



## **ADDICTION 101**

### **A basic primer on addiction**

## **How do we approach addiction?**



“If the only tool you have is a hammer, you tend to see every problem as a nail.”

(Abraham Maslow)

## **Definition of addiction**

“Alcoholism is a primary, chronic disease with genetic, psychosocial and environmental factors influencing its development and manifestations. The disease is often progressive and fatal.

It is characterized by continuous or periodic impaired control over drinking, preoccupation with the drug alcohol, use of alcohol despite adverse consequences, and distortions in thinking, most notably denial.”

(National Council on Alcoholism and Drug Dependence, Inc. 2/3/90)



## **What is a disease?**



### **The causal model:**

1. cell, organ or system
2. defect or injury
3. measurable symptoms

## **A broken leg?**



### **The causal model:**

1. bone
2. defect?
3. symptoms?
4. treatment?

## **Diabetes?**



### **The causal model:**

1. pancreas
2. defect?
3. symptoms?
4. treatment?

## Alcoholism?



### The causal model:

1. brain? liver?
2. defect?
3. symptoms?
4. treatment?

## The causal model works for easy diagnosis

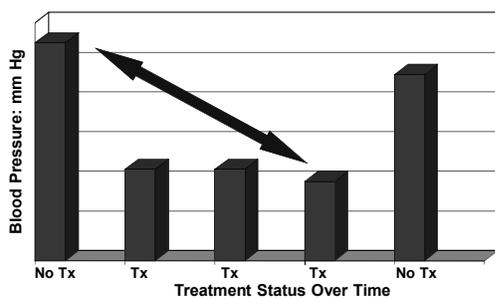


- The model favors simple organs.  
Addiction?  
Brain disease? Liver disease?
- In the absence of easy causality, what models work?  
Moral  
Personality  
Environment

## Language Problems

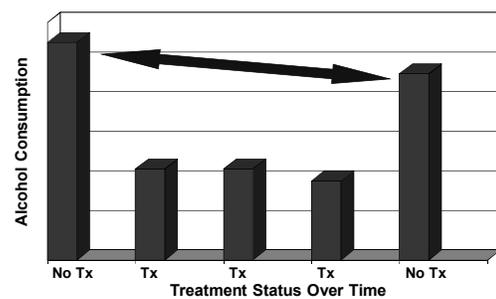


### Treatment for Hypertension: Did Treatment Work?



Hypertension is a chronic disease. Treatment is applied consistently over time (anti-hypertensive therapy with consistent follow-up).

### Treatment for Alcoholism: Did Treatment Work?



Should we also be using chronic/rehabilitative treatment model INSTEAD of an acute/single episode treatment model?

## How do these diseases compare?



Addiction/Chronic Illness	Compliance Rate (%)	Relapse Rate (%)
Alcohol	30-50	50
Opioid	30-50	40
Cocaine	30-50	45
Nicotine	30-50	70
Insulin Dependent Diabetes		
Medication	<50	30-50
Diet and Foot Care	<50	30-50
Hypertension		
Medication	<30	50-60
Diet	<30	50-60
Asthma		
Medication	<30	60-80

O'Brien CP, McLellan AT. Myths about the Treatment of Addiction (1996).  
The Lancet, Volume 347(8996), 237-240.

## Learning to drink

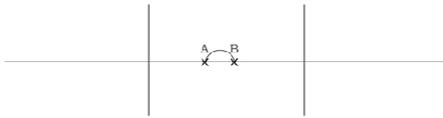


priming  
early experimentation  
being adult  
designated driver

## The mathematics of drinking

The Feeling Chart...Revisited

PAIN                  NORMAL                  EUPHORIA

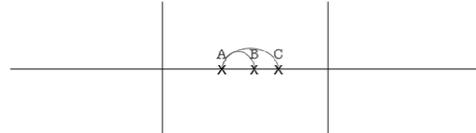


priming  
early experimentation  
building trust  
reliable effect  
learning how to use  
signature experience

## More is better

The Feeling Chart...Revisited

PAIN                  NORMAL                  EUPHORIA

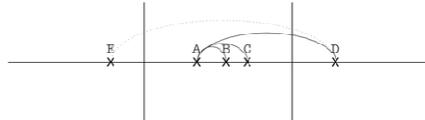


priming  
early experimentation  
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signature experience

