

**Pain**week.

# ADVANCED EDUCATION

CERTIFICATION SERIES

## CANNABINOIDS

### Drug Markets, Pricing, and Policy

Mark Garofoli, PharmD, MBA, BCGP, CPE

# Faculty Disclosure

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- **Consulting Fee:** HealthXL, Speranza
- **Other:** Expert Witness—Cardinal Health

This presentation was not a part of the presenter's official duties at the WVU and does not represent the opinion of WVU

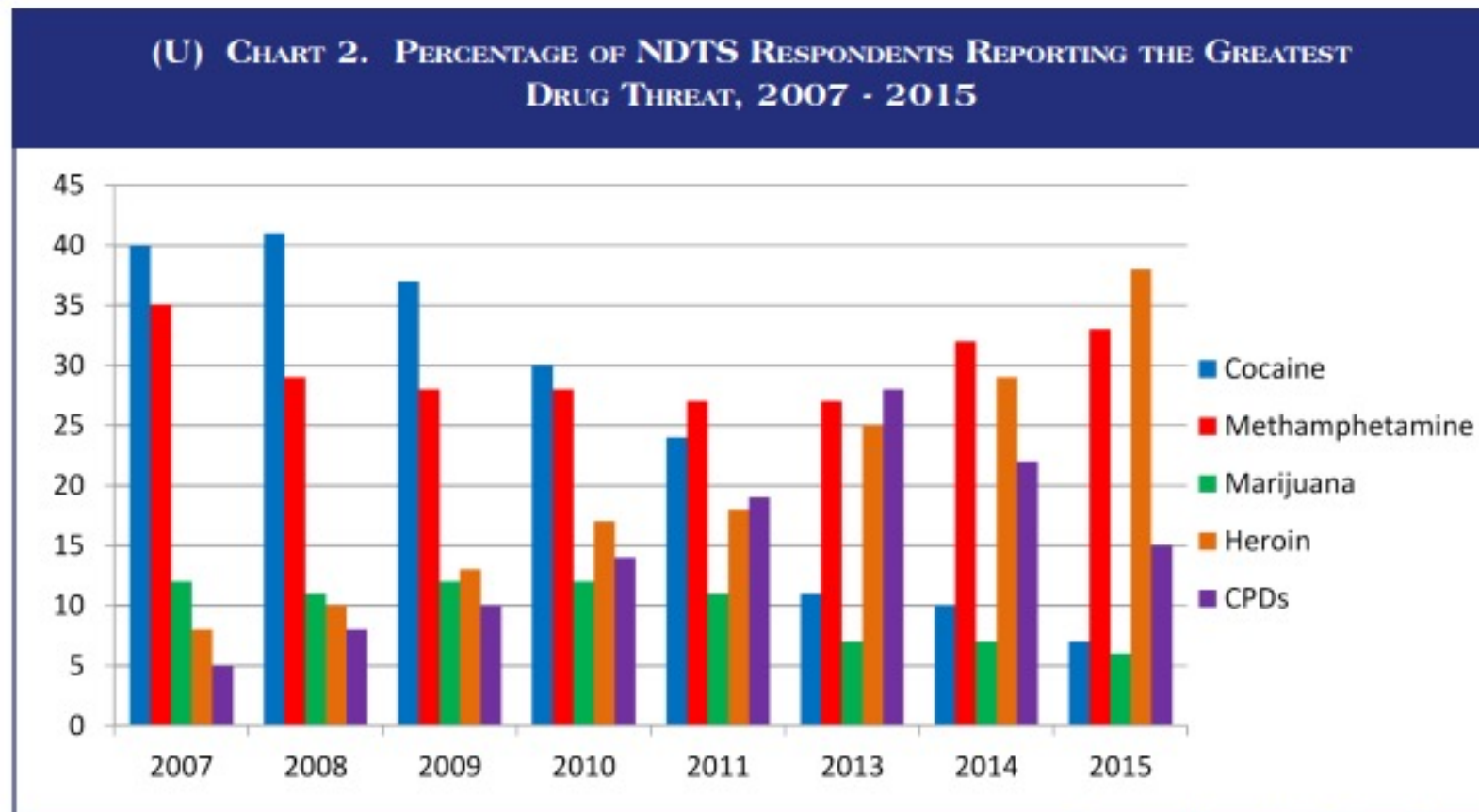
# Learning Objectives

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- Recall the most impactful US and international drug policies and laws.
- Explain how people illegally purchase substances of abuse in headshops, smartshops, and the darknet.
- Distinguish the relatively low number of marijuana deaths compared to the relatively high number of emergency room visits.

