



# Our Stress Response

## System, Symptoms and Scenarios

Handout prepared for: The Resilient Clatsop County and Columbia County Childhood Trauma Informed Networks

- Topics Included:
- Key concepts to remember
  - The body's stress response
  - Connection to the concept of Trauma
  - N.E.A.R. Science and TIC

### Key Concepts:



Excitement and Stimulation!



Acute Physiological Stress



Chronic Stress



Social and Psychological Stress



Allotasis



Allotasis video

A **stressor** will be anything that will make our bodies lose the allostatic balance

**Stress response** will be the body trying to restore the allotasis

### The Body's Stress Response

A full body response guided by the autonomic nervous system through:

- The Sympathetic Nervous System
- The Parasympathetic Nervous System



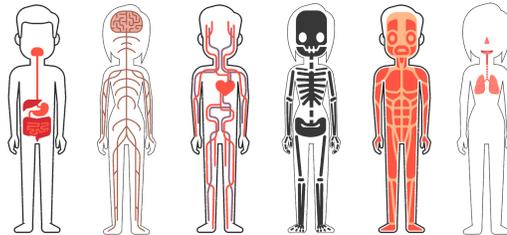
## Whole body stress response to regain allostatic balance:



**Energy:** Storage to muscle  
**Delivery:** Fast and strong  
**Breathing:** Increased oxygen  
**Pain:** Blunt  
**Senses:** Sharper  
**Memory:** Can improve



**Energy:** stop storing  
**Digestion:** slow down  
**Repair:** stop/slow  
**Immunity:** inhibit  
**Libido:** decrease  
**Pregnancy or Ovulation**



## Stress activation and body functions:

### Pain:

Protects from tissue damage  
 Moldable, interpretative  
 Context dependent (dentist)

### Sleep:

Lack of sleep causing stress  
 Stress causing lack of sleep  
 Quality AND Quantity

### Reproduction:

Decreased testosterone  
 Irregular menstrual cycle  
 Libido decline

### Memory:

Disrupted by stress  
 Mild to moderate: improve  
 Severe: declines

### Aging:

Capacity to respond to stress  
 Capacity to turn off stress  
 Wear and tear, plus context

### Inflammation:

Arteries: sediment  
 Inflammatory Bowel Disease  
 Mental illness

## Trauma: the 3 Es

### EVENT

Could be an event, series of events or set of circumstances



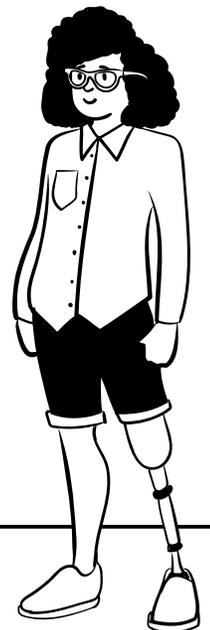
SAMHSA

### EXPERIENCE

These are experienced by the person as physically or emotionally harmful or life threatening

### EFFECT

They have lasting adverse effects on the way the person functions and their mental, physical, social, emotional or spiritual wellbeing



# Trauma: represents many experiences

## Individual or Collective

Can be experienced by a single person as well as a collective

## One or Multiple

Can happen as the result of one event, or multiple events overtime

## Various Ways

Trauma and Toxic Stress can be experienced differently by different people

## Past and Future

Trauma can be experienced by one generation, but the effects can pass from one generation to the next

## Direct or Indirect

Trauma can be the result of a direct experience, or due to indirect contact with others who experienced it

## People, Places and Organizations

Trauma can be the result of interactions with others, as a result of interactions with systems and institutions

## NEAR Science and Stress

### Neurobiology

Activation (E+E+E) becomes Trauma



Physiology of the brain changes



Experience of the trauma is different for every person



- Threat perception is enhanced. The person sees danger where others see normal things
- System used to distinguish what is relevant now and what you can dismiss is affected
- Connection with sense of self, with your own experience is blunted. Internal response of self is dampened

### Epigenetics

How our behaviors and environment can cause heritable changes that affect the way our genes work.

- Toxic stress and adversity can be transmitted and experienced across generations through heritable genetic makers
- The impact of historical and collective trauma for populations experiencing trauma for generations
- The power of behaviors and environments to alter gene expression

### Adverse Childhood Experiences

Traumatic experiences during childhood can negatively affect a person throughout their life.

### Resilience

Is the capacity to navigate towards psychological, social, cultural and physical resources that can sustain well-being and the capacity to individually and collectively negotiate for these resources to be provided in culturally meaningful ways. (Adapted from Dr. Michael Ungar, Resilience Research Centre)



Resilience Research Centre

