

Co-Occurring Psychiatric and Substance Abuse Disorder in Children and Adolescents: Diagnostic Challenges and Treatment Options for Los Angeles County Psychiatrists

Youth with Trauma Histories, PTSD and Co-Occurring Substance Abuse

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Goals

- Understand the impact of child and adolescent traumatic stress on the development and behavior of youth.
- Understand the relationship between child and adolescent traumatic stress and co-occurring disorders, primarily substance abuse.
- Learn about assessment and treatment strategies for youth affected by trauma and substance abuse.

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Importance of Topic

- Prevalence of traumatic experiences
 - Youth at highest risk for being victims of violent crime (3x adult rate)
 - Exposure among incarcerated youth is higher across interpersonal violence trauma categories and from childhood through adolescence
(Wood et. al., 2002)
- Significant impact of trauma on proximal and distal development
 - Disturbances in acquisition of developmental competencies
 - Relying on security of protection by parents/caregivers
 - Emotional regulation
 - Specific learning task eg. reading
 - Making a best friend (“chum”)
 - Self-efficacy in face of danger
 - Understanding human motivation
- Correlation of trauma histories, PTSD, and substance abuse
- Developmental issues in regard to appraisal and response to danger
 - Reckless and high-risk behaviors
 - Drug experimentation

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The Link between Violence Exposure and Chronic PTSD with:

- Substance Abuse
- Reckless Behavior
- High-risk Sexual Behavior
- Gang Participation
- Disturbances in Academic Functioning

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(Kilpatrick, Saunders & Resick, 1998)

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Cultural Parameters

- Risk of trauma and loss exposure
- Trauma responses
- Risk of substance abuse
- Strengths and resilience factors in family, peer group and community
- Help seeking behavior
- Attitudes toward intervention components
- Youth culture

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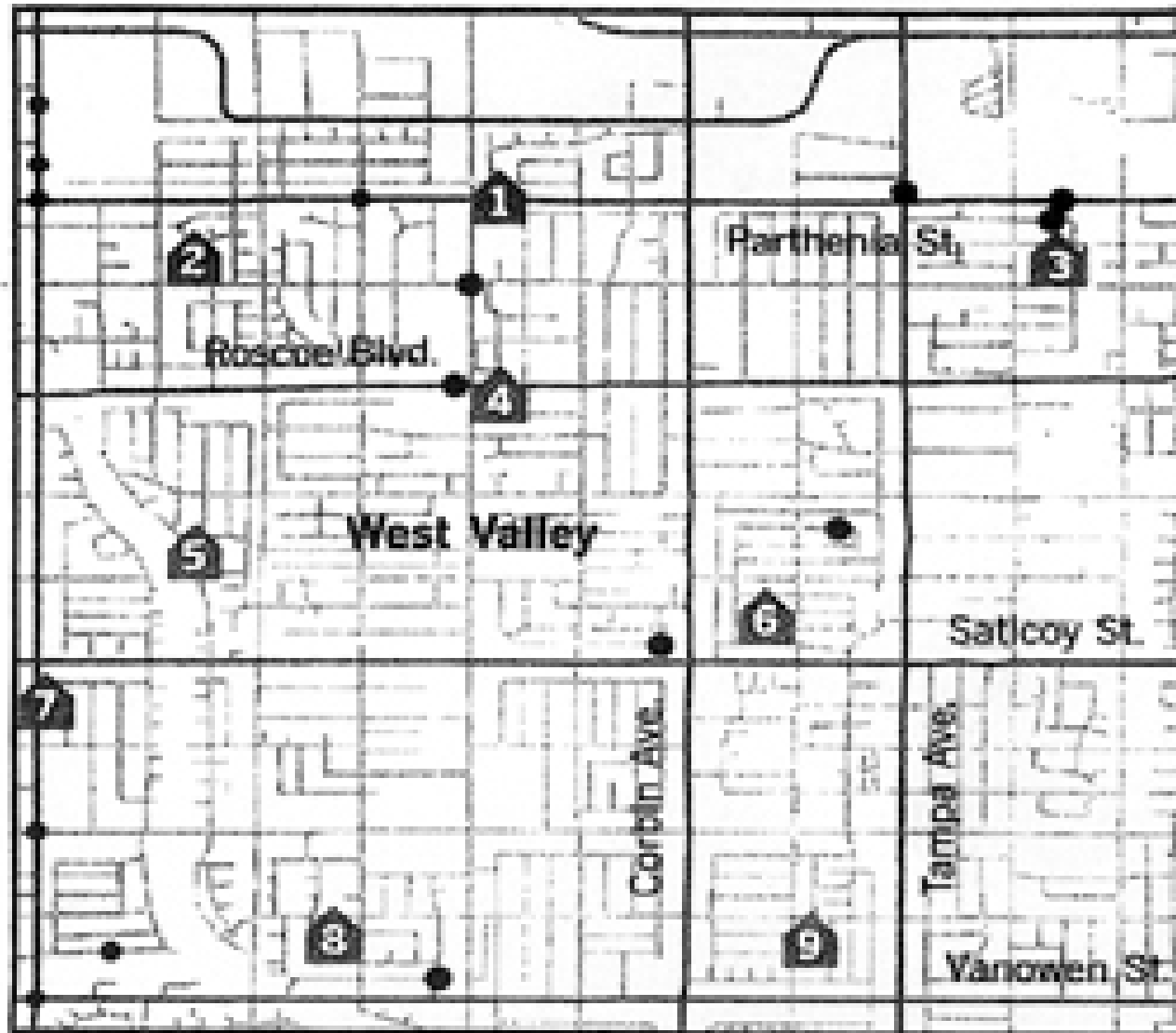
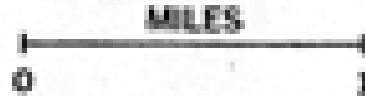
Three Correlations Related to Exposure