# Illicit Trends

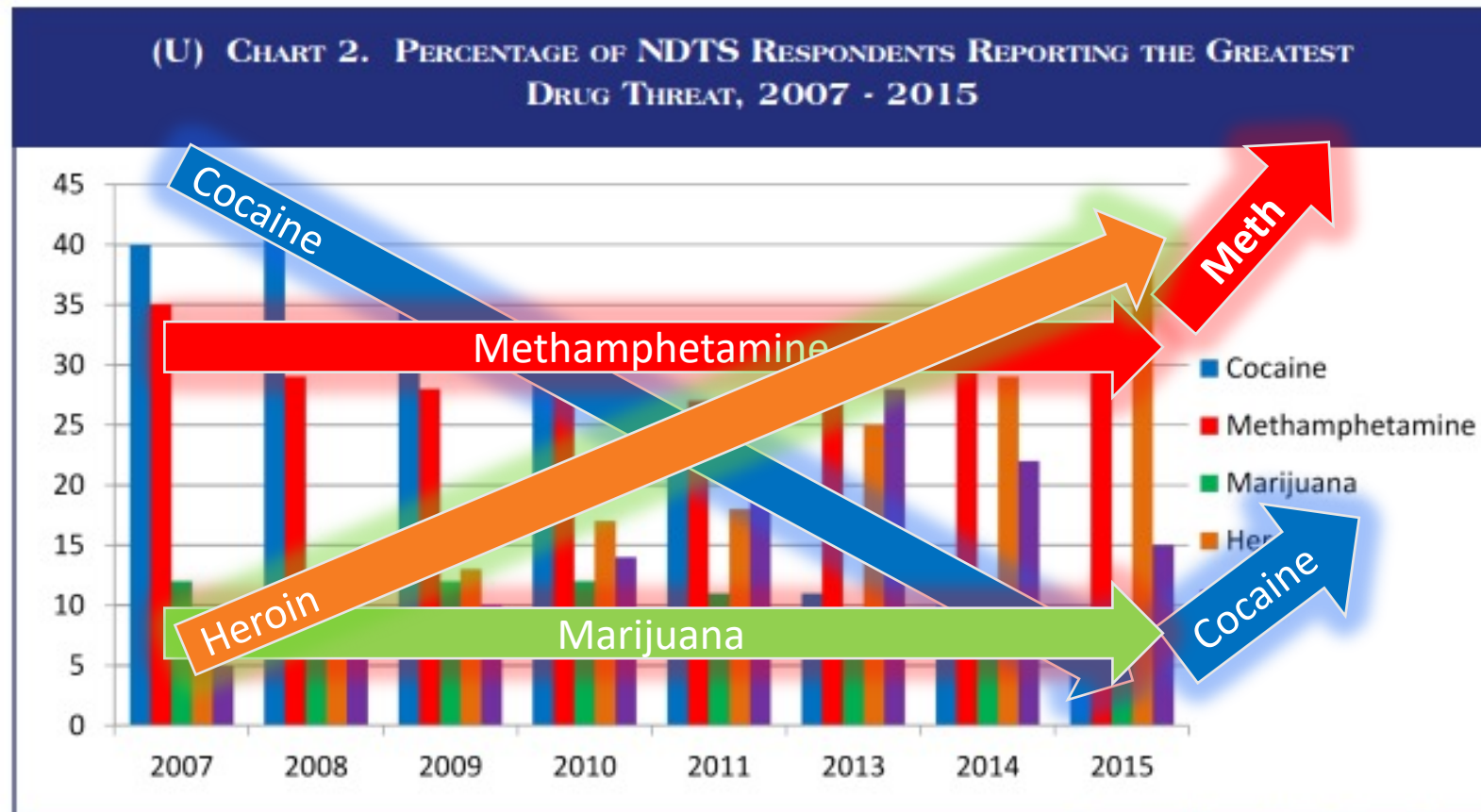
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SOURCE: NATIONAL DRUG THREAT SURVEY



