The addiction paradox

Drug dependence has two faces—as a chronic disease and a temporary failure to cope

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Actor Philip Seymour Hoffman’s February death from a drug overdose triggered media reports blaming the terrible disease of addiction for claiming another life. But calling addiction a “disease” may be misguided, according to an alternative view with some scientific basis. Most people who are addicted to cigarette smoking, alcohol or other drugs manage to quit, usually on their own, after experiencing major attitude adjustments. Although relapses occur, successes ultimately outnumber fatalities. People can permanently walk away from addiction.

Evidence that addiction is a solvable coping problem rather than a chronic, recurring disease seems like encouraging news. But it’s highly controversial. Neuroscientists and many clinicians regard drug addictions as brain illnesses best vanquished with the help of medications that fight cravings and withdrawal. From this perspective, drug-induced brain changes increase a person’s thirst for artificial highs and make quitting progressively more difficult.

This conflict over addiction’s nature plays out in two lines of research: studies of remission and relapse among treated substance abusers and long-term studies of the general population.

Follow-up investigations of people who attend treatment programs report that addicts never completely shake an urge to snort, inject, guzzle or otherwise consume their poisons of choice. Ongoing treatment in psychotherapy, rehab centers or 12-step groups encourages temporary runs of sobriety, but it’s easier to kick the bucket than to kick the habit.

Surveys and long-term studies of the general population, however, observe that addicts typically spend their youth in a substance-induced haze but drastically cut back or quit using drugs altogether by early adulthood. Most of those who renounce the “high” life do so without formal treatment.

Each research approach has drawbacks. Treatment studies don’t include people who overcome addictions without seeking formal help, and thus underestimate overall recovery rates. Community surveys often overlook individuals with especially harsh drug problems, and thus overestimate recovery rates.

Two sides of treatment

Some treatments for alcoholism and drug addiction assume that addiction is a disease:

Twelve-step groups and centers promote guiding principles that include acknowledging a lack of control over one’s addiction and recognizing a higher power that enables one to quit. Total abstinence is the goal.

Drugs prescribed by a physician can substitute for street drugs and prevent or reduce withdrawal symptoms as doses are tapered. The synthetic opiate buprenorphine is used in this way to treat heroin addicts.

Other approaches emphasize coping skills and in some instances reject the disease perspective:

Motivational interviewing and cognitive behavioral therapy engage clients in exploring how they would like to change and in developing healthy ways to deal with stress and daily challenges. SMART Recovery self-help groups — an alternative to 12-step programs — allow for either abstinence or occasional drug use, depending on the client.
Therapeutic communities, which are sometimes affiliated with 12-step programs, are drug-free settings where addicts live together and learn healthy approaches to life with the help of former addicts and therapists.

“There’s clearly disagreement in the field about the natural history of alcohol dependence and other substance use disorders,” says psychologist Madeline Meier of Arizona State University in Tempe. “Part of the reason is that clinic-based studies tend to find high rates of relapse but population-based studies don’t.”

New investigations aim to clarify how alcohol and drug addictions play out across the life span, at least in industrialized nations. A reanalysis of four national surveys in the United States concludes that issues such as getting married, fears of arrest, drug prices and health concerns can prompt individuals to quit drug addictions at any age, a finding at odds with the brain disease model of addiction. Related research suggests that life transitions and personality changes accompany remission from excessive drug use. Studies of New Zealand children tracked into adulthood suggest that individuals who break free of alcoholism suffer relapses less frequently than is often assumed.

Severe substance abusers, on the other hand, appear to face the most challenging future. Recent evidence highlights a near-universal tendency for people with multiple addictions and other mental ailments to relapse at least once within four years of completing treatment.

Scientists trying to untangle the life course of excessive, harmful consumption of mind-altering substances face challenges at every turn.