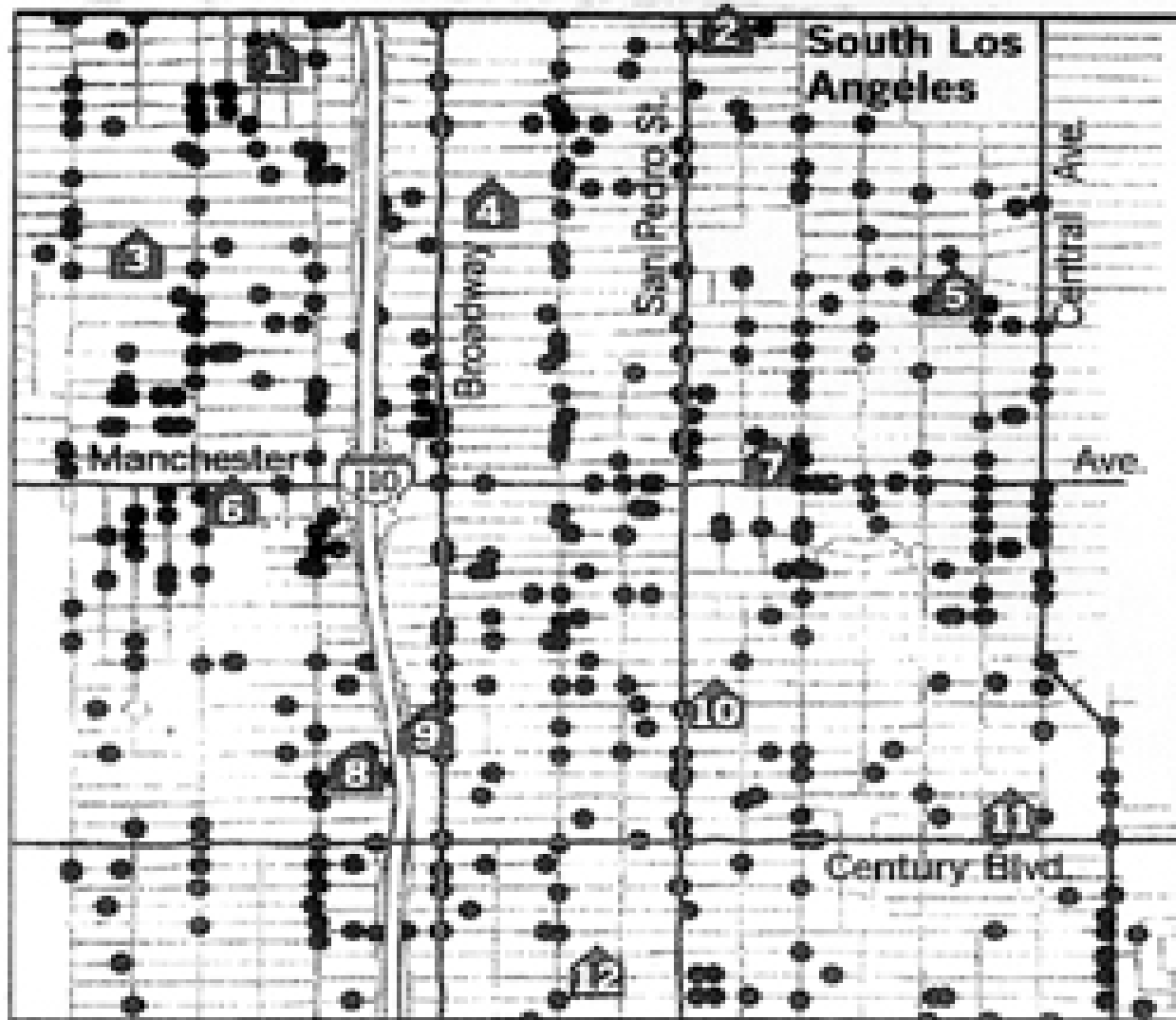
- Substance use associated with exposure
 - Substance use with high risk behavior
 - Substance use before committing violence
 - Risk of violent victimization and severe accidental injury/loss of friends related to substance use

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• **Unsolved murders**  **Schools**





* Blocks of 0.25 square miles or greater are not shown.