# Illicit Trends



SOURCE: NATIONAL DRUG THREAT SURVEY

# Policy Punches...

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APRIL 12, 2017 | NUMBER 811

## Four Decades and Counting

The Continued Failure of the War on Drugs

BY CHRISTOPHER J. COYNE AND ABIGAIL R. HALL

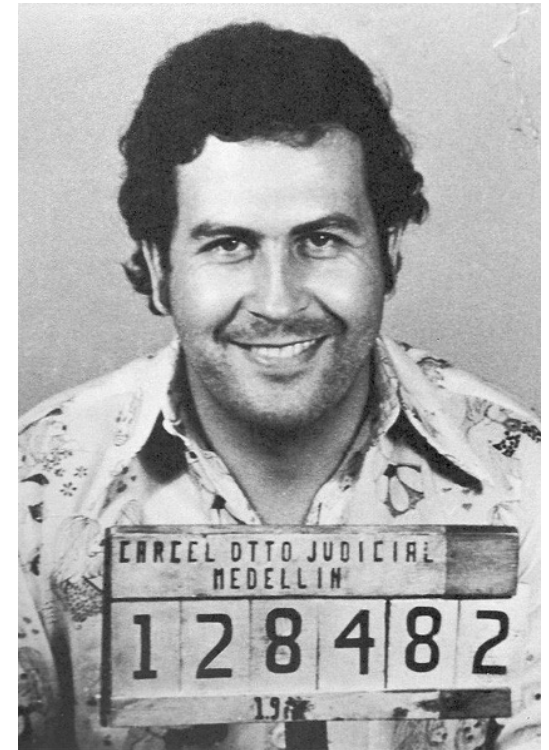
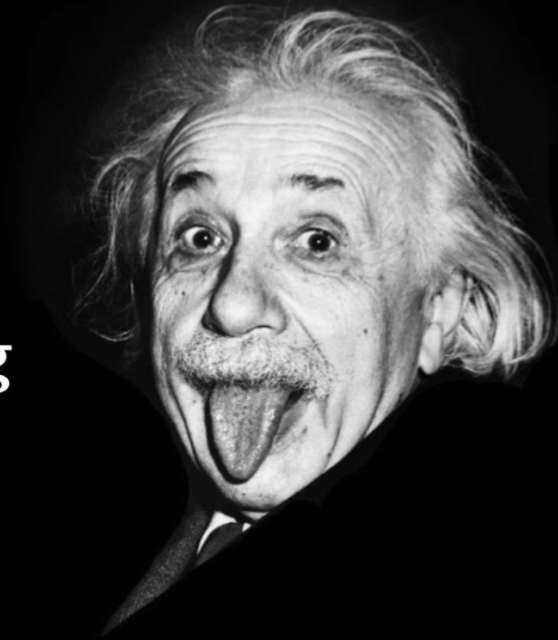
[object.cato.org/sites/cato.org/files/pubs/pdf/pa-811-updated.pdf](https://object.cato.org/sites/cato.org/files/pubs/pdf/pa-811-updated.pdf).

# Policy Pitfalls...

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"Insanity is doing the same thing over and over again and expecting different results"

*Albert Einstein*



[object.cato.org/sites/cato.org/files/pubs/pdf/pa-811-updated.pdf](http://object.cato.org/sites/cato.org/files/pubs/pdf/pa-811-updated.pdf)

# Just Say No-thing Pays Better



HOME / MONEY & CAREER /

## These Are the Richest Drug Dealers of All Time

Jason Rossi | MORE ARTICLES

May 30, 2018

1. Pablo Escobar (\$3#B)
2. Christopher Coke (\$30B)
3. Amado Carrillo Fuentes (\$25)
4. Alfredo Beltran Leyva (\$10B)
5. Dawood Ibrahim Kaskar (\$6.7B)
6. Ochoa Vasquez brothers (\$6B)
7. Khun Sa (\$5B)
8. Jose Gonzalo Rodriguez Gacha (\$5B)
9. Joaquin "El Chapo" Guzman Leora (\$3B)
10. Gilberto Rodriguez Orejuela (\$3B)
11. Carolos Lehder (\$2.7B)
12. Griselda Blanco (\$2B)
13. Al Capone (\$1.5B)
14. Rafael Caro Quintero (\$615M)
15. "Freeway" Rick Ross (\$600M)
16. Zhenli Ye Gon (\$300M)
17. Paul Lir Alexander (\$170M)
18. Nicky Barnes (\$105M)
19. George Jung (\$100M)
20. Jose David Figueroa Agosto (\$100M)
21. Frank Lucas (\$52M)
22. Many, many, many more

[news.yahoo.com/el-chapo-12-richest-drug-214253459.html](https://news.yahoo.com/el-chapo-12-richest-drug-214253459.html).

