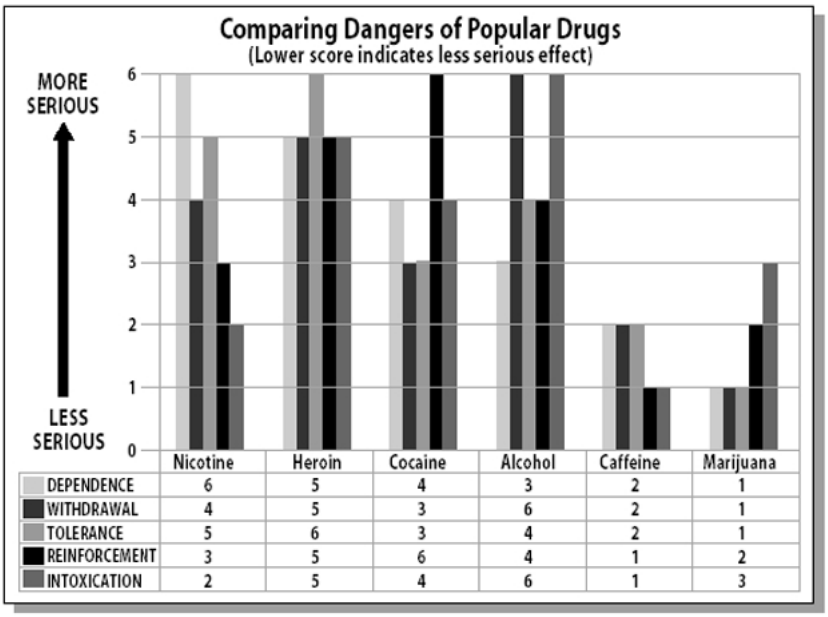
Addictive Properties of Popular Drugs

Published: 01/09/2008 - 16:50

1.

(Addictive Qualities of Popular Drugs)



	Nicotine	Heroin	Cocaine	Alcohol	Caffeine	Marijuana
DEPENDENCE	6	5	4	3	2	1
WITHDRAWAL	4	5	3	6	2	1
TOLERANCE	5	6	3	4	2	1
REINFORCEMENT	3	5	6	4	1	2
INTOXICATION	2	5	4	6	1	3

Withdrawal: Presence and severity of characteristic withdrawal symptoms.

Reinforcement: A measure of the substance's ability, in human and animal tests, to get users

to take it again and again, and in preference to other substances.

Tolerance: How much of the substance is needed to satisfy increasing cravings for it, and the level of stable need that is eventually reached.

Dependence: How difficult it is for the user to quit, the relapse rate, the percentage of people who eventually become dependent, the rating users give their own need for the substance

and the degree to which the substance will be used in the face of evidence that it causes harm.

Intoxication: Though not usually counted as a measure of addiction in itself, the level of intoxication is associated with addiction and increases the personal and social damage a substance may do.

Source:

Jack E. Henningfield, PhD for NIDA, Reported by Philip J. Hilts, New York Times, Aug. 2, 1994 "Is Nicotine Addictive3 It Depends on Whose Criteria You Use."

http://www.nytimes.com/1994/08/02/science/is-nicotine-addictive-it-depen...

http://www.erowid.org/psychoactives/addiction/addiction_media1.shtml

2.

(Drug Rankings by Harm) "Participants were asked to score each substance for each of these nine parameters, using a four-point scale, with 0 being no risk, 1 some, 2 moderate, and 3 extreme risk. For some analyses, the scores for the three parameters for each category were averaged to give a mean score for that category. For the sake of discussion, an overall harm rating was obtained by taking the mean of all nine scores. The scoring procedure was piloted by members of the panel of the Independent Inquiry into the Misuse of Drugs Act. [13]

"Once refined through this piloting, an assessment questionnaire based on table 1, with additional guidance notes, was used. Two independent groups of experts were asked to do the ratings. The first was the national group of consultant psychiatrists who were on the Royal College of Psychiatrists' register as specialists in addiction Replies were received and analysed from 29 of the 77 registered doctors who were asked to assess 14 compounds—heroin, cocaine, alcohol, barbiturates, amphetamine, methadone, benzodiazepines, solvents, buprenorphine, tobacco, ecstasy, cannabis, LSD, and steroids. Tobacco and alcohol were included because their extensive use has provided reliable data on their risks and harms, providing familiar benchmarks against which the absolute harms of other drugs can be judged. However, direct comparison of the scores for tobacco and alcohol with those of the other drugs is not possible since the fact that they are legal could affect their harms in various ways, especially through easier availability.