Sources: Los Angeles Police Department, U.S. Census Bureau, Los .

Traumatic experience, subsequent distress and substance abuse

- Acute change in substance use in response to distress
 - Life threat
 - Traumatic Grief
 - Posttraumatic reactions
 - Pain management related to injury
 - Change in future expectations:
 - » Disillusionment with life circumstances
 - » Pessimistic view of future
 - » Change in moral perspective

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Trauma-related Investment in the Social Contract

Randomized survey of traumatic expectations among youth in
California Probation Camps (selected findings n= 200)

	Totally agree
Life can change unpredictably from good to very bad	73%
A person like me can die easily, anytime unexpectedly	52%
It is easy for people to become violent or cruel	61%
Laws do not always protect you	71%
I know what it feels like to want revenge	71%

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Maladaptive Coping over Time

- To PTSD symptoms
- To Traumatic Grief
- To Depression
- To course of distal trauma and loss reminders
 - » Anniversary
 - » Daily
 - » Episodic
- To worsening of other pre-existing conditions
- To a cascade of ongoing adverse life circumstances
- Increased marketing of drugs to vulnerable traumatized and bereaved youth populations

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Maladaptive Coping over Time to Early Childhood Abuse/Neglect

- Interaction of genetics and non-shared environment, including epigenetic changes
- Cumulative model of trauma experiences and developmental disturbances – toward a trauma developmental disorder
- Interaction with onset of other disorders in adolescence and young adulthood

Adverse Childhood Experiences (ACE)

- Adverse Childhood Experiences (ACE):
 - Emotional, physical or sexual abuse
 - Domestic violence against the mother
 - Household member with mental illness
 - Household member with substance abuse
 - Household member ever imprisoned
- Predict 10 leading causes of adult death/disability

(ACE Study, Felitti et al. 1998)

Estimates of the Population Attributable Risk* (PAR) of ACEs for Selected Outcomes in Women

<u>Mental Health:</u>	<u>PAR</u>
Current depression	54%
Depressed affect	41%
Suicide attempt	58%
<u>Drug Abuse:</u>	
Alcoholism	65%
Drug abuse	50%
IV drug abuse	78%
<u>Promiscuity</u>	48%
<u>Crime Victim:</u>	
Sexual assault	62%
Domestic violence	52%



Interaction of Early Childhood Trauma with Subsequent Psychiatric Disorders: Selected Findings

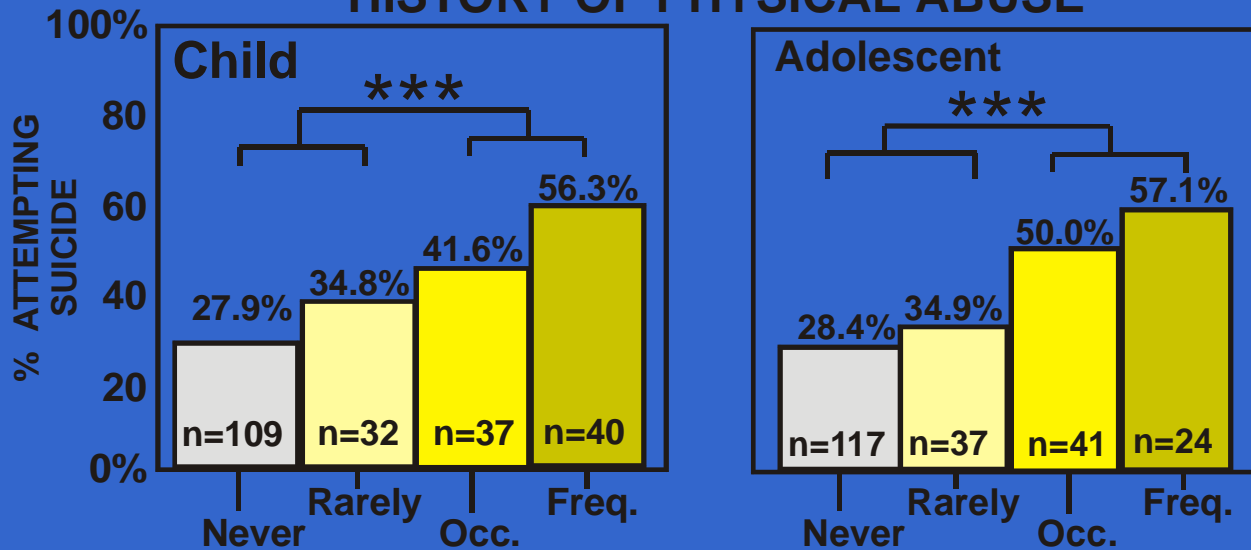
- Early physical and sexual abuse associated with adverse course of bipolar illness. (Leverich et al., Biol. Psych., 2000)
 - Higher incidence of early onset and faster cycling
 - Higher rates of substance abuse
 - Doubling of risk for suicidal behavior
 - Dose of exposure dependent
- Child trauma history most significant environmental contribution to risk of adolescent substance abuse
 - Strong gene-environment interaction