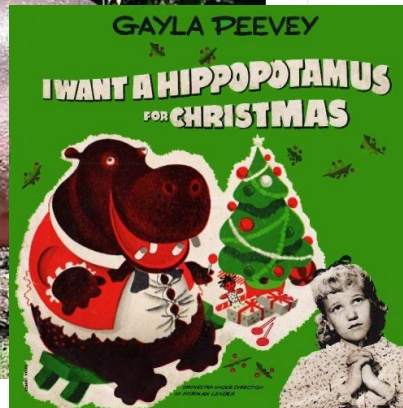
[www.cheatsheet.com/money-career/richest-drug-dealers-of-all-time.html/](https://www.cheatsheet.com/money-career/richest-drug-dealers-of-all-time.html/).



# Everyone Wants a Hippopotamus for Christmas!

## Invasion of the hippos: Colombia is running out of time to tackle Pablo Escobar's wildest legacy

Efforts to castrate hippos are not as easy as you would think



### Could Pablo Escobar's escaped hippos help the environment?

Colombia's "cocaine hippos" are making waves in their new home, but whether that's a good thing or not depends on who you ask.

BY CHRISTIE WILCOX



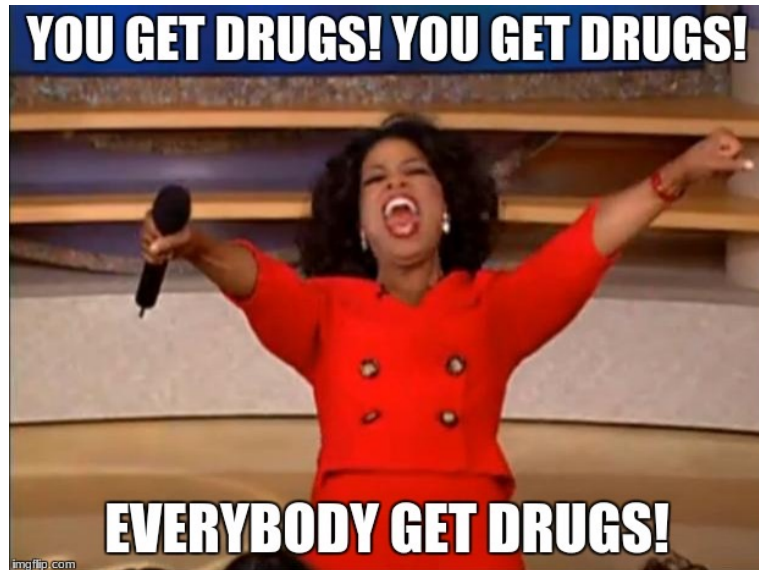
PUBLISHED JANUARY 31, 2020 • 10 MIN READ

When the notorious drug lord Pablo Escobar was shot dead in 1993, the Colombian government took control of his luxurious estate in northwestern Colombia, including his personal zoo. Most of the animals were shipped away, but the four hippopotamuses—of which Escobar was especially fond—were left to fend for themselves in a pond. Now, there are dozens and dozens of them.

[www.washingtonpost.com/climate-environment/2021/01/11/invasive-hippos-escobar-colombia-castrate/](https://www.washingtonpost.com/climate-environment/2021/01/11/invasive-hippos-escobar-colombia-castrate/)  
[www.nationalgeographic.com/animals/article/colombia-cocaine-hippos-rewilding-experiment-news](https://www.nationalgeographic.com/animals/article/colombia-cocaine-hippos-rewilding-experiment-news)

# When I grow up, I want to be a...

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# Markets

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- Market
  - Any structure that allows buyers/sellers to exchange any type of goods, services, and information
- Grey market
  - Parallel market
  - Trade through legal distribution channels but unintended by original manufacturer
  - Diversion or counterfeiting
  - Example: selling knock-off “Coach®” purses from a van in Manhattan
- Black market
  - Involves transactions outside of the official economy
  - Common motives: trade contraband, avoid taxes and price controls
  - Examples: drug trade (eg, darknet), prostitution, illegal currency transactions, human trafficking

