



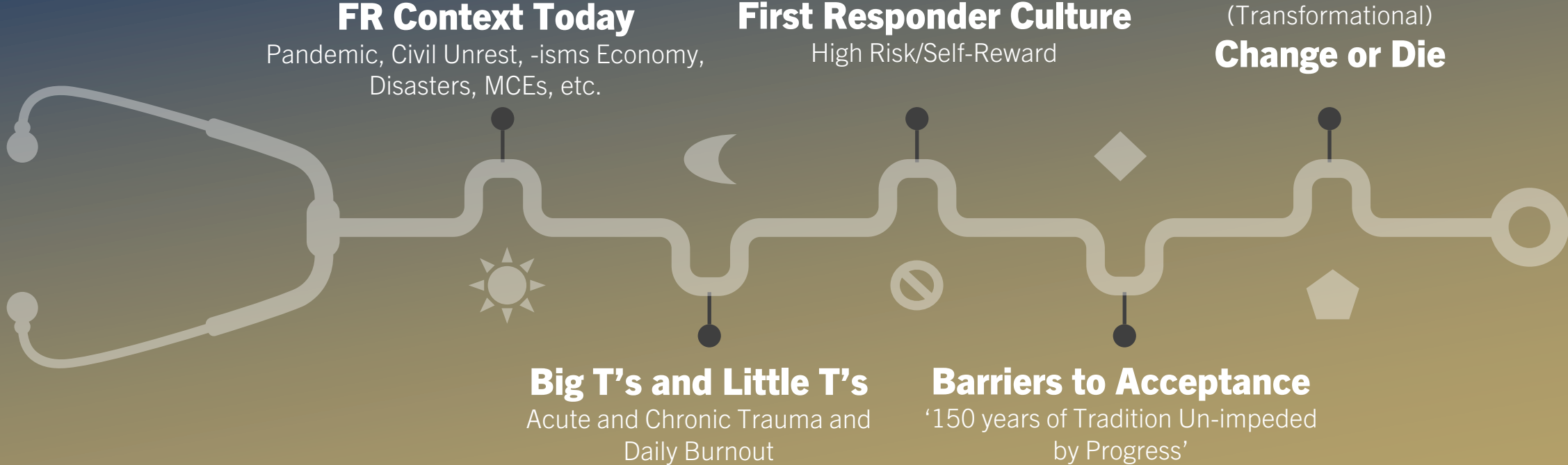
First to Respond, Last to Seek Help

First Responder Mental Health and Susceptibility to Addiction

Dr. Stephen Odom, PhD



First Responder Mental Health



Line of Duty Deaths & Suicide

(high probability underreported)

#1

54% higher rate of suicide than the general population (2021)

Small Departments: Rate is 3x higher than Depts >500

#2

#3

2018: LE: 159 Suicides; 145 LODD
2019: LE: 228 Suicides; 132 LODD
2020: LE: 172 Suicides; 378 LODD
2021: LE: 151 Suicides; 500 LODD
2022: LE: 200 Suicides; 226 LODD

2018: FF/EMT: 103 Suicides; 64 LODD
2019: FF/EMT: 139 Suicides; 62 LODD
2020: FF/EMT: ~110 Suicides; 96 LODD
2021: FF/EMT: 90 Suicides; 70 LODD
2022: FF/EMT: 150 Suicides; 92 LODD

1. NFPA 2020
2. FBI, 2020
3. McAward, 2022)

The World Today

In U.S., Confidence in Police Lowest in 32 Years. ¹ 18% of Americans have very little or no confidence in police.

8/10

More than 8/10 of police officers say the public does not understand the risks & challenges of their job.²

2/3 of officers perceive that the fatal police shootings that prompted demonstrations are isolated incidents.²

2/3

48%

48% Confidence in Police: Lowest ever measured: Dominated by higher highs & Lower lows ³

1. Gallup study, 2017 <https://news.gallup.com/poll/183704/confidence-police-lowest-years.aspx>

2. Pew Research Center Survey (<http://www.pewsocialtrends.org/2017/01/11/behind-thebadge/>)

3. Forbes/Gallup Poll 2020

Law Enforcement Today

Seattle: 1400 Sworn down to 1080: 180 left in 2020, 66 YTD 2021

+18%

Resignations: Up year over year²

Dramatic decreases in hiring for large departments;
dramatic increases in smaller departments



45%

45% Increase in Retirements³

1. Gallup study, 2017 <https://news.gallup.com/poll/183704/confidence-police-lowest-years.aspx>
2. Pew Research Center Survey (<http://www.pewsocialtrends.org/2017/01/11/behind-thebadge/>)
3. Forbes/Gallup Poll 2020/policeforum.org



