

Substance Use Disorders: The Basics

Saskatchewan
Methadone and Suboxone
Opioid Substitution Therapy
Conference

Saskatoon
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Disclosures

- No conflict of interest.
- Methadone prescriber since 1998.
- Work within the SHR Methadone Assisted Recovery Program.
- Chair, College of Physicians and Surgeons of Saskatchewan Opioid Advisory Committee, 2013 -

Objectives

- Explore the definition of Addiction.
- Learn the DSM 5 framework and diagnostic criteria for a Substance Use Disorder.
- Reflect on the risks for the development of a SUD.
- Understand the basic neurophysiology of Addiction, and how it challenges treatment and recovery.

Addiction Defined

A common term,
Commonly misused

Addiction Defined: ASAM & CSAM

- A primary, chronic disease of brain reward, motivation, memory and related circuitry.
- Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations.
- This is reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviours.

Addiction Defined: ASAM & CSAM

- Inability to consistently abstain.
- Impaired behavioral control.
- Craving.
- Diminished recognition of problems with one's behavior & relationships.
- Dysfunctional emotional response.

Addiction Defined: ASAM & CSAM

- Like other Chronic Diseases, there are cycles of relapse and remission.
- Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death.

Addiction Defined (4 C's)

- **IMPAIRED CONTROL** over drug use once ingestion begins. (DSM 5: 1, 2, 3, 8.)
- **COMPULSIVE** use marked by preoccupation or salience, with increasing devotion to acquisition, use, effect, and recovery. (DSM 5: 3, 4, 5, 6, 7, 9.)
- **CONTINUED** and recurrent use **DESPITE NEGATIVE CONSEQUENCES** or harm. (DSM 5: 5, 6, 7, 9.)

Substance Use & Induced Disorders

- SUD Severity: Mild, Moderate or Severe
- Substance Induced Intoxication
- Substance Induced Withdrawal
- Substance Induced Mental Disorders
- Unspecified Substance Related Disorder

(DSM 5)

DSM 5 Substance Use Disorder

- A problematic pattern of use leading to clinically significant impairment or distress, as manifested by at least 2 of the following, occurring within a 12 month period.
- 4 criterion:
 - 1) Impaired control
 - 2) Social impairment
 - 3) Risky use
 - 4) Pharmacological criteria

Impaired Control

- 1) The substance is taken in larger amounts or over a longer period than was intended.
- 2) There is a persistent desire or unsuccessful efforts to cut down or control use.
- 3) A great deal of time is spent in activities to obtain, use or recover.
- 4) Craving, or strong desire to use, exists.

Social Impairment

- 5) Recurrent use results in a failure to fulfill major role obligations at work, school or home.
- 6) Continued use despite having persistent or recurrent social or interpersonal problems cause or exacerbated by the effects of use.
- 7) Important social, occupational, or recreational activities are given up or reduced because to use.

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Risky Use

- 8) Recurrent use in situations in which it is physically hazardous.
- 9) Continued use in spite of knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.

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Pharmacological Criteria

- 10) Tolerance: either
 - A) A need for markedly increased amounts to achieve intoxication or desired effect or
 - B) A markedly diminished effect with continued use of the same amount.
- 11) Withdrawal: either
 - A) A characteristic withdrawal syndrome or
 - B) A related substance is taken to relieve or avoid withdrawal.

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DSM 5 Substance Use Disorder

- A spectrum disorder:
- Mild: 2 – 3 symptoms.
- Moderate: Presence of 4 – 5 symptoms.
- Severe: Presence of 6 or more symptoms.