**Maturing out**

Psychologist Charles Winick grappled with those challenges in a controversial 1962 article titled “Maturing out of narcotic addiction.” More than 50 years later, new studies support and expand on key elements of his argument. Winick discovered that about three-quarters of those listed as heroin addicts in an annual federal tally disappeared from the rolls by age 36. He concluded that these young people had “matured out” of opiate dependence as they assumed adult responsibilities and resolved emotional conflicts that had driven them to drugs in the first place.

In line with most mental-health professionals at the time, Winick, affiliated with City University of New York, considered heroin addiction a disease. These findings suggested to him that addictions, like some infections, can be resisted successfully.

Winick assumed that police and hospital data collected by the government included nearly every U.S. heroin addict and that all of those dropped from the list had stopped using heroin. But some may have died without the government knowing, or continued using while managing to avoid the authorities. Today, arguments over Winick’s conclusions haven’t been fully resolved, says Boston College psychologist Gene Heyman.

Many people addicted to legal and illegal drugs end up quitting without formal treatment, just as Winick concluded, according to Heyman’s reanalysis of data from four national surveys of psychiatric disorders conducted in the 1980s, the 1990s and the early 2000s. Heyman’s work also indicates that people conquer their addictions at all ages, not just during young adulthood, as Winick thought.


Heyman rejects the standard premise that alcoholism and drug abuse result either from brain diseases or moral failures.

Marijuana and cocaine addiction mainly afflicted young people in the national surveys. An average of about three-quarters of those who at some point had heavily consumed either of these two drugs had cut back markedly or stopped using completely by age 30. Just 5 percent of cocaine addicts remained hooked into their 40s and 8 percent of marijuana addicts remained devoted pot smokers into their 50s.
Alcoholics and cigarette smokers held on tighter to their habits. It took an average of 27 years for two-thirds of alcoholics to quit or dramatically curtail their drinking and a whopping 49 years for two-thirds of tobacco users to give up their smokes. Cocaine and marijuana addicts quit sooner; two-thirds had quit within seven years and nine years, respectively.

It’s especially tough to break the addictive grip of substances that are glamorized in ads and can be legally purchased at local stores, Heyman suspects.

Never too late
Most provocatively, he calculates that the likelihood of recovery stayed constant over time. A disease that turns the brain into an increasingly insatiable drug-seeker would make aging addicts the least likely to recover. Yet, heavy alcohol users in the study were as likely to give up the bottle or revert to occasional use at age 40 or 50 as at 30. That means that people whose addictions lasted into their 50s and beyond still had the potential to turn their lives around, Heyman concludes.

Being married, having a college degree, fearing arrest, facing high drug prices and developing drug-related health concerns made heavy cocaine, marijuana and alcohol users more apt to quit or substantially cut back.

Heavy smokers took a different road to recovery. Most who gave up nicotine did so after age 75. Government data suggest that antismoking campaigns have influenced increasing numbers of heavy smokers, many of them older, to quit using cigarettes, Heyman argues. From 1965 to 1995, smokers who had graduated from high school or college quit at higher rates than those with less education, apparently in reaction to information about health dangers of their habit, he says. Cigarette sales began a steady downward slide shortly after the 1964 Surgeon General’s report on smoking and illness, which was followed by increased cigarette taxes, prohibitions on public smoking and the appearance of warning labels on packs of cigarettes.

“Whether or not drug use persists depends on factors that influence decision making, particularly values related to family, the future and one’s reputation,” Heyman says.

Short-term, self-focused decisions — such as wanting to numb the emotional pain of childhood abuse — can eventually lead to drug addiction, he argues. Switching to a long-term focus on others — say, choosing to be a better parent and to make family members proud — triggers the hard work of getting sober and improving one’s lot in life.

Providers of addiction treatments differ on whether a positive perspective shift banishes bad habits or temporarily controls illnesses that can’t be cured. Studies of how people kick addictions on their own are rare. Intensive investigations of addicts who quit without formal treatment would help in designing treatments that produce long-lasting improvement, Heyman suggests.