## The rules of drinking

The Feeling Chart...Revisited

PAIN                  NORMAL                  EUPHORIA

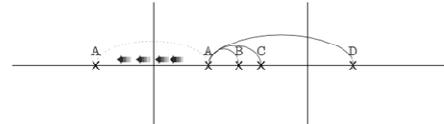


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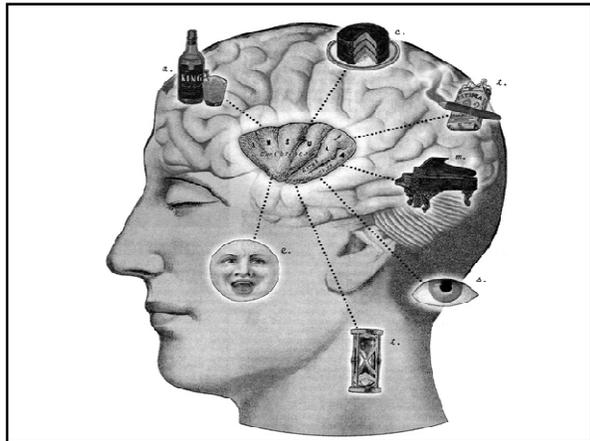
## How alcoholism develops

The Feeling Chart...Revisited

PAIN                  NORMAL                  EUPHORIA



priming  
early experimentation  
building trust  
reliable effect  
learning how to use  
signature experience



## The lizard brain



MENTAL OBSESSION  
 CRAVING  
 tolerance  
 loss of control  
 blackouts  
 physical dependence  
 withdrawal syndrome

## Untreated addiction



FEAR  
 LONELINESS  
 hypersensitivity  
 insecurity  
 adaptive defenses  
 delusions  
 "self will run riot"



## A Disease Involving:



- pleasure
- choice
- attention
- stress
- memory



## A Disease of Pleasure

Addicts are anhedonic, often have difficulty experiencing normal pleasure.



### A Disease of Choice

Top down control fails. The midbrain trumps cognitive function and judgment.



### A Disease of Attention

Addiction impacts *saliency* – what we can pay attention to.



### A Disease of Stress

People with addiction experience chronically elevated levels of stress hormones — which contributes to relapse.



### A Disease of Memory

Similar to PTSD, addiction distorts *memory*, and is triggered by sights, sounds and smells. There is an emotional flooding of memory.

## What's wrong with these people?



**MENTAL OBSESSION**  
**CRAVING**  
 tolerance  
 loss of control  
 blackouts  
 physical dependence  
 withdrawal syndrome

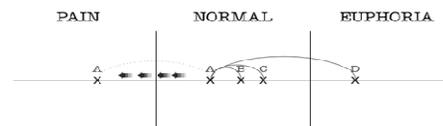


**FEAR**  
**LONELINESS**  
 hypersensitivity  
 insecurity  
 adaptive defenses  
 delusions  
 "self will run riot"

"the alcoholic drinks as long as he can, stays sober as long as he can, drinks as long as he can..."

## Escaping a state of pain

The Feeling Chart...Revisited



**MENTAL OBSESSION**  
**CRAVING**  
 tolerance  
 loss of control  
 blackouts  
 physical dependence  
 withdrawal syndrome

**FEAR**  
**LONELINESS**  
 hypersensitivity  
 insecurity  
 adaptive defenses  
 delusions  
 "self will run riot"

"the alcoholic drinks as long as he can, stays sober as long as he can, drinks as long as he can..."

## Signs and Symptoms



- personality change
- blackouts
- problems at work/school
- mood/attitude changes
- legal problems
- health problems
- avoiding friends/family
- constant obsession
- appetite/sleep changes
- high tolerance
- lying/dishonesty
- strained relationships
- financial problems
- loss of interests
- accidents
- depression/suicide attempts
- risk-taking behaviors
- changes in appearance

## Definition of Addiction

Addiction, alcoholism and drug dependence is a chronic, progressive disease characterized by physical and psychological symptoms:

### CRAVING

The strong need or compulsion to drink

### DEPENDENCE

Withdrawal symptoms, such as nausea, sweating, shakiness and anxiety when you stop drinking or using after a period of heavy use.

### COMPULSION

The frequent inability to stop drinking or using once you've begun (see Loss of Control)

### TOLERANCE

You need increasing amounts of drugs/alcohol to get "high"



## Definition of Abuse



Drug/alcohol abuse may not involve craving, loss of control or physical dependence. Rather, it is a pattern of use that has led to at least one of the following situations within a 12-month period:

- Inability to fulfill major work, school or home responsibilities
- Drinking while driving a car, operating heavy machinery, or while involved in any other physically dangerous activity.
- Relationship problems that are caused or worsened by the effects of use.
- Recurring drug/alcohol-related legal problems, such as being arrested for driving under the influence, or for physically hurting someone while impaired.

## A Disease of Perception

NORMAL PERCEPTION



ADDICTIVE PERCEPTION



## Traditional Therapeutic Intervention

NORMAL PERCEPTION



ADDICTIVE PERCEPTION



If "self will run riot" is the problem, what is the solution?

## AA's Counterintuitive Model

ADDICTIVE PERCEPTION



- Attend A.A. meetings regularly
- Read the Big Book
- Get and use a sponsor
- Participate in A.A. service work
- Get a home group of A.A.
- Pray regularly
- Help other alcoholics