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Addiction

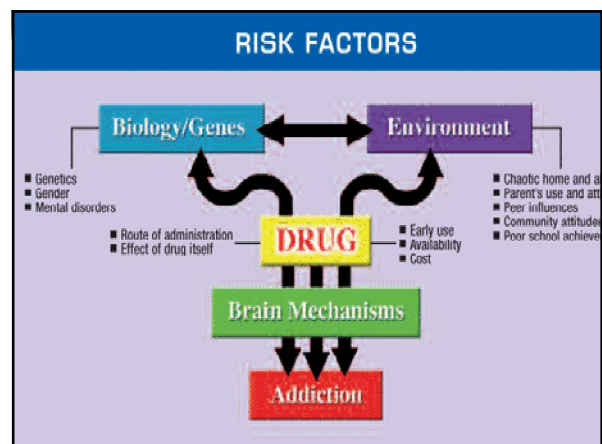
- A pathological relationship
- with a mood altering activity
- with life damaging consequences.

(Bradford)

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What Causes Addiction?



The Primary Risk Factors




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Risk Factors

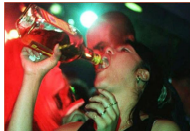
Fault Lines:
Genetics & Neurobiology

Epigenetics:
Toxic stress, environmental and developmental challenges.



Exposure in a pattern of persistent conditioning, with both positive and negative reinforcement.



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Adverse Childhood Experiences

- The Relationship of Adult Health Status to Childhood Abuse and Household Dysfunction. American Journal of Preventive Medicine. Felitti VJ, Anda RF, Nordenberg D, et al. 1998; 14:245 – 258
- Kaiser Permanente Department of Preventive Medicine
- N = 17,000

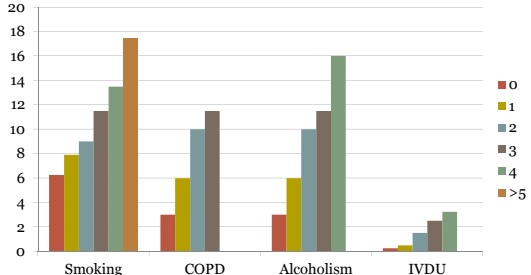
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Adverse Childhood Experiences

- Recurrent and severe physical abuse
- Recurrent and severe emotional abuse
- Sexual abuse
- Growing up in a household with:
 - An alcoholic or drug user
 - A member being imprisoned
 - A mentally ill member
 - The mother being treated violently
 - Both biological parents not being present

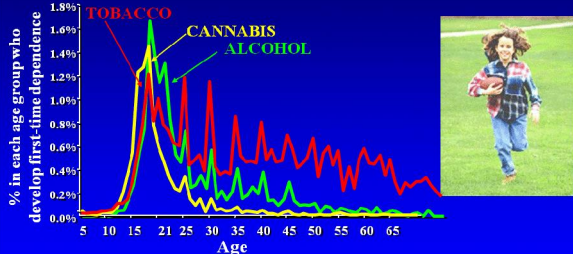
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Adverse Childhood Experiences and Health



The Relationship of Adult Health Status to Childhood Abuse and Household Dysfunction. Am J of Prev Med Felitti et al. 1998; 14:245-258

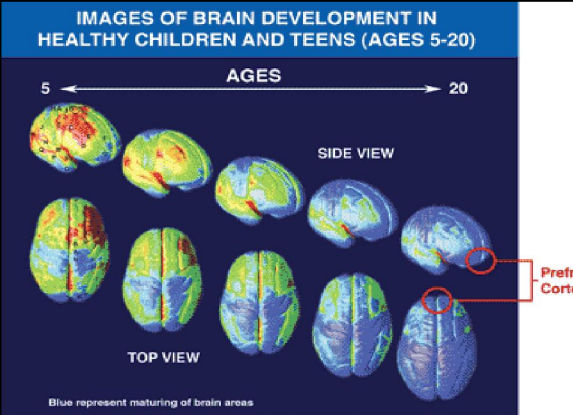
Addiction Is A Developmental Disease that starts in adolescence and childhood



Age at tobacco, alcohol, and cannabis dependence per DSM IV

NIDA
National Epidemiologic Survey on Alcohol and Related Conditions, 2003.