(The Programmatic Research on Co-morbid Conduct and Substance Abuse Problems, University of Colorado School of Medicine)

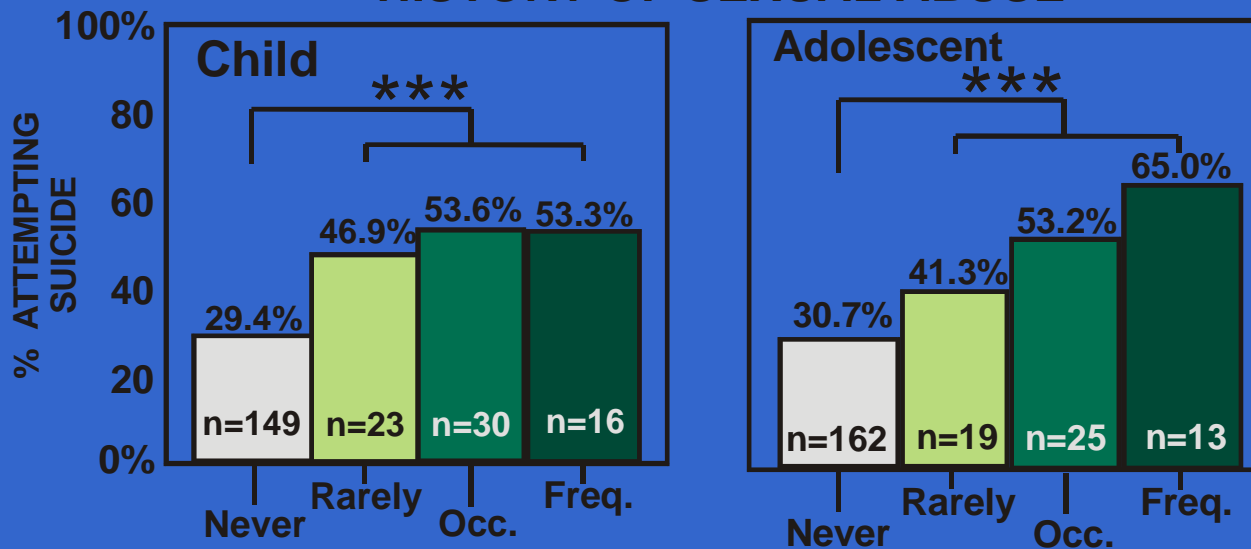
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Suicidality Increases with Rate of Recurrence of Abuse