# Industrial Labs

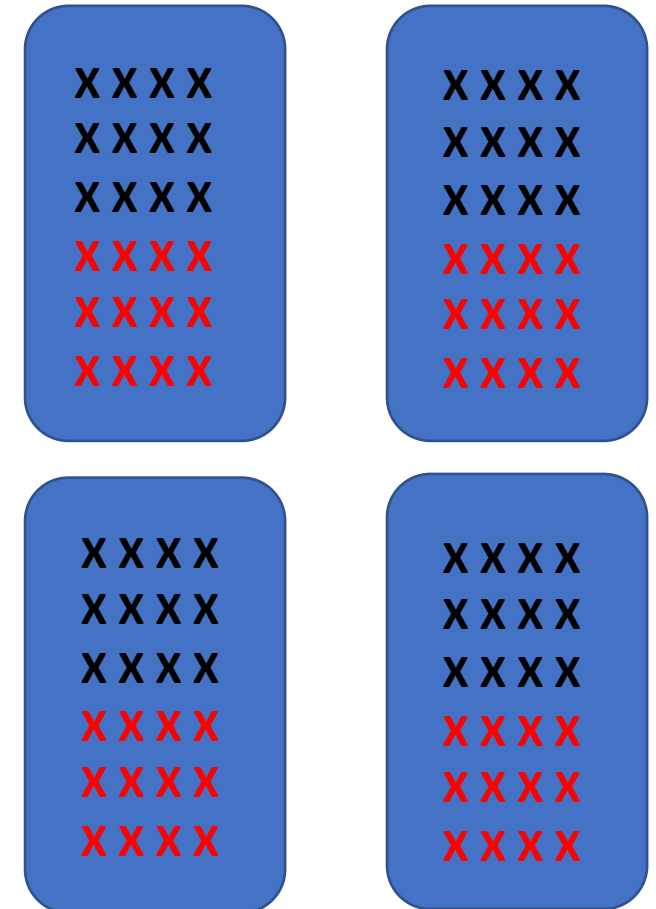
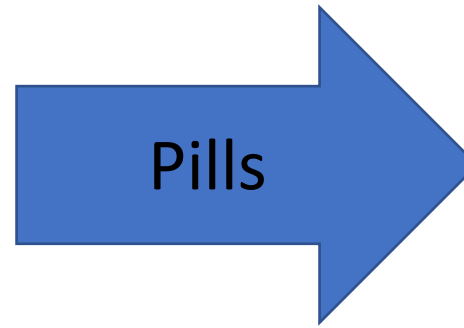
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Inactive Substances

XXXX  
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XXXX

Active Substances





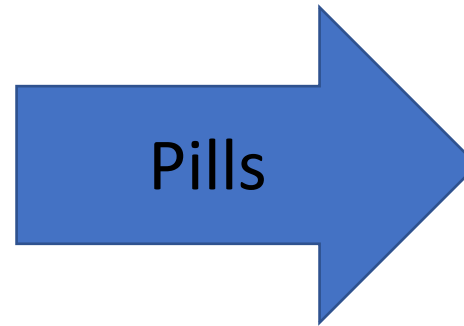
# Clandestine Labs

## Inactive Substances

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## Active Substances



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[www.dea.gov/documents/2018/10/02/2018-national-drug-threat-assessment-ndta](http://www.dea.gov/documents/2018/10/02/2018-national-drug-threat-assessment-ndta).

# Head Shops

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Found 5 head shops in Morgantown, WV.

**Brownie's Glass**

185 Walnut Street  
Morgantown, WV 26505  
(304) 241 1780

**Cool Ridge**

329 High St  
Morgantown, WV 26505  
(304) 296 5757

**Glass Lab**

2005 University Avenue  
Morgantown, WV 26505  
(304) 381 2156

**Smoke Zone**

433 Beechurst St  
Morgantown, WV 26505  
(304) 212 5296

**The Den**

182 Willey Street  
Morgantown, WV 26505



[www.findheadshops.com/](http://www.findheadshops.com/).