Sobering changes
Major personal transitions throughout life, as suggested by Heyman’s findings, shape the course of alcohol and drug addictions, says psychologist Kenneth Sher of the University of Missouri in Columbia.

“People mature out of addictions at all ages,” Sher says, echoing Heyman’s expansion of Winick’s 1962 proposal.

Sher and his colleagues have analyzed data from one of the U.S. population surveys of alcohol and drug use that Heyman consulted. In that project, more than 34,000 adults, ages 18 and older, completed face-to-face interviews in 2001 or 2002 and again three years later. At the second interviews, past-year rates of drug dependence and abuse — defined in the survey as full-blown addiction accompanied by painful withdrawal reactions, as well as lesser but still serious drug problems — peaked at 9.3 percent among 18- to 20-year-olds but gradually fell in older age groups, reaching a low of 0.5 percent among those older than 50.
In particular, rates of new drug addictions and relapses among those who had kicked past substance problems declined sharply as participants got older, Sher’s group reports in the December 2013 *American Journal of Public Health*. From young adulthood to old age, those who started out with drug problems were most likely to get better over the three-year span if they got married, had children or landed a job after being unemployed, in line with Heyman’s results.

Cases of drug dependence and abuse that originated between interviews clustered among people who were at least 34 years old and got divorced in that window of time.

Alcoholics in the sample displayed an intriguing gender difference, Sher’s team reported in the May 2012 *Journal of Abnormal Psychology*. Men, but not women, who were at least 38 years old and got jobs or had a child after the first interview displayed marked declines in alcoholism by round two of the interviews. About 50 percent of alcoholic women in that age bracket who had children during the study remained heavy alcohol drinkers after three years, versus 40 percent of alcoholic women who didn’t give birth during the study.

Life transitions mean different things to different people, Sher says. For instance, parenthood may more often instill a sense of responsibility in middle-aged men and a sense of despair in middle-aged women.

**A changeable habit**

Sher’s team has found in another study that personality changes also contribute to maturing out of alcohol problems. Among 467 men and women tracked from ages 21 to 35, heavy drinking and other booze-related problems declined among those who became more conscientious and more emotionally resilient over time, the researchers reported in the November 2010 *Addictive Behaviors*.

A fine-grained picture of the ways in which people gravitate into and out of alcoholism is emerging in New Zealand.

Interviews with a representative population sample of about 1,000 participants at ages 18, 21, 26, 32 and 38 have probed the extent of imbibing and alcohol-related problems in the previous year. Data on physical and mental health have been obtained every few years since birth for each volunteer.

Findings so far underscore Heyman and Sher’s argument that alcoholism often doesn’t last a lifetime, or even past middle age, Arizona State’s Meier and her colleagues report in the August 2013 *Development and Psychopathology*.

About 13 percent of volunteers were diagnosed as alcohol dependent at age 18 or 21 but no longer drank alcohol excessively when questioned at later ages. Another 4 percent qualified as alcohol dependent only one time, at age 26. Members of these groups had generally grown up in relatively stable families and had brief brushes with delinquency and drug use as teenagers. Young adults’ stressful transition to greater independence and responsibility may have evoked temporary booze problems, Sher suggests.

A small minority experienced persistent problems. Alcoholism consistently affected around 3 percent of the sample from ages 18 or 21 onward. These participants displayed the highest rates of alcohol and drug dependence, criminal convictions and psychiatric disorders in their families.

Of the 22 percent of alcoholics who had recovered by age 32, only 14 percent had relapsed into heavy drinking when contacted at age 38.

“Based on our representative sample, relapse does not appear to be as ubiquitous as one might expect based on estimates from clinic samples,” Meier says. Nearly everyone tracked by researchers after receiving addiction treatment relapses at some point. A substantially lower relapse rate in Meier’s study is consistent with the view that alcoholism, at least in most cases, represents a changeable habit rather than a brain disease. Since the interviews occurred at 3- to 6-year intervals and covered just the previous 12 months, however, the researchers can’t be sure what happened in the years between interviews.
Chronic urgency

Even if the new studies show that many people beat addictions when they reach critical junctures in their lives, Michael Dennis, a psychologist and addiction researcher, is more concerned about the people with severe addictions who can’t go it alone.

