



“Why Addiction is a “Disease”, and Why It’s Important”

RESOURCE GUIDE

EDUCATIONAL PAGES

- **Addiction 101.** The Recovery Research Institute provides a comprehensive overview of the epidemiology (prevalence), etiology (causes), phenomenology (experience), impact and the latest terminology on addiction.
- CASA Columbia’s educational page on **the Disease Model of Addiction** answering questions whether addiction is a disease, how it affects the brain, and the chronicity of the condition.
- **The Brain in Recovery**. The Recovery Research Institute’s educational page on the brain in recovery, citing the long-term impacts of substance use disorder on brain functioning and circuitry.

RESOURCES

- **Nature Outlook: Addiction**. Read about the latest advances in addiction research in a special Nature supplement, co-sponsored by the National Institutes of Health’s National Institute on Drug Abuse (NIDA) and the National Institute of Alcohol Abuse and Alcoholism (NIAAA).
- The **American Society Addiction Medicine (ASAM) defines Addiction** as 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. Read the full **Public Policy Statement** and **FAQs**.
- **Drugs, Brains, and Behavior: The Science of Addiction**. The National Institute on Drug Abuse (NIDA)’s publication provides an overview of the scientific research evaluating substance use and addiction, including the identification of biological and environmental factors and an introduction to the search for the genetic variations that contribute to the development and progression of the disease.
- **Americans Recognize the Growing Problem of Opioid Addiction**. The Associated Press NORC Center for Public Affairs Research provides this Issue Brief on the findings of AP-NORC Poll on Opioids. Notably, while more than half (53%) view prescription drug addiction as a “disease”, only 20% would closely associate with someone “suffering from addiction”.
- **DSM-5 Fact Sheet**. In May 2013, the American Psychiatric Association issued the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM–5). Although there is considerable

overlap between DSM–5 and DSM–IV, the prior edition, there are several important differences, outlined here.

- **“Addiction Is a Disease of Free Will”**. A video presentation in which Dr. Nora Volkow, Director of NIDA, addresses the question of why addiction is a disease, and how addiction as a disease impairs the free will and decision-making abilities of those affected.

COMMENTARY

- **What does it mean when we call addiction a brain disorder?** In this Scientific American magazine article, NIDA Director Nora Volkow reviews the foundation for and progress of the concept of addiction as a brain disease over the past three decades, beginning with brain imaging evidence early in her career at NIDA, which helped to solidify the scientific basis of the disease model. Dr. Volkow responds to critics of the disease model and cites its benefits in driving a public health-focused response to increase access to treatment and reduce stigma.
- **Dramatic advances in addiction research.** This commentary, authored by NIDA Director Dr. Nora Volkow, NIAAA Director Dr. George Koob, and Thomas McLellan, reviews recent scientific advances in the neurobiology of addiction, including prevention and treatment strategies, as well as related developments in public policy.
- **Brain disease model of addiction: Why is it so controversial?** This commentary (Volkow & Koob, 2016) cites the scientific evidence for and advantage of the brain disease model of addiction. The commentary is a direct response to the criticism published by Hall, Carter, and Forlini (2015; see *Criticisms* section below).
- **The development and maintenance of drug addiction.** Authors Wise and Koob (2014) seek to come to a consensus on the defining property of addiction. While agreeing on its early and late stages, they describe their differing views as to “(i) the point...at which the diagnosis of addiction should be invoked, (ii) the relative importance of positive and negative reinforcement leading up to this transition, and (iii) the degree to which the specifics of negative reinforcement can be generalized across the range of addiction agents”.

What is a disease? Scully (2004) examines the philosophical definition of a disease, citing increasing health evidence and expectations as well social and economic factors which underlie the historical changes to the disease criteria: “If we want to ensure that limited healthcare resources are appropriately distributed...we must have a reasonably clear idea, first what a disease is, and second, which diseases are most worth the investment of time and money”.

JOURNAL ARTICLES

- **DSM-5 Criteria for Substance Use Disorders: Recommendations and Rationale.** This article presents the issues considered by the Substance-Related Disorders Work Group in making recommendations for proposed DSM-5 changes and revisions, including the determination of combining substance abuse and dependence and establishing SUD severity levels (a departure from the DSM-4).

- **Drug dependence, a chronic medical illness: Implications for treatment, insurance, and outcomes evaluation.** This literature review (McLellan, Lewis, O’Brien, & Kleber, 2000) compared substance use disorders to type 2 diabetes, hypertension, and asthma on the parameters of etiology, pathophysiology, and treatment response, concluding that substance use disorders should be insured, treated, and evaluated in the same way as other chronic illnesses.
- **Considering the Definition of Addiction.** Authors Sussman and Sussman (2011) conduct a literature search to determine the definition of addiction, landing on and further defining five common elements: (1) feeling different; (2) preoccupation with the behavior; (3) temporary satiation; (4) loss of control; and, (5) negative consequences.
- **Evaluating, managing, and treating substance use disorders like other chronic health conditions.** The authors (Dupont, Compton, & McLellan, 2015) describe how the treatment of addiction to alcohol and other drugs has been conceptually, organizationally, and financially segregated from the rest of health care, and advocate for a consensus on how to measure and manage addiction services and for judging the effectiveness and value of addiction services based on the goal of five-year recovery. Click for the **RRI summary** of this publication.

CRITICISMS OF ADDICTION AS A DISEASE – *The scientific findings of addiction as a brain disease was the topic of the webcast and discussed by panelists to help change incorrect perceptions and misunderstanding. The resources provided below contain information discussed within the webcast disputing alternative perspectives, and therefore are included for reference.*

- **Addiction is not a disease.** In this *Salon* article, neuroscientist Dr. Lewis speaks out against the disease model of addiction, arguing that it fails to account for the plasticity of the human brain (in other words, that “brain is built to learn and change”).
- **The brain disease model of addiction: Is it supported by the evidence and has it delivered on its promises?** Authors Hall, Carter & Forlini (2015) refute the basis of NIDA’s brain disease model of addiction (BDMA), arguing that it “is not supported by animal and neuroimaging evidence to the extent its advocates suggest; it has not helped to deliver more effective treatments for addiction; and its effect on public policies toward drugs and people with addiction has been modest”.
- **Addiction is NOT a disease.** Holden (2012) responds to speak against a CMAJ editorial (see **Addiction is a disease: We must change our attitude towards addicts**), arguing that addiction does not meet the disease criteria, and calls to destigmatize it “remove any sense of personal responsibility”.
- **Addiction as a medical disorder: Delivering a more persuasive message.** In this editorial, Humphreys (2017) outlines a rationale for why popular comparisons of substance use disorder to diabetes and asthma may miss the mark, and how we can address the problem of stigma while still realistically acknowledging the potential harm substance use disorders can cause.

The Power of Perceptions and Understanding: Changing How We Deliver Treatment and Recovery Services
Webcast 2: “Why Addiction is a ‘Disease’, and Why It’s Important”

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