# Head Shops

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## Conversational

- Acronym for “***He Eats Acid Daily***”
- Nickname for fans of the Grateful Dead (Dead ***Heads***)
- 1913: First documented use of a drug name with “***head***” (denoting drug use)
- 1960s: Acid ***heads*** & pot ***heads*** became a pronounced aspect of American counterculture

## Factual

- A retail outlet specializing in paraphernalia used for consumption of cannabis and tobacco and items related to cannabis culture and related countercultures
- 1966: 1<sup>st</sup> head shop opened in San Francisco (Ron & Jay Thelin's Psychedelic Shop)

# Smart Shops

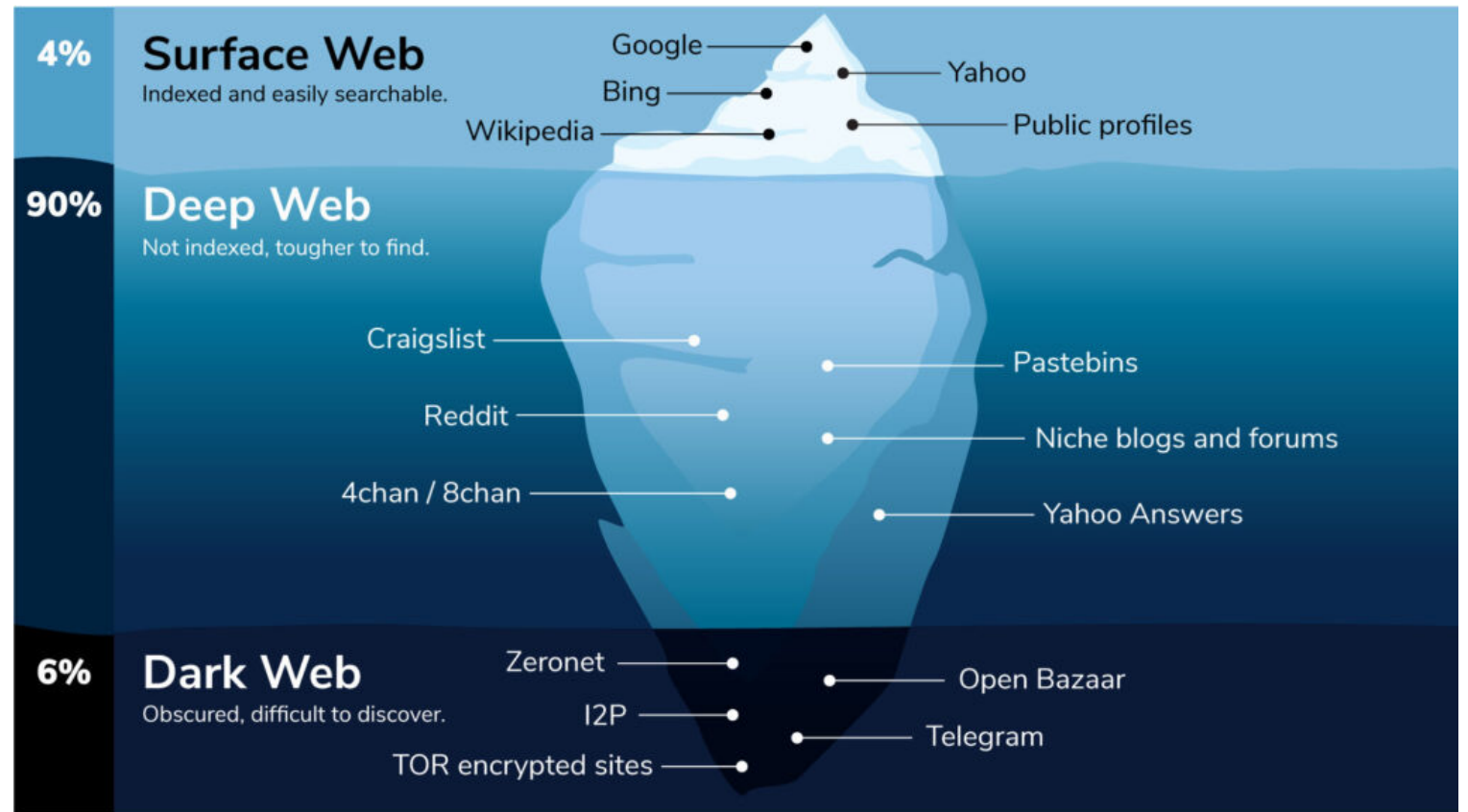
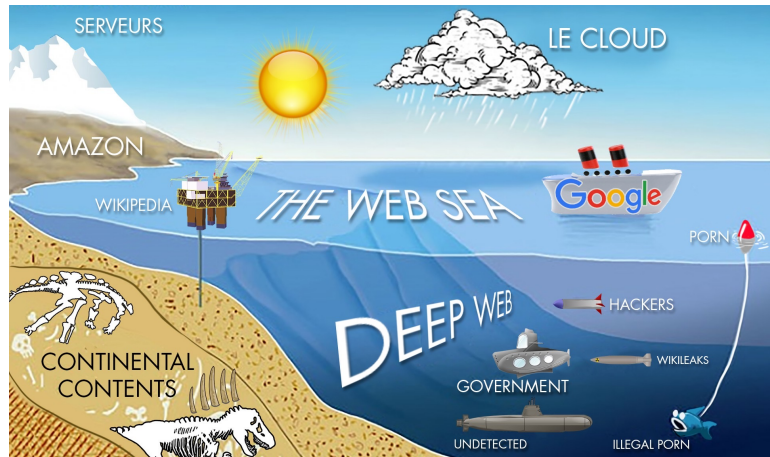
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- Netherlands, UK, and online retail stores specializing in the sale of psychoactive substances and related literature and paraphernalia
- Derived from “smart drugs”
  - Class of drugs and supplements intended to effect cognitive enhancements
- Operate under the theory that unprepared substances (mushrooms, cacti, etc) are not considered “preparations” of the substances they contain