IMAGES OF BRAIN DEVELOPMENT IN HEALTHY CHILDREN AND TEENS (AGES 5-20)

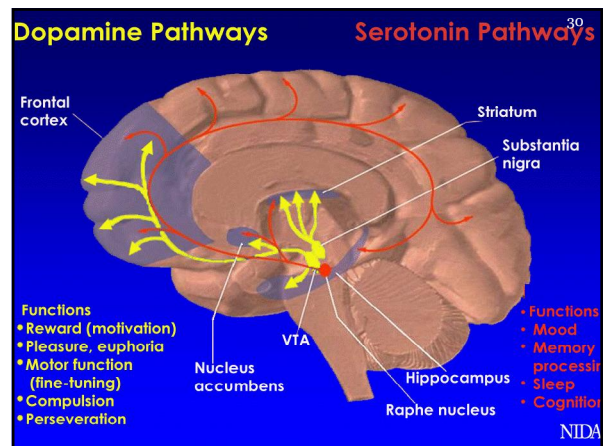
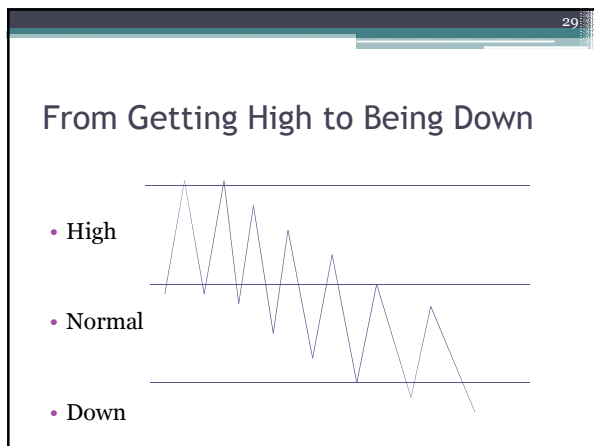
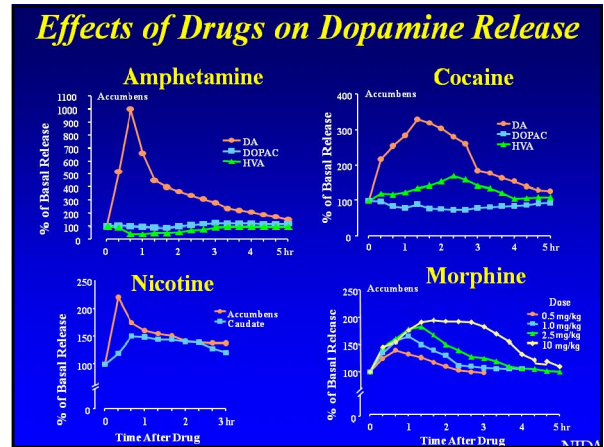
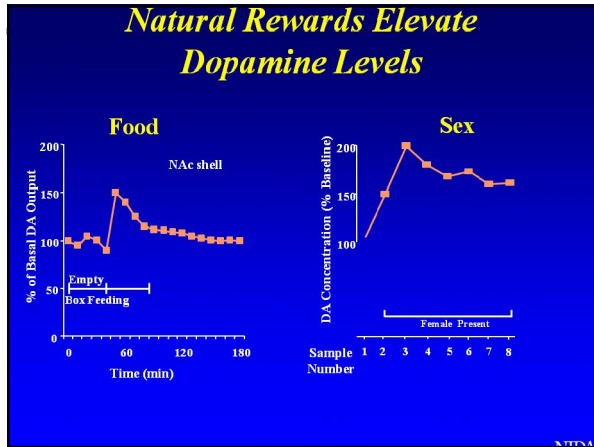
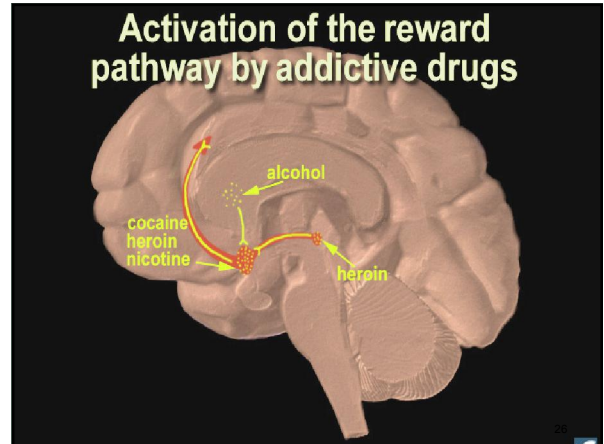


