What is Addiction?

Jessica Hulsey Nickel
We envision a world where fewer lives are lost and help is readily available for the millions of Americans affected by addiction every day.
What is Addiction?
Addiction vs. Heart Disease

Degraded Brain Metabolism in Drug Abuse Patient

Control

Cocaine Abuser

Degraded Heart Metabolism in Heart Disease Patient

Healthy Heart

Diseased Heart

Sources: From the laboratories of Drs. N. Volkow and H. Schelbert
Hijacking the Survival Hardwiring

Primary motivations

Hijack the brain
Primary motivations
How Do We Respond to a Disease?

1. Reduce the number of individuals that contract the disease.
2. Early detection and intervention/treatment for those diagnosed.
3. Improve survival rates.
Severity of Substance Use Disorders

DSM-5 Mild, Moderate, Severe

At-Risk
at risk of developing substance-related problems

.05

1

2

3

Severe Substance Use Disorder
Six or more symptoms present and requires intense medical management of the disease and inpatient care
Before

After
What is Prevention?
Why not everyone?

Why doesn’t everyone who uses alcohol or drugs become addicted?

At the individual level, risks include lack of parental monitoring, unstable home, lack of attachment to your community or school and early onset of use of alcohol, marijuana or other drugs.

High risk environments include high drug availability, normalizing alcohol and drug use so adolescents feel like it’s normal behavior, poverty and crime.

Family studies suggest that as much as half of a person’s risk of becoming addicted to nicotine, alcohol, or other drugs depends on his or her genetic makeup.
# Understanding Risk and Protection

## Risk Factors
- Genetic disposition
- Prenatal alcohol and/or drug exposure
- Parents who use drugs and/or alcohol or who suffer from mental illness
- Child abuse and maltreatment
- Inadequate supervision
- Neighborhood poverty and violence
- Norms and laws favorable to substance use
- Adverse Childhood Experiences

## Protective Factors
- Parental involvement
- Health peer involvement
- Availability of faith-based resources
- After-school activities
- Policies limiting the availability of alcohol
- Attachment to community
- Pro-social engagement
- Connectedness to adults outside of family
Delay the Onset

21 years
Adolescent Brain Development

Images of Brain Development in Healthy Children and Teens (Ages 5–20)

Prefrontal Cortex

Blue represents maturing of brain areas.

22 - 25 years old
Genes
Parental Substance Use Disorder
Neglect
Poverty
Homelessness
Foster Care
Connectedness to Adults
Mental Health
Parental Substance Use Disorder
Genes
Community Coalition
Pro-Social Engagement
Attachment
Clear Expectations
Healthy Norms
Healthy Peers
After-School Activities
Mental Health
Connectedness to Adults
Programs and Resources

- Addiction Resource Center
- RxDisposal Kits and Campaign
- What is Addiction? Kit
- 174aDay Awareness Campaign
- Vigils
- Hospital Toolkit
- Free Materials
Learn more about the brain science of substance use disorders.

If you or a loved one are worried about addiction, there are resources that can help you proactively seek consultation or care.

Whether you or someone you love has a substance use disorder, learning about the illness and what to expect can help you cope.
TOOLKIT ON ADDICTION AS A HEALTH CONDITION – FROM THE BRAIN SCIENCE, TREATMENT, PREVENTION AND RECOVERY.

THANK YOU
ADDICTION POLICY FORUM

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