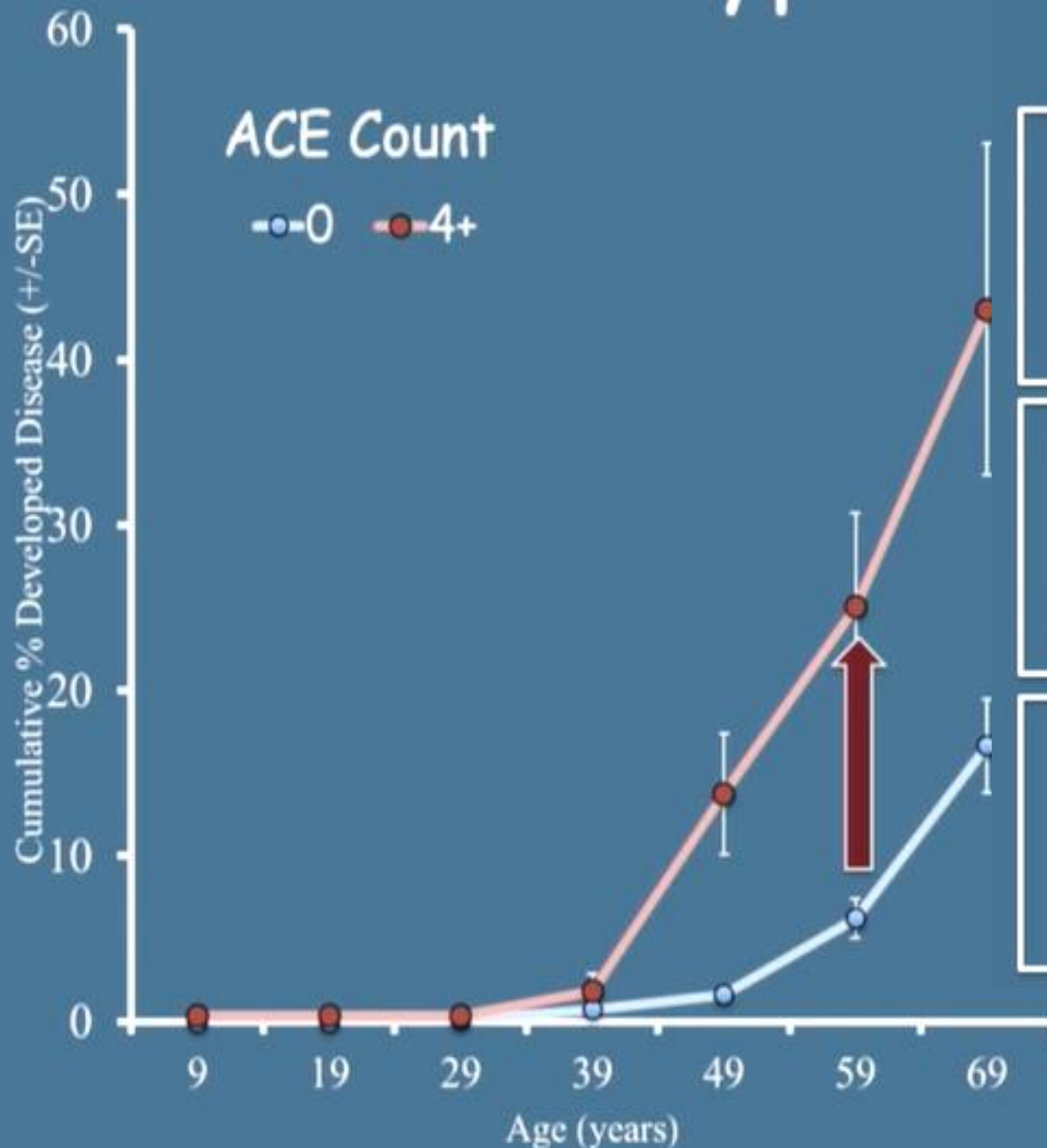
- 3 times more likely to have never or rarely felt relaxed
- 3 times more likely to have never or rarely felt close to other people
- 4 times more likely to have never or rarely been thinking clearly
- 5 times more likely to have never or rarely to have dealt with problems well
- 5 times more likely to have never or rarely been able to make up their own mind about things
- 6 times more likely to have never or rarely felt optimistic about the future
- 6 times more likely to have never or rarely felt useful

Wales: Length of Healthy Life

Individuals Diagnosed with a Major Disease by Age (%)



Diabetes Type 2



4 or more vs.
No ACEs

4x



more likely to develop
Diabetes (Type 2)

3x



more likely to develop a
Respiratory Disease

3x

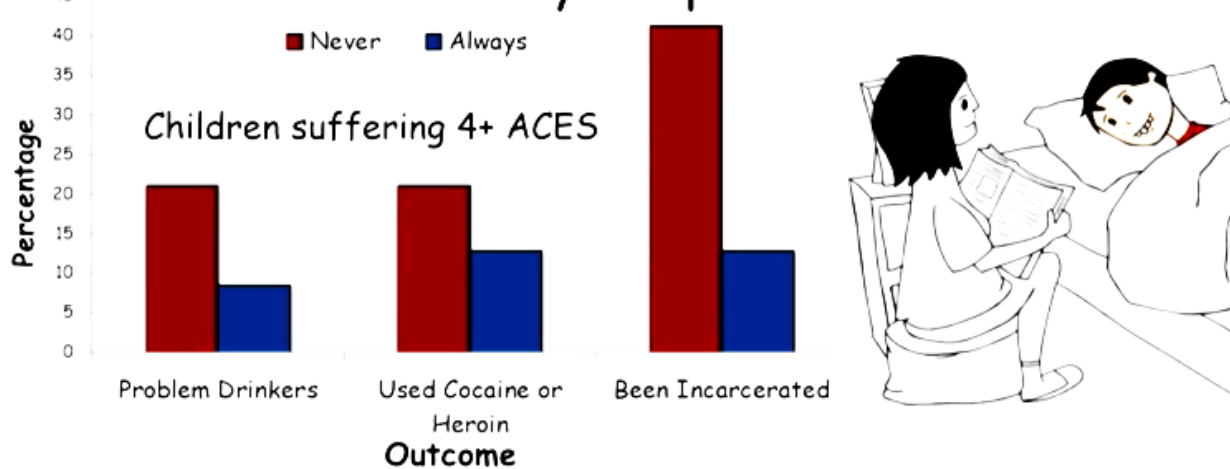


more likely to develop
Heart Disease

4+ACEs....it's not all over!

1. Trusted Adult

As a child, there was adult you trusted and could talk to about your problems?



2. Trauma informed Services

Adverse Childhood Experiences are not confined to the under privileged – they are all around us.

Bad stuff is common, it happens to everybody.



Video Links:

Experiences Build Brain Architecture

<https://www.youtube.com/watch?v=VNNsN9IJKws&list=PL0DB506DEF92B6347>

Animation

<https://www.youtube.com/watch?v=XHgLYI9KZ-A>

TED Talk referred to in presentation:

How childhood trauma affects health across a lifetime

Dr Nadine Burke Harris

<https://www.youtube.com/watch?v=95ovIJ3dsNk>