"Having established that this nine-parameter matrix worked well, we convened a second group of experts with a wider spread of expertise. These experts had experience in one of the many areas of addiction, ranging from chemistry, pharmacology, and forensic science, through psychiatry and other medical specialties, including epidemiology, as well as the legal and police services. The second set of assessments was done in a series of meetings run along delphic principles, a new approach that is being used widely to optimise knowledge in areas where issues and effects are very broad and not amenable to precise measurements or experimental testing, [14] and which is becoming the standard method by which to develop consensus in medical matters."

Drug Rankings by Harm

Substance	Physical Harm	Dependence	Social Harm	UK Class	US Schedule
Heroin	2.78	3.00	2.54	A	I
Cocaine	2.33	2.39	2.17		

A
II

Barbiturates

2.23
2.01
2.00

B
III

Street Methadone

1.86
2.08
1.87

A
II

Alcohol

1.40
1.93
2.21

n/s
n/s

Ketamine

2.00
1.54
1.69

C
III

Benzodiazepines

1.63
1.83
1.65

C
IV

Amphetamine

1.81
1.67
1.50

A
II

Tobacco

1.24
2.21
1.42

n/s
n/s

Buprenorphine

1.60
1.64
1.49

C
III

Cannabis

0.99
1.51
1.50

B
I

Solvents
1.28
1.01
1.52

n/s
n/s

4-MTA
1.44
1.30
1.06

A
n/s

LSD
1.13
1.23
1.32

A
I

Methylphenidate
1.32
1.25
0.97

B
II

Anabolic steroids

1.45
0.88
1.13

C
III

GHB

0.86
1.19
1.30

C
I

Ecstasy

1.05
1.13
1.09

A
I

Alkyl nitrites

0.93
0.87
0.97

n/s
n/s

Khat

0.50
1.04
0.85

C
I

Notes:

- United Kingdom drug classes were initially assigned based on Table 2 in *The Lancet* report. However, since then, two drugs have been reclassified:

- Methamphetamine was moved from class B to class A in 2006.

- Although Cannabis was downgraded from class B to class C in 2004, it was subsequently upgraded to class B in 2009.

- "n/s" = no scheduling

A one-page flyer depicting the data in the “Drug Rankings by Harm” table can be found in PDF format at http://drugwarfacts.org/cms/files/Drug-Rankings-by-Harm.pdf .

Source:

Nutt, David Nutt; King, Leslie A; Saulsbury,William; and Blakemore, Colin "Development of a rational scale to assess the harm of drugs of potential misuse," The Lancet (London, United Kingdom: March 24, 2007), Vol 369, p. 1051.

http://www.beckleyfoundation.org/bib/doc/bf/2007_David_211305_1.pdf

http://www.ncbi.nlm.nih.gov/pubmed/17382831

U.S. Code. Title 21, Chapter 13 -- Drug Abuse Prevention and Control -- Section 844, Penalties for Simple Possession, pp. 385-387.

http://frwebgate.access.gpo.gov/cgi-bin/usc.cgi?ACTION=RETRIEVE&FILE=$$xa$$busc21.wais&start=2717826&SIZE=24600&TYPE=PDF

http://mapinc.org/url/1NCZaa7Q

http://www.deadiversion.usdoj.gov/schedules/orangebook/e_cs_sched.pdf

List of controlled drugs in the United Kingdom,

http://en.wikipedia.org/wiki/List_of_controlled_drugs_in_the_United_King...

3.

(Addictive Potential) "Of the people who sample a particular substance, what portion will become physiologically or psychologically dependent on the drug for some period of time? Heroin and methamphetamine are the most addictive by this measure. Cocaine, pentobarbital (a fast-acting sedative), nicotine and alcohol are next, followed by marijuana and possibly caffeine. Some hallucinogens—notably LSD, mescaline and psilocybin—have little or no potential for creating dependence."