Among volunteers recruited from Illinois’ largest addiction treatment agency, severe substance abusers qualify for an average of at least five psychiatric disorders, often including depression, anxiety conditions, personality disorders and addictions to two or more drugs, according to research by Dennis and his colleagues at Chestnut Health Systems in Illinois. Most have struggled with addictions for at least 20 consecutive years.

These individuals tend to end up dead or in nursing homes by their early 50s, so it makes no sense to wait for them possibly to find ways to get better on their own, Dennis says.

Quarterly recovery checkups of 446 patients released from state-run addiction centers in Illinois revealed that more than 90 percent needed more treatment at some point over the next four years, Dennis and psychologist Christy Scott of Chestnut Health Systems reported in the February 2012 Drug and Alcohol Dependence.

“For those with chronic addictions that last for at least two decades and include multiple psychiatric problems, the odds of recovery are limited without treatment,” Dennis says.

Lasting improvement depends on personal growth after treatment, he adds. Many ex-addicts who manage to stay off drugs long after treatment ends talk about having had spiritual awakenings or jolts of awareness about the destruction wreaked by their drug habits. “I’ve also seen people who can’t stop using drugs even though they desperately want to,” Dennis says.

Tough road ahead

Scientists don’t expect that any empirical jolts of insight will clarify lifetime patterns of alcohol and drug addictions to everyone’s satisfaction. Because excessive substance use occurs at a crossroads where culture, society, economics, psychology and biology meet, “it’s very difficult to study the natural history of drug use,” says psychiatrist Wilson Compton, deputy director of the National Institute on Drug Abuse in Bethesda, Md.

Rocky recoveries

Though most people can eventually quit without help, those with severe addictions usually require multiple rounds of rehab. In those cases, quarterly checkups run by a case manager seemed to make a big difference in getting people back into treatment when their recoveries were starting to falter. In a study of people released from Illinois treatment centers, half of those in a checkup program re-entered treatment within 13 months; it took 45 months for half of those receiving only brief quarterly interviews to seek treatment.

NIDA and many medical organizations regard alcoholism and drug addictions as brain diseases. That’s not to deny that, in population surveys, many people report having quit addictions without formal treatment, Compton acknowledges. He and his colleagues have examined data from the most recent U.S. survey analyzed by Heyman, which was conducted in 2001 and 2002 and again three years later. Compton’s team estimated that nearly half of those who began with mild to moderate drug problems had stopped using drugs at the follow-up interviews. Another 11 percent of problematic drug users had shifted to occasional drug consumption that had no harmful effects on their lives, the researchers reported in the June 2013 American Journal of Psychiatry.

About 40 percent of drug users cited at least as many drug issues three years later. So there’s reason for concern that a substantial minority of problem users are headed for worse, long-lasting drug problems, in Compton’s view.
Rehab and other forms of treatment jump-start recovery, even if many people with drug problems eventually get better on their own, Compton says. He compares this situation to flu sufferers, who can return to health without treatment but do so more quickly when prescribed proper medication.

Heyman disagrees. “The data don’t tell us that there are two kinds of addicts, one that quits and one that doesn’t,” he says. Everyone can potentially break free of addictions if their personal options and perspectives on life change — and most do.

Those who don’t quit still make choices that are unavailable to those afflicted with physical illnesses, Heyman emphasizes.

That goes for actress Drew Barrymore no less than for Philip Seymour Hoffman, who stayed clean for more than 20 years before he tragically returned to heroin use. Barrymore transitioned from child movie star to teenage alcoholic and drug addict to nonaddicted movie star and producer who occasionally drinks wine from her own winery. In life as in research, that’s the paradox of addiction.

Citations