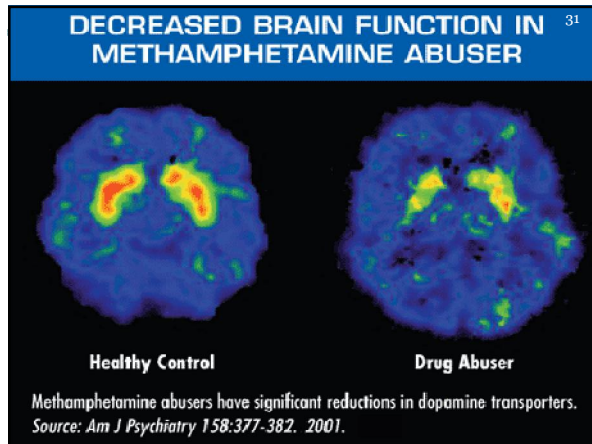
Source: Copyright PNAS ;101(21):8174-9. 2004

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Why is Addiction so Powerful?

Addiction And The Brain





³²

The Neuroscience of Addiction

A Brain Disease:

- An “Acquired Brain Injury” with
- Disruption of the Reward and Motivation centres &
- Irrational thought patterns and behaviour.

³³

BUT it is not just a Brain Disease

It effects

- Spirit
- Mind and
- Body

³⁴

Treatment

A process, not an event

³⁵

Addiction as a Chronic Disease

- A chronic disease requires care that is:
 - Sustained
 - Continuous
 - Monitored
 - Individualized and
 - Coordinated
- Adjusts to cycles of remission and relapse.

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Substance Dependence Treatment

- Supportive Maturation
- Variations on a Matrix Model
- Concurrent integrated therapy
- Medication
- Follow-up

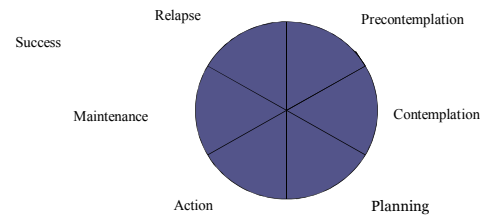
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Matrix Model

- Manual based 16 week non-residential psychosocial approach:
- Individual Counseling
- Cognitive Behavioral Therapy
- Motivational Interviewing
- Family Education Groups
- Urine testing
- 12 step programs
- Concurrent Care

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Stages of Change



(Prochaska & Di Clemente)

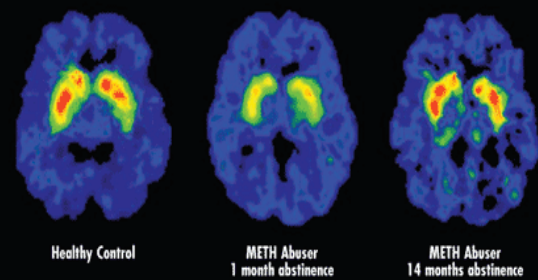
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Treatment: Meds for drugs

- Alcohol: Disulfiram (Antabuse), Naltrexone (ReVia), Acamprostate
- Tobacco: Nicotine Replacement Therapy, Bupropion (Zyban), Nortriptyline, Varenicline (Champix)
- Opioids: Methadone, Buprenorphine, Naltrexone

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RECOVERY OF BRAIN FUNCTION WITH PROLONGED ABSTINENCE



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Thank you

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