HISTORY OF PHYSICAL ABUSE



HISTORY OF SEXUAL ABUSE



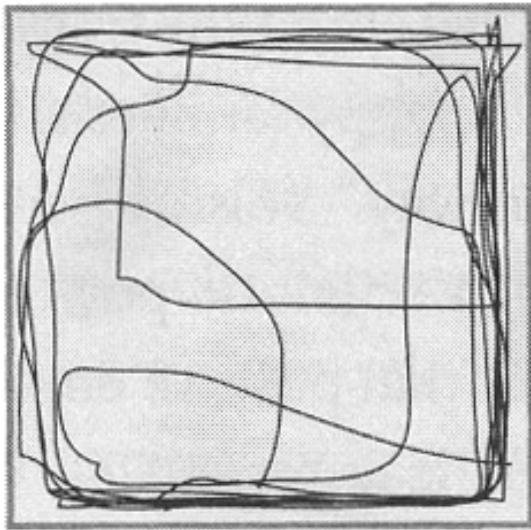
Modern Neurobiology

Paradigm shift in the understanding of trauma-related substance use

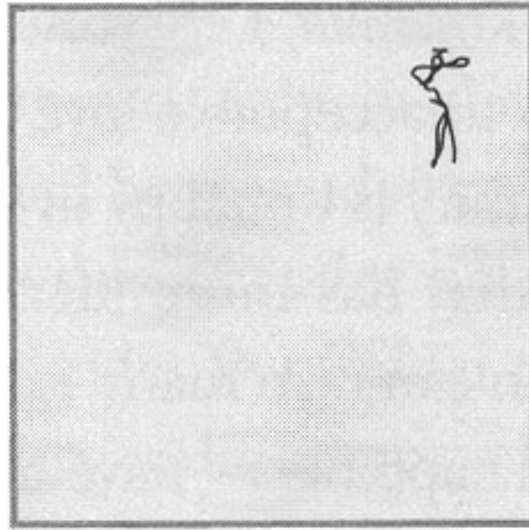
- Old model – primary focus on “fear circuit” in brain with fear-related emotions and arousal- Goal: attenuate fear responses
- New Model: Acquisition of safety engages the reward centers of the brain along with reduced fear responses – focus on overlap with reward centers related to substance abuse
 - Trauma-related substance abuse treatment protocols address securing a sense of safety and protection similar to protocols for children exposed to domestic violence, physical and sexual abuse

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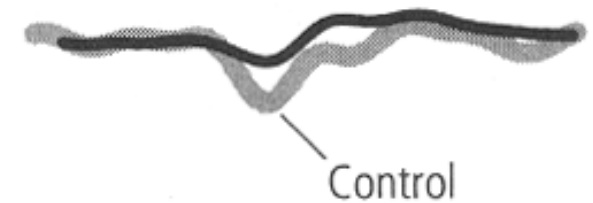
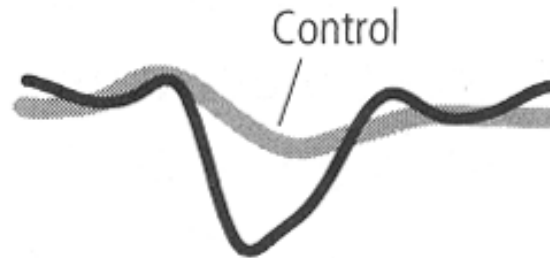
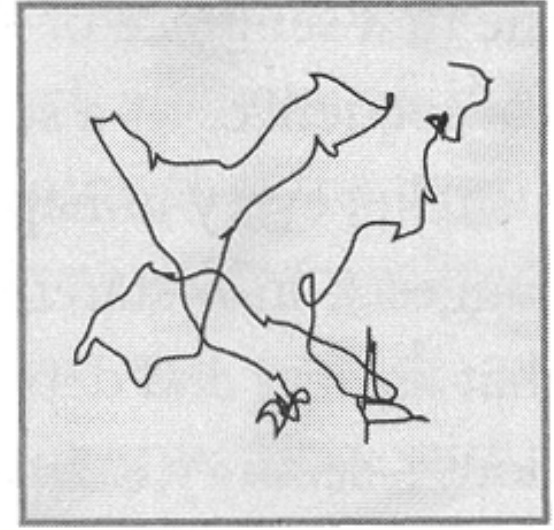
Neutral stimulus