[www.dea.gov/pr/multimedia-library/publications/drug\\_of\\_abuse.pdf](http://www.dea.gov/pr/multimedia-library/publications/drug_of_abuse.pdf).

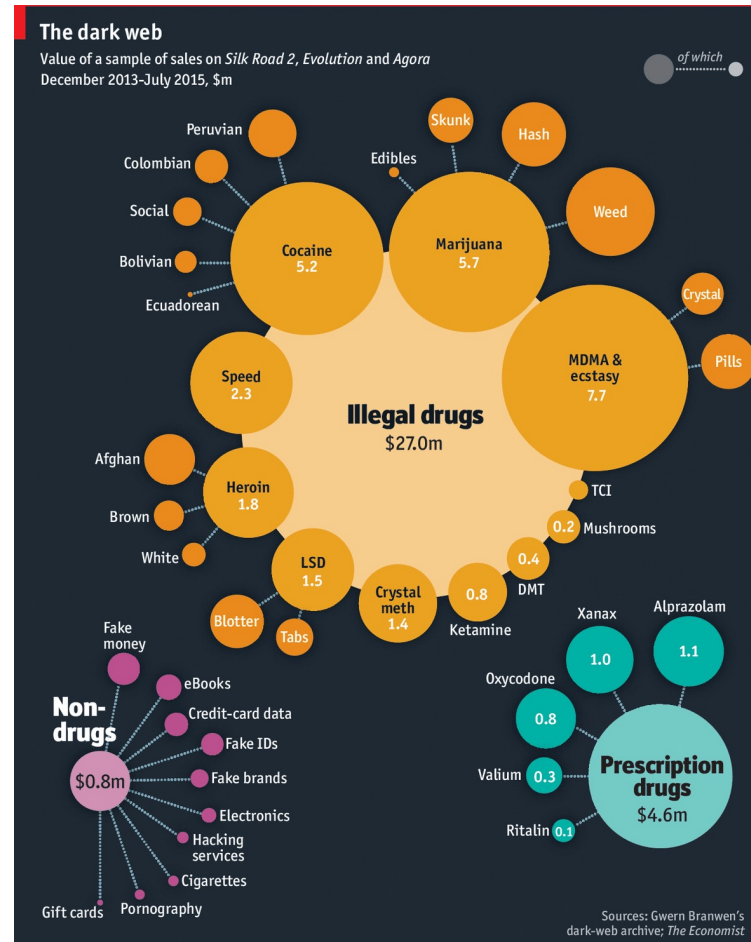
[www.dea.gov/documents/2018/10/02/2018-national-drug-threat-assessment-ndta](http://www.dea.gov/documents/2018/10/02/2018-national-drug-threat-assessment-ndta).

# Surfin' the Web(s)



[safefort.com.cy/dark-web-monitoring/](https://safefort.com.cy/dark-web-monitoring/)

# Darknet Commerce Trends



[www.economist.com/international/2016/07/16/shedding-light-on-the-dark-web](http://www.economist.com/international/2016/07/16/shedding-light-on-the-dark-web)



# Darknet Market Toolbox

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## 1. Tor browser

- TOR (The Onion Routing) developed by US Navy to protect US communications
- Continual relay of ISP address with each peeling a layer of the “onion” ISP address off
- Dot Onion (.onion) web address endings for 16 character alphanumerical random web addresses

## 2. Darknet sites