Source:

Gable, Robert S., "The Toxicity of Recreational Drugs," American Scientist (Research Triangle Park, NC: Sigma Xi, The Scientific Research Society, May-June 2006) Vol. 94, No. 3, p. 208.

http://www.americanscientist.org/libraries/documents/200645104835_307.pd...

4.

(Ranking of Substances by Potential for Harm) "Method: Members of the Independent Scientific Committee on Drugs, including two invited specialists, met in a 1-day interactive workshop to score 20 drugs on 16 criteria: nine related to the harms that a drug produces in the individual and seven to the harms to others. Drugs were scored out of 100 points, and the criteria were weighted to indicate their relative importance."

"Findings: MCDA [multicriteria decision analysis] modelling showed that heroin, crack cocaine, and metamfetamine were the most harmful drugs to individuals (part scores 34, 37, and 32, respectively), whereas alcohol, heroin, and crack cocaine were the most harmful to others (46, 21, and 17, respectively). Overall, alcohol was the most harmful drug (overall harm score 72), with heroin (55) and crack cocaine (54) in second and third places."

Source:

Nutt, David J Nutt; King, Leslie A; Phillips, Lawrence D, "Drug harms in the UK: a multicriteria decision analysis," The Lancet (London, United Kingdom: November 1, 2010) Vol. 376, p. 1558.

http://download.thelancet.com/pdfs/journals/lancet/PIIS0140673610614626....

(Note: To access this PDF users need to log in and a fee/subscription may be required.)

5.

(Cannabis and Dependence) "People who develop problems with marijuana may indeed be different from those who do not, but this phenomenon has been observed with other substances of abuse. A comparison with alcohol use and dependence provides a case in point. The great majority of Americans have tried alcohol and continue to drink alcoholic beverages regularly. However, only an estimated 10 to 15 percent of alcohol drinkers develop problems, and only some of these problem drinkers seek treatment. This is also true of those who have tried cocaine or heroin (Anthony, Warner, and Kessler, 1994).

"That said, the experience of dependence on marijuana tends to be less severe than that observed with cocaine, opiates, and alcohol (Budney, 2006; Budney et al., 1998). On average, individuals with marijuana dependence meet fewer DSM dependence criteria; the withdrawal experience is not as dramatic; and the severity of the associated consequences is not as extreme. However, the apparently less severe nature of marijuana dependence does not necessarily mean that marijuana addiction is easier to overcome. Many factors besides a drug's physiological effects—including availability, frequency and pattern of use, perception of harm, and cost—can contribute to cessation outcomes and the strength of addiction. The low cost of marijuana, the typical pattern of multiple daily use by those addicted, the less dramatic consequences, and ambivalence may

increase the difficulty of quitting. Although determining the relative difficulty of quitting various substances of abuse is complex, the treatment literature reviewed here suggests that the experience of marijuana abusers rivals that of those addicted to other substances."

Source:

Budney A, Roffman R, Stephens R, Walker D. Marijuana dependence and its treatment. Addiction Science and Clinical Practice. 2007;4(1):4–16.

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2797098/pdf/ascp-04-1-4.pdf

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2797098/

6.

(Estimated Prevalence of Cannabis Dependence) "Some 4.3 percent of Americans have been dependent on marijuana, as defined in the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision (DSM-IV-TR; American Psychiatric Association, 2000), at some time in their lives. Marijuana produces dependence less readily than most other illicit drugs. Some 9 percent of those who try marijuana develop dependence compared to, for example, 15 percent of people who try cocaine and 24 percent of those who try heroin. However, because so many people use marijuana, cannabis dependence is twice as prevalent as dependence on any other illicit psychoactive substance (cocaine, 1.8 percent; heroin, 0.7 percent; Anthony and Helzer, 1991; Anthony, Warner, and Kessler, 1994)."

Source:

Budney A, Roffman R, Stephens R, Walker D. Marijuana dependence and its treatment. Addiction Science and Clinical Practice. 2007;4(1):4–16.

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2797098/pdf/ascp-04-1-4.pdf

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2797098/