Shift Work



**Sleep
Deprivation**



**Inadequate
Training**



**Technical
Problems**

**Bad
Partners/
Crews**



**Malicious
Coworkers**

**Inconsistent
Policies**



**Those
Bad Calls**



**Leadership
Challenges**

The Annoying Nine

LE, FIRE/EMS, Dispatch

The Terrible Ten



Line-of-duty
death



Suicide of
colleague



Serious
line-of-duty
injury



Disaster /
Multi-casualty
incident



"Not saving"
Someone



Significant
events involving
children



Prolonged
incidents
especially with
loss of life



Personally
threatening
situations



Events with
excessive
media interest



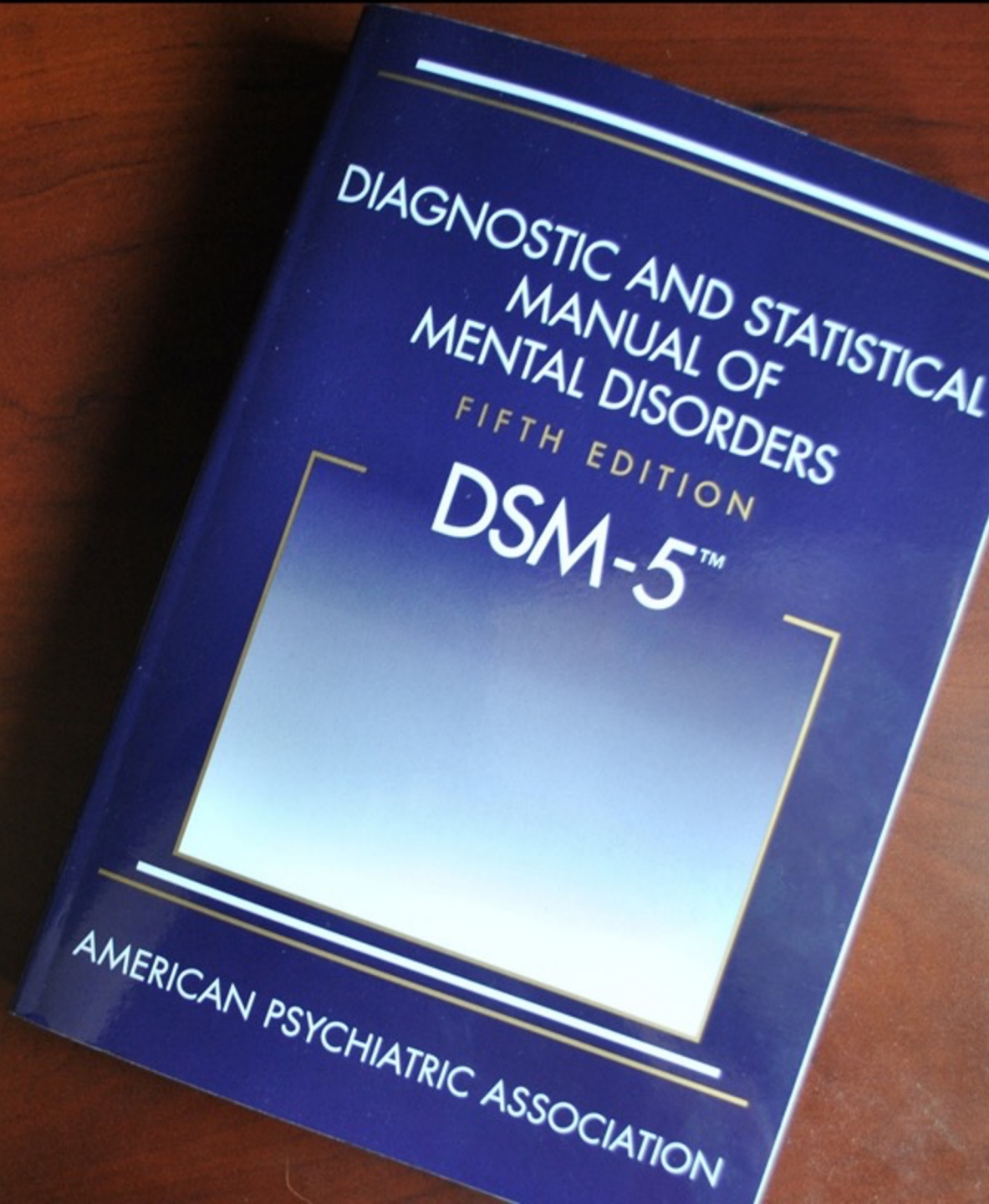
Any highly
distressing
event

Overworked And Underserved (Continued)

- Protective service occupations **have the highest incidence rate of occupational injuries and illnesses than any other occupation.**
- For police officers and sheriff's patrol officers: **violence accounts for over 50% of occupational injuries and illnesses** (including mental health and trauma).
- For firefighters, over 55% of incidents are caused by **overexertion and bodily exhaustion.**¹

Dispatchers and Telecommunications:

- **24.6%** of 808 telecommunications from through the US acknowledged symptoms consistent with **PTSD.**
- **54.7%** of 911 TCs are obese
- **24%** acknowledge symptoms consistent with a diagnosis of **Major Depression.**²



The Diagnostic and Statistical Manual of the American Psychiatric Association, Fifth Edition (DSM-5, 2014) defines a traumatic event as a stressor in which:

- A. The person has experienced, witnessed, or been confronted with an event or events that involve actual or threatened death or serious injury, or a threat to the physical integrity of oneself or others.
 - I. Experiencing, witnessing, close friend/family, repeated/extreme exposure to aversive details
- B. Intrusion Symptoms
- C. Avoidance Symptoms
- D. Negative thinking and mood
- E. Arousal & reactivity:
 - I. Irritability/anger outbursts, reckless/self-destructive, hypervigilance, startle response, problems with concentration, sleep issues

1st Responder Job Description?

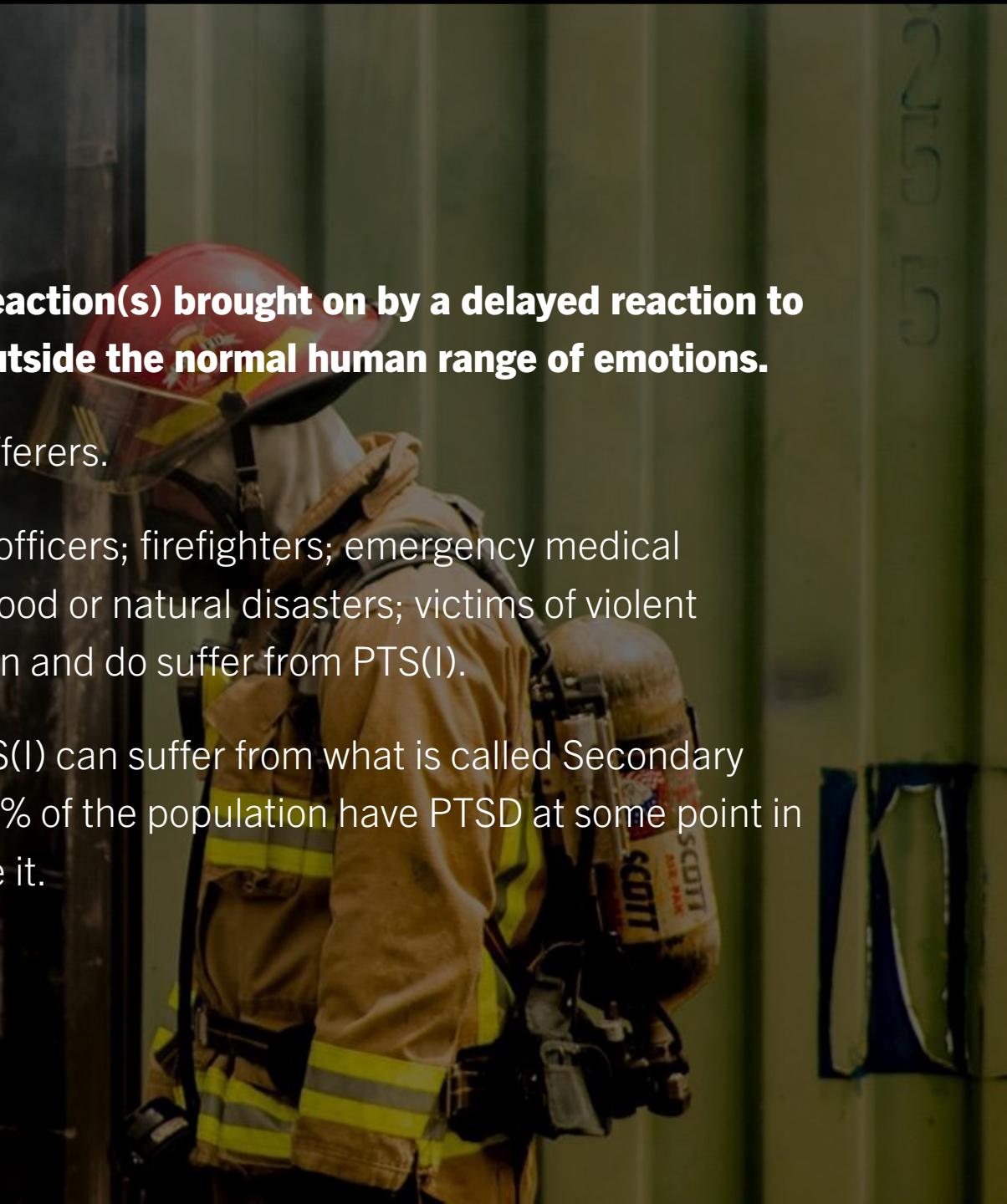
Post Traumatic Stress Injury

Are an unconscious, automatic, physical and emotional reaction(s) brought on by a delayed reaction to severe physical and psychological experiences that are outside the normal human range of emotions.

Veterans of combat are the most publicized group of sufferers.

ANYBODY can be affected by PTS(I): Law enforcement officers; firefighters; emergency medical personnel; survivors of life-threatening accidents, fire, flood or natural disasters; victims of violent crime; and victims of domestic, child or sexual abuse can and do suffer from PTS(I).

Even family members and friends of those who have PTS(I) can suffer from what is called Secondary Traumatic Stress Disorder (STSD). It is believed that 7-8% of the population have PTSD at some point in their lives, while 20-30% of First Responders experience it.





Brain signals and chemical reactions used to keep someone safe signals can be toxic for the brain!

STRESS INCIDENTS ICS:

Amygdala – Lookout in the field → Dispatch →

Hypothalamus – 1st Response

Pituitary – Verification with the Chief – Quality Control (Committees)

Adrenals – Station/Team - Stress Chemicals – Responders, Tools, Tactics

STRESS CHEMICALS:

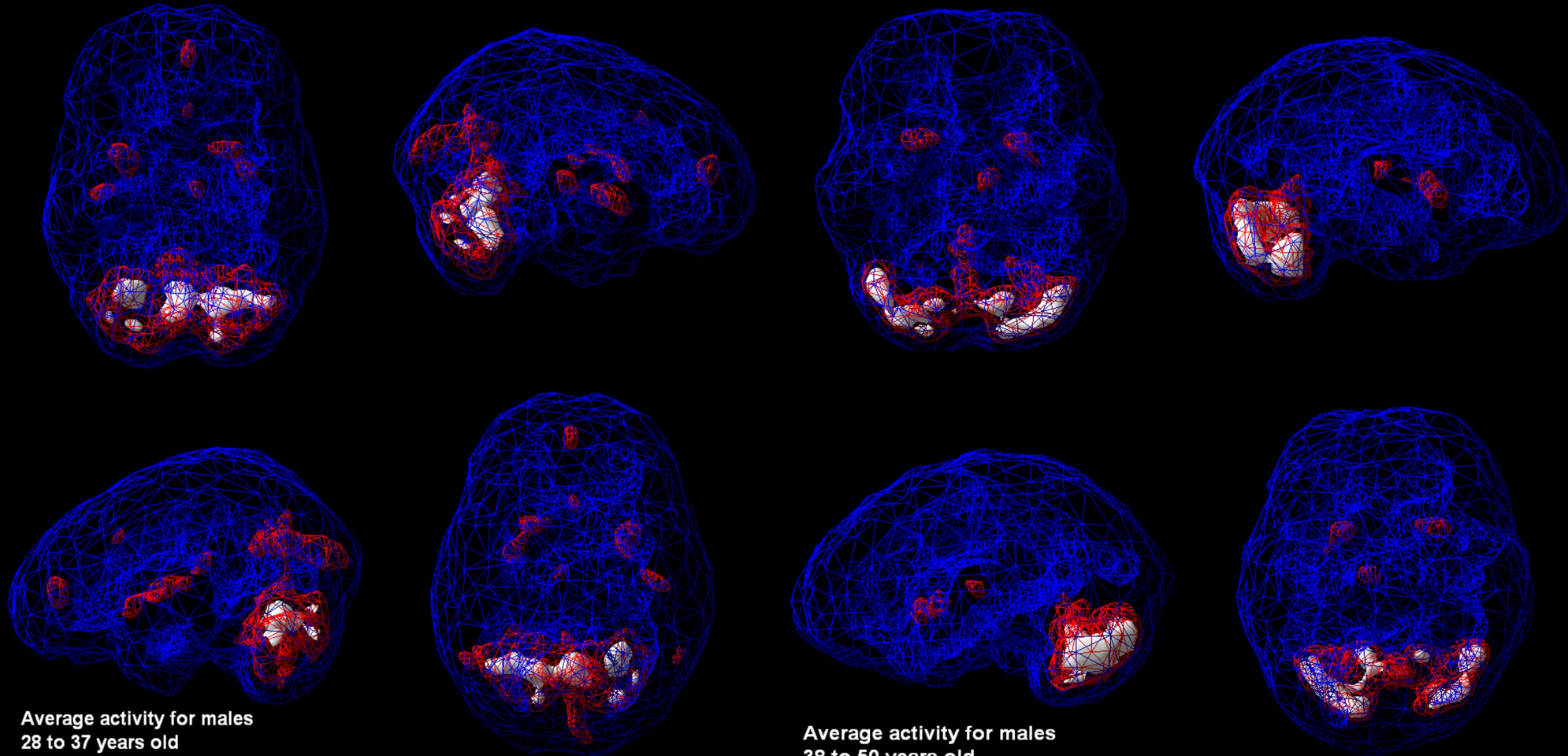
Adrenaline – 1st Response (Amygdala Hypothalamus Adrenals)

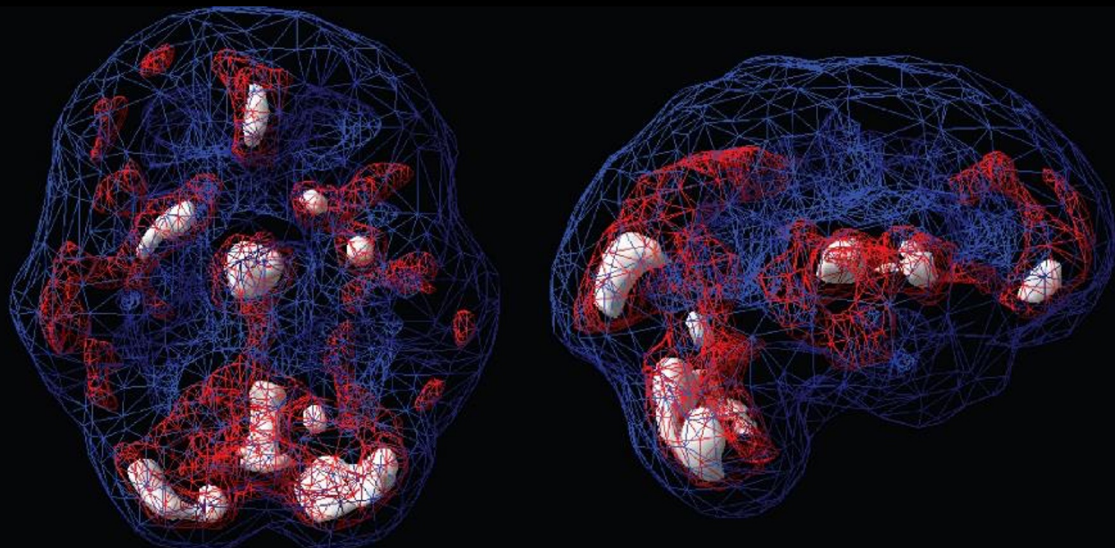
Norepinephrine – 2nd Alarm/Backup

Cortisol (stress hormone) – Ambulance, Hospital Stabilization, and Discharge
(Amygdala → Hypothalamus → Pituitary → Adrenals)

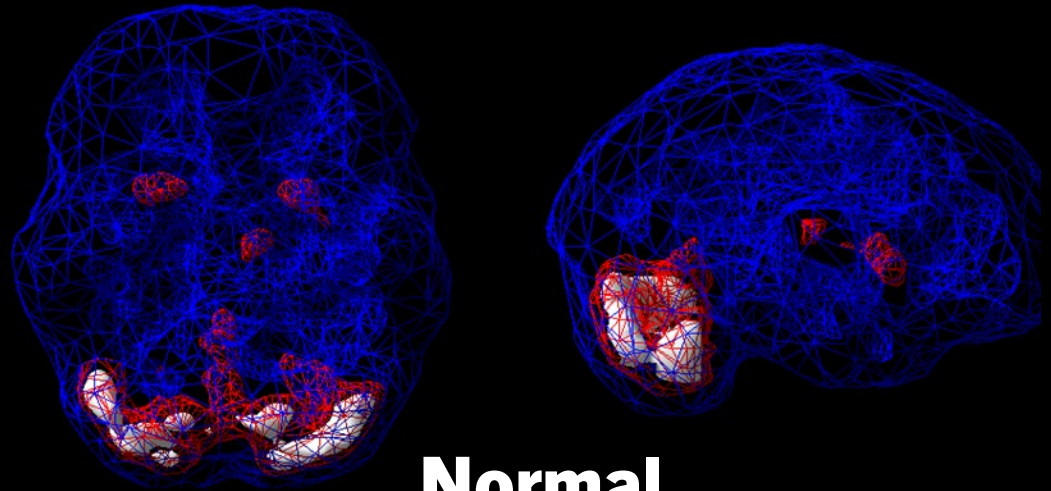
- **Adrenaline:** the mega surge increases encoding of implicit memory. which is: emotional memory (fear of dog attacking me), perceptual memory (imprinting of the perception) and procedural memory (encoded actions) and bodily sensation (feeling in the body of the bite)
- **Cortisol (stress hormone):** blocks the hippocampus (memory and emotion regulation center) and shrinks it when released over extended periods of time. is neurotoxic for a developing brain and can inhibit making new synaptic connections, destroys healthy synapses, kills neurons and damages the region overall.

Normal SPECT Scans Age 28-50 Males

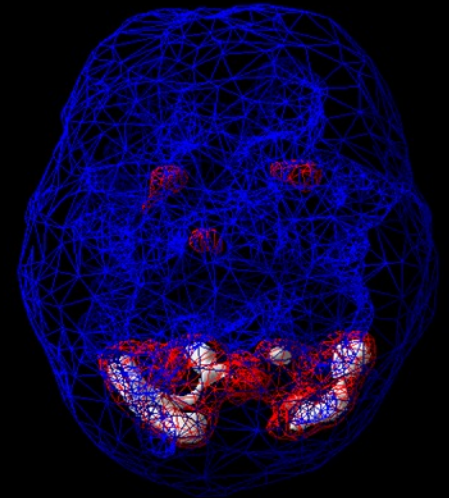
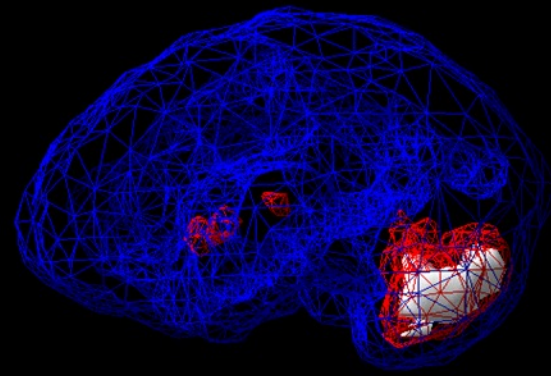
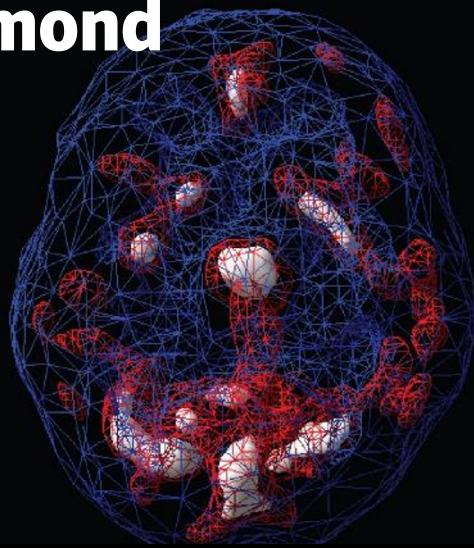




PTSD Diamond



Normal



Post Traumatic Stress Injury

The following behavior/reactions are some effects of PTSD (not a complete list, each person reacts differently, and reaction differ due to the source of the trauma):

Flashbacks, or reliving the traumatic event(s) for minutes or even hours

Feelings of shame or guilt

Having upsetting dreams about the event(s)

Trying to avoid thinking or talking about the event(s)

Feeling emotionally numb

Irritability or anger

Poor relationships

Feeling hopeless about the future

Self destructive behavior - use of drugs or drinking too much

Having trouble sleeping

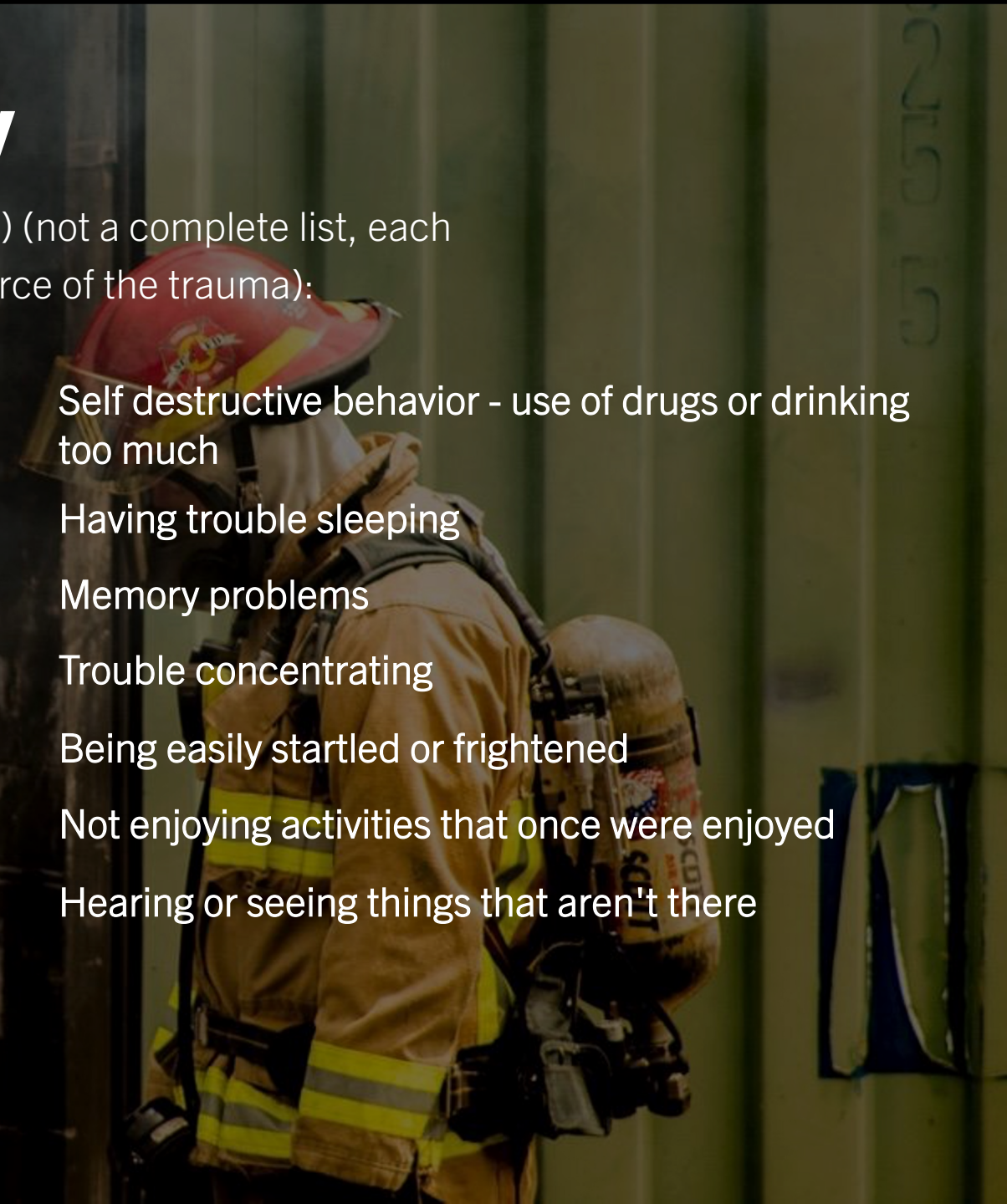
Memory problems

Trouble concentrating

Being easily startled or frightened

Not enjoying activities that once were enjoyed

Hearing or seeing things that aren't there



Victims of the Profession

- On duty the First Responder presents as: alive, alert, energetic, involved and humorous.
- Off duty the First Responder presents as: tired, detached, isolated and apathetic, or needing excessive stimulation.
- The failure to cope in a healthy way leads to finding unhealthy coping mechanisms, of which substance use and substance abuse is most common.

ADDICTION THEORY: WHY & HOW

Pervasive Theories

Morality Theory

Won't drink responsibly

Weak moral character

Lacks willpower



ADDICTION THEORY: WHY & HOW

Deviance Theory

Impervious to Analysis

Incurable

Criminal

Horrific & Laughable



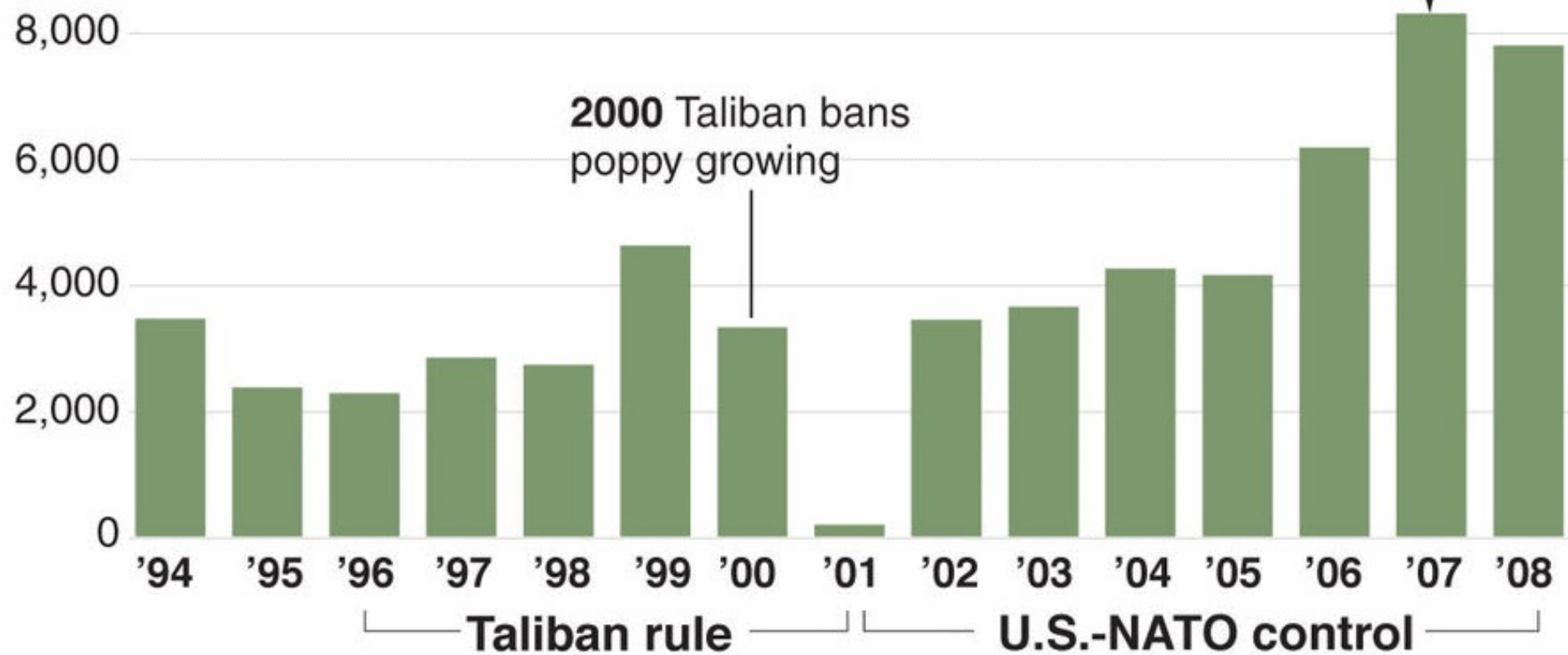
ADDICTION THEORY: WHY & HOW

Interdict

We should provide the
Our tax money

Afghan production

Estimated opium production, in metric tons



Source: McClatchy Washington Bureau, U.N. Office on Drugs and Crime

Graphic: Judy Treible

*Heroin is made from opium

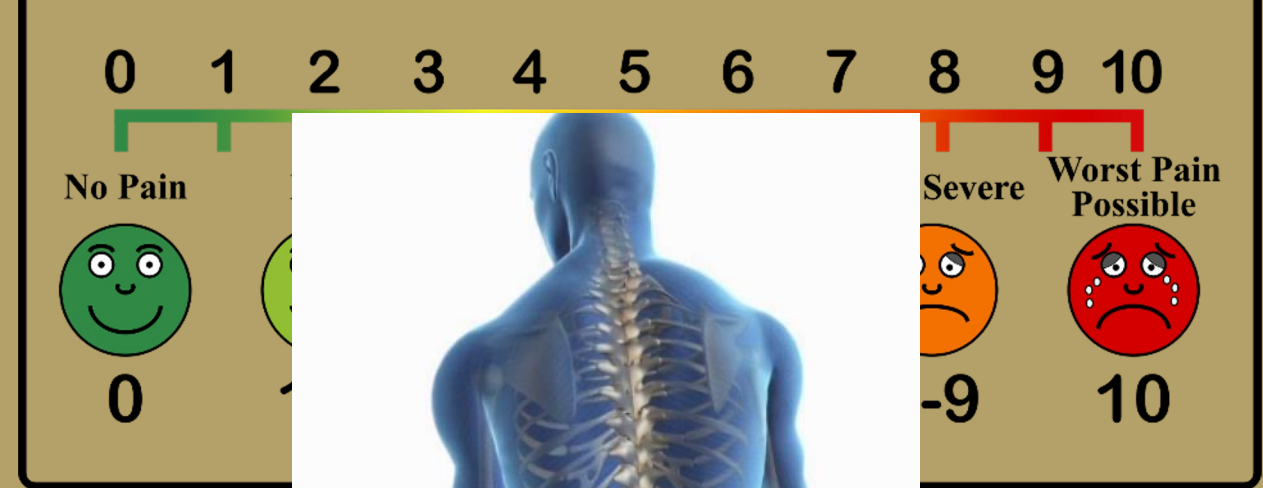
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Graphic Extracted From Larger Graphic by Sivaram Velauthapillai



Stealth Addiction

- Oxycontin 1995
- TJC: 1999 National Patient Safety Goal
 - Pain is the 5th Vital Sign
- WHO: February 2007
- Medication Addiction > “all illegal drugs”
- May 2007: Purdue Pharma 1st \$600 Mil
- Workers Compensation System
- Symptom Management



Theory 4: Biogenetic psychosocial

3 Major Factors

1. Nature or nurture?
2. What makes the brain that way? Structure? Function?
3. Why can ingest “chemical” but act and feel normal?

Animal Studies

Poor Little Alcoholic Rats



Rats on Crack



Human Research: Stockholm Twin Study

Family History
FH Positive - FH Negative
TYPE I and TYPE II

Type I = ~40% probability
Type II = ~90% probability
Control = ~10% probability

Human Research: Stockholm Twin Study

		Adoptive Family	
		FH(-)	FH(+)
Bio-Family	FH(+)	50%	50%
	FH(-)	10%	25%

Human Research: Freshman Rats

What is it that is different?

- EEG differences
- Kinesthetics

Human Rats (aka college freshman)

Self-perceived intoxication:

- FH(-): 1 drink = mild intoxication
- FH(+): 2.7 drinks = mild intoxication

Body Sway

- FH(-): 2.6 drinks = mod. to severe impairment
- FH(+): 2.8 drinks = mild impairment



Biogenetics

Why can they ingest chemicals but feel normal?

NEUROPHARMACOLOGY

- Meso-Limbic Dopamine System

Emotional Dysregulation

Pleasure Center (nucleus accumbens/MFB)

- Tolerance
- Euphoria... Avoiding dysphoria

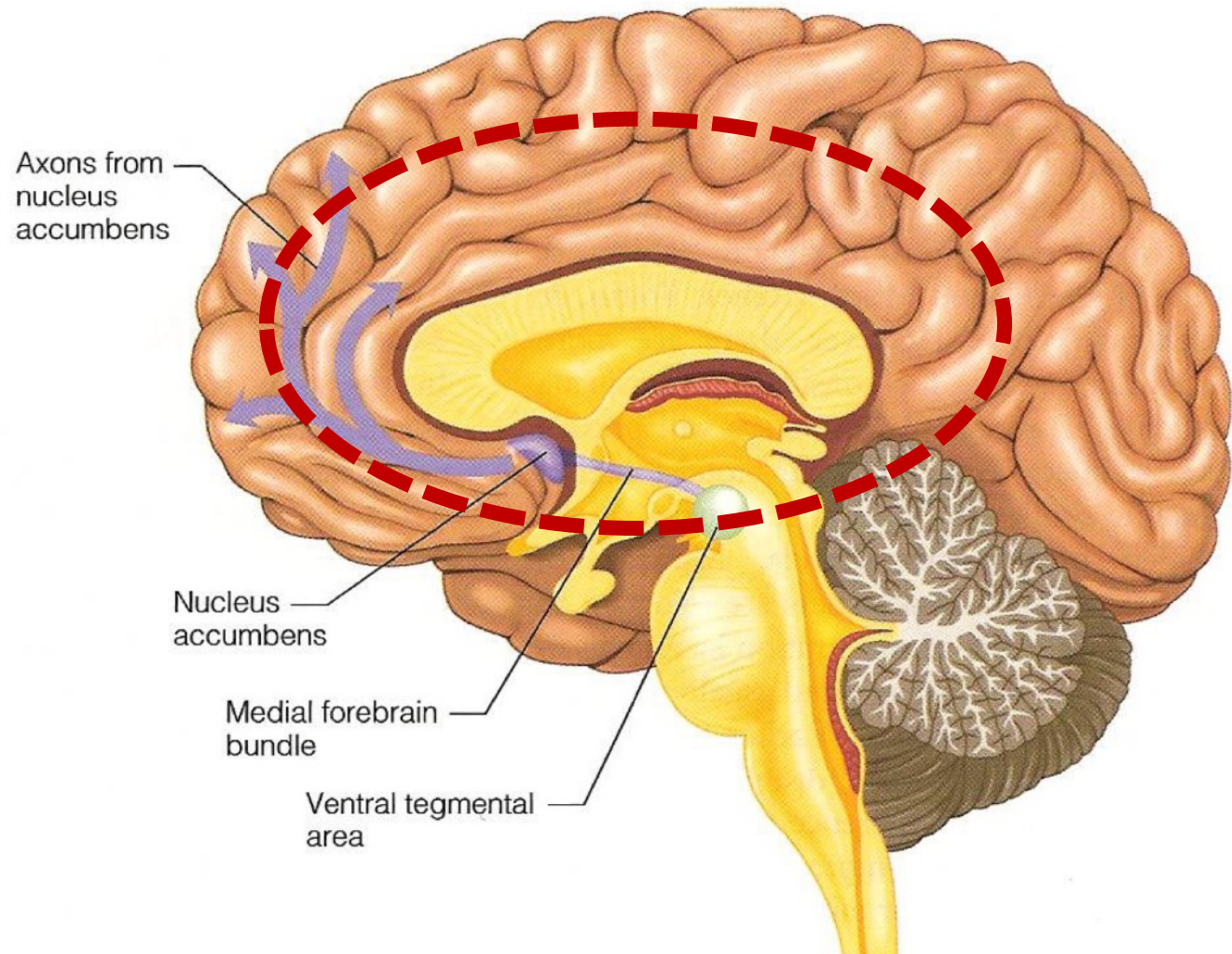
Survival/Fight or Flight

- Hypersensitivity

Not just dopamine

- Glutamate, ACH, GABA, Serotonin, Nor-adrenaline, etc.

Biogenetics



The Psychological Pathway to Addiction: Self-Medication Model



Psychoanalytic
Theory
Vs Detox Tree



Sanitariums



Birth of AA



WWII: New
Addictions



Hazelden: 35%



1950's
psychotropics



Relapse
Dual Diagnosis
CBT



Stats: 50/65

Socio-Cultural Pathway

If it's in your environment

- Legislation
- 1919 – Volstead Act: 18th Amendment: Prohibition
- Rates: 12% - 25%
- Mob: Irish & Italian
- NASCAR
- 1969: Operation Intercept
 - Cannabis < 50%
 - Heroin >500%
- Mickey Mouse



Socio-Cult

If it's in your

- Culture Influences Use
- Northern vs Southern Europe
- Religion
- Native Americans
- Occupation: Public Safety & Health
- Women
- Media and Advertising



OUR FAMILY OF COMPANIES

