Understanding Addiction

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How Does the Compulsion That Characterizes Addiction Come About?

Prolonged Drug Use Changes the Brain In Fundamental and Long-Lasting Ways

Addiction is a Disease of the Brain as other diseases it affects the tissue function

Decreased Heart Metabolism in Heart Disease Patient

Decreased Brain Metabolism in Drug Abuse Patient

Drug addiction is a brain disease that affects behavior

Brain changes in addiction help explain continued drug use and relapse.
We Don’t Know the Exact Switch  
BUT…

We Do Know that the Brain Circuitry Involved in Addiction Has Similarities to that of Other Motivational Systems
The fine balance in connections that normally exists between brain areas active in reward, motivation, learning and memory, and inhibitory control.

Becomes severely disrupted in addiction.

Drugs usurp brain circuits and motivational priorities.

Addiction is a brain disease expressed as compulsive behavior, both developing and recovering from it depend on behavior and social context.

That’s why addicts can’t just quit, that’s why treatment is essential!
Kevin Knight, Ph.D., IBR Associate Director
Understanding Addiction
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TCU Drug Screen (TCUDS):
- Short assessment (2 pages) for:
  - Drug problems/dependence
  - Treatment history/needs

Identifying Need for Treatment

71% referred to treatment

TCUDS Diagnosis

1. TCUDS Diagnosis

2. Existing Records

Assessments:
- N = 50,000 per Year

Interventions:
- Low Intensity (Education)
- Low Severity
- Offender Drug Use?
- High Intensity (Residential Therapeutic Community)
- Longer Term
- Aftercare (or Re-entry) Program

Identifying Need for Treatment

52
22
29
100
80
60
40
20
0

No Treatment (n=103)
In-Prison+Aftercare (n=169)

% 3-Year Recidivism

Problem Severity and Intensive Treatment

Lower Severity (n=91)
Higher Severity (n=181)

Use of Alcohol and/or Illicit Drugs

• May be periodic or frequent
• May be used regularly or in binges
• Use is often influenced by peers and availability
• Legal implications
  - Alcohol: Use may be responsible or dangerous (e.g. DWI)
  - Illicit Drugs: Possession is always illegal
  - Types of Charges: Possession, DWI, Assault
• Usually exacerbates delinquent behavior and reduces gainful employment
• Use may be suppressed by toxicology, alcohol/drug education, CJS supervision focused on peers/work

Abuse of Alcohol and/or Illicit Drugs

• Abuse: A maladaptive pattern of substance use, leading to clinically significant impairment or distress as manifested by one or more behaviorally based criteria. DSM IV-R
  - Influenced by peers but more by lack of coping skills
  - Exacerbates delinquent behavior and reduces gainful employment
  - Legal implications more frequent and escalating
• Use may be suppressed by CJS supervision, lifeskills and alcohol/drug education. Counseling/Outpatient Treatment can help develop coping skills. Criminal thinking interventions also useful.

Use
Abuse
Dependence

Use of Alcohol and/or Illicit Drugs


NIDA

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Use of Alcohol and/or Illicit Drugs

Abuse of Alcohol and/or Illicit Drugs
Alcohol and/or Drug Dependence

- **Physiological dependence**: Tolerance, withdrawal symptoms or continued use to avoid withdrawal.
- **Psychological dependence (addiction)**: Overall loss of control, obsessive-compulsive drug-seeking, continued use of a substance in spite of clearly adverse consequences.
- **Use** is frequent, if not daily. An alternative pattern may be one of intermittent, frequent binges.
- **Peers** have become other drinkers and drug users, unless the person uses completely alone.

Upcoming changes?…DSM-5

- No differentiation between Abuse and Dependence
- Replacing these categories with a new category: **Addiction and Related Disorders** with varying levels of severity
- **Why?**
  - Trying to eliminate the confusion between physiologic dependence upon alcohol or a drug and addiction;
  - Address the problem with our current categories in which the psychosocial consequences of abuse are given more weight than in the dependence diagnosis itself.

- Moderate Severity: 2 or 3 Yes responses; 4 or more referred to as Severe (noting with our without physiological dependence)
- A Substance-Use Disorder will be defined as a clinically significant impairment or distress as manifested by 2 (or more) of the following, occurring within a 12-month period:
  1) Failure to fulfill major role obligations at work, school, or home
  2) Recurrent use of substances in situations in which it is physically hazardous
  3) Continued use despite persistent social and interpersonal problems caused by the substance
  4) Tolerance - diminished effect with the continued use of the same amount of the substance
  5) Withdrawal syndrome
  6) Tolerance - diminished effect with the continued use of the same amount of the substance
  7) Persistent desire or unsuccessful attempts to cut down on the substance use
  8) A great deal of time spent in activities necessary to obtain the substance
  9) Giving up important occupational or recreational activities
  10) Continued use despite knowledge of having a persistent physical or psychological problem caused or exacerbated by the substance
  11) Craving or a strong desire or urge to use a specific substance

NIDA Website

www.drugabuse.gov