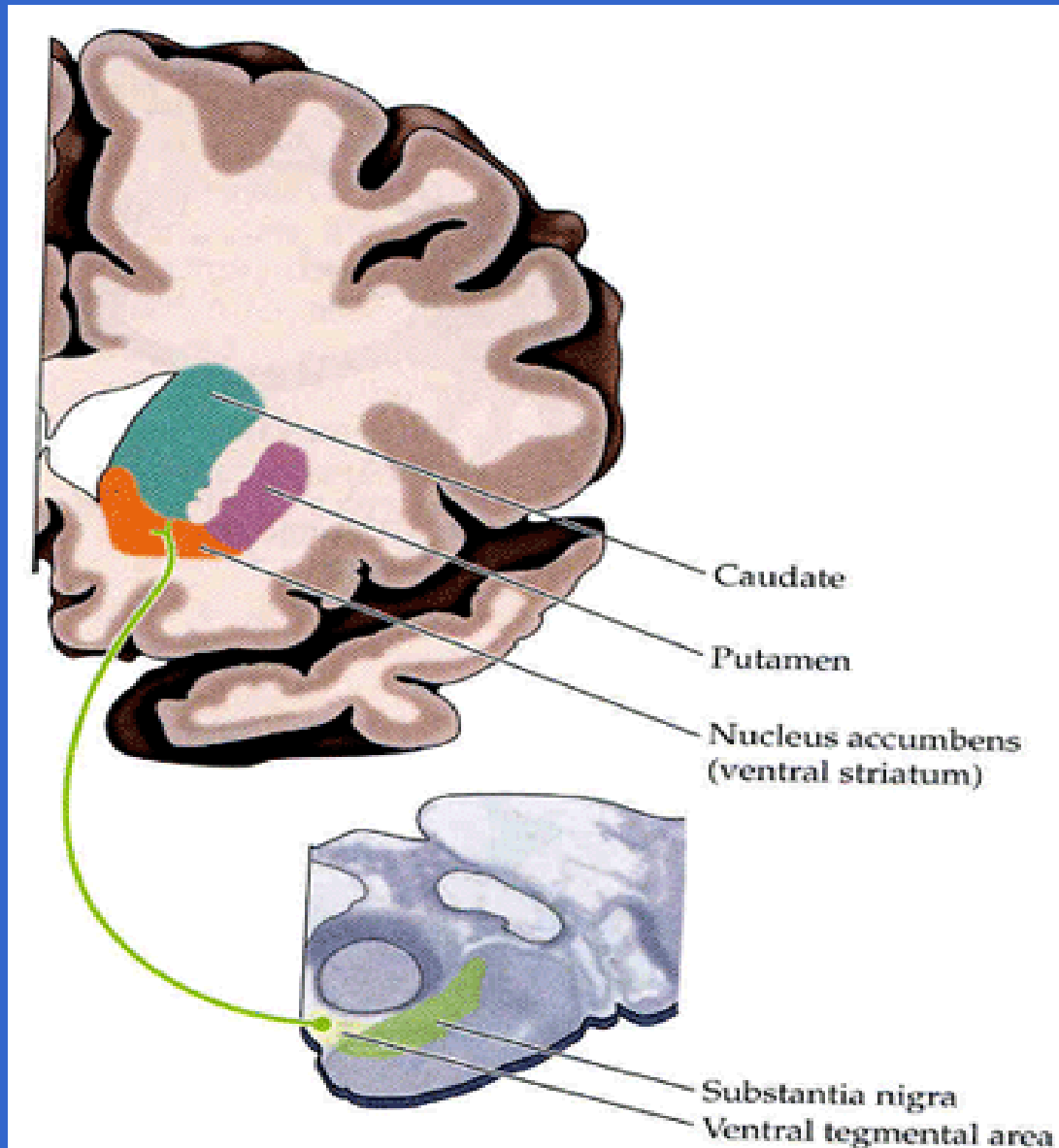


Danger signal



Safety signal





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Neuroscience 4/e Purves, et al. 2008

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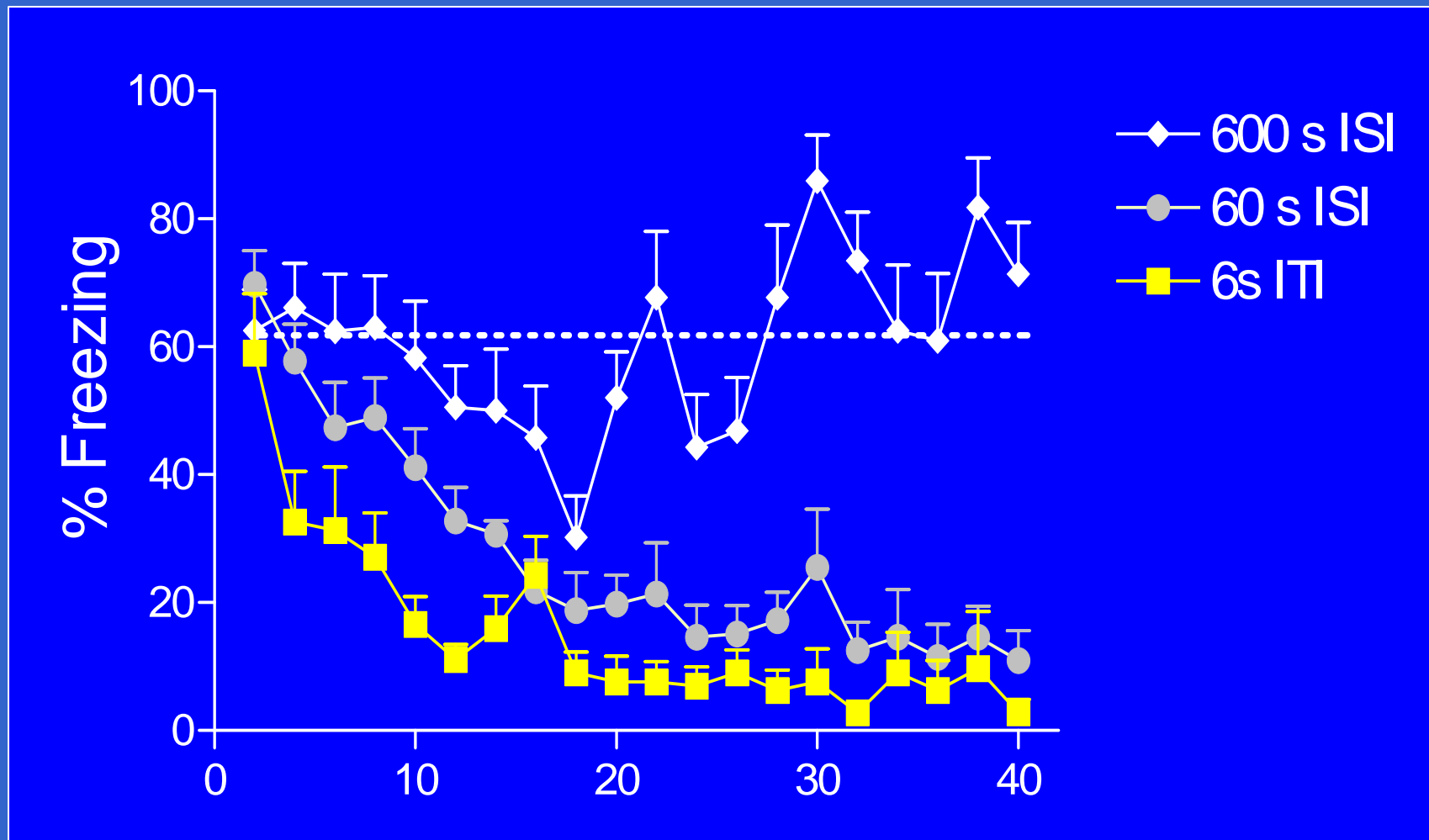
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New learning paradigm underlying intervention protocols

- Exposure to trauma reminders initiates reconsolidation of memory and learning without complete extinction – focus is on the life-time importance of managing trauma and loss reminders, as well as addressing the trauma experience
- Relapse prevention strategies for substance abuse broadened to include managing contextual reminders of trauma and loss as well as of substance abuse.

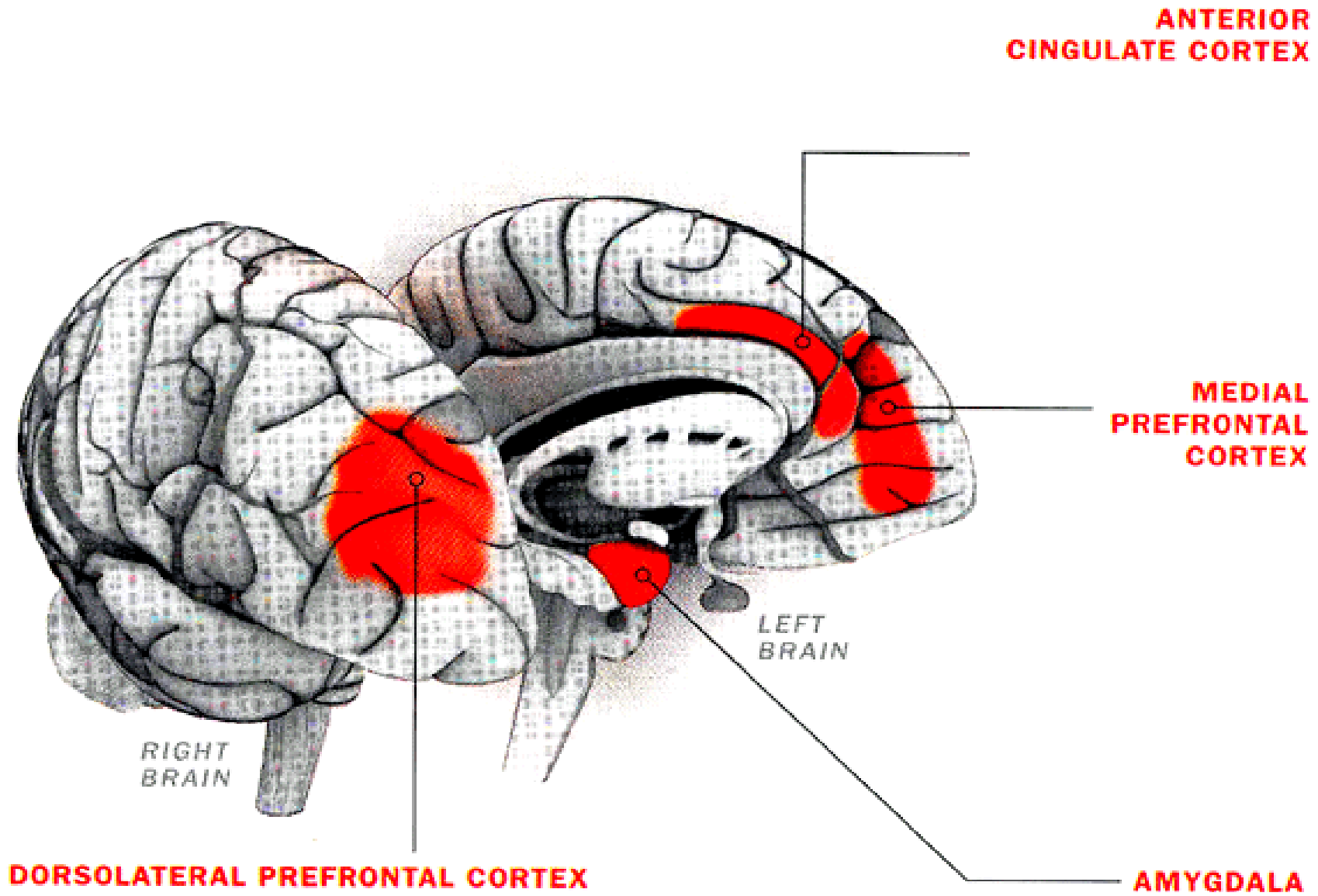
Spaced exposure causes incubation acutely



Sequential Day 2 Cue Exposures

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Mark Barad, et al. (2000).



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- Careful staging of addressing trauma experiences, as doing so serves as a trauma reminder
 - » Combination of teaching skills to manage extreme negative emotions, including rage or sadness, as a preparatory step to more extensive trauma treatment
- Psychopharmacological studies of treatment of PTSD suggest a difference in brain response to serotonin uptake inhibitors related to early childhood physical and sexual abuse

Practical Approach to Intervention

If referral for substance abuse:

- The use of a trauma history profile, including loss
 - Review over multiple time points in course of referral, treatment and recovery
 - Caution: Graduated approach in regard to trauma details and subjective experience
 - Need for multiple informants
 - Adolescent self-report by paper and pencil, or computer as a prelude to clinical review
 - Review a time-line regarding trauma/loss history profile and substance use by type, duration and intensity

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Trauma History Profile

Age In Years

Trauma Information	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Unk
Sexual Maltreatment/Abuse																				
Sexual Assault/Rape																				
Physical Maltreatment/Abuse																				
Physical Assault																				
Emotional Abuse/Psychological Maltreatment																				
Neglect																				
Domestic Violence																				
War/Terrorism/Political Violence Inside U.S.																				
War/Terrorism/Political Violence Outside U.S.																				
Illness/Medical																				
Serious Injury/Accident																				
Natural Disaster																				
Trauma Loss or Bereavement																				
Forced Displacement																				
Impaired Caregiver																				
Extreme Interpersonal Violence (not reported elsewhere)																				
Community Violence (not reported elsewhere)																				
School Violence (not reported elsewhere)																				
Other Trauma (not reported elsewhere)																				

Trauma History Profile

Age In Years

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Physical Assault																					
Emotional Abuse/Psychological Maltreatment																					
Neglect																					
Domestic Violence																					
War/Terrorism/Political Violence Inside U.S.																					
War/Terrorism/Political Violence Outside U.S.																					
Illness/Medical																					
Serious Injury/Accident																					
Natural Disaster																					
Kidnapping																					
Trauma Loss or Bereavement																					
Forced Displacement																					
Impaired Caregiver																					
Extreme Interpersonal Violence (not reported elsewhere)																					
Community Violence (not reported elsewhere)																					
School Violence (not reported elsewhere)																					
Other Trauma (not reported elsewhere)																					

- Complement substance use trigger inventory with trauma and loss reminder inventories
- Examine relationship of exposure to reminders and substance use by type, duration and intensity
 - Pay particular attention to reminders and triggers for trauma/loss and substance use that coincide
- Screen for posttraumatic stress, traumatic grief and depression
- Do not overlook co-occurring PTSD and grief among injured youth, especially in those with ongoing pain, surgical procedures, and disability
 - 27% rate of PTSD
 - Double the rate for violent injury
 - Five fold increase if death of family member at scene
(Holbrook et al. 2005)

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If referral for traumatic experience or PTSD, include screening as outlined above

- Screen for current and prior substance abuse, family history of substance abuse, and ecology of substance availability
- Develop an acute plan to manage trauma and loss reminders
- Proactive guidance about risk-taking and reckless behavior, and use of substances
- Ongoing screening for initiation of substance use
- Use of youth trauma/grief specific intervention (vary by emphasis on components, age range and trauma/symptom/ecology profile – e.g.
 - TF-CBT
 - CBITS
 - TGCT
 - TST
 - SPARCS
 - ARC
 - STAIRS

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Integration of Substance Abuse and PTSD Interventions

- Use assessment-driven model to choose intervention components
- Integrate management of trauma/loss reminders and triggers for substance abuse into early stages of intervention
- After initial treatment for substance abuse, reevaluate for PTSD, depression, and traumatic grief, and the need for additional intervention components
- Become familiar with treatments that address both substance abuse and PTSD
 - Ex: Najavits - Seeking Safety: A Treatment Manual for PTSD and Substance Abuse

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- Become familiar with treatments that address trauma developmental disturbances by providing a preparatory phase to trauma narrative or prolonged exposure interventions
- As recovery from substance abuse and PTSD progresses, add components of intervention that redress omissions in developmental opportunities and achievements due to substance abuse and PTSD-related avoidance/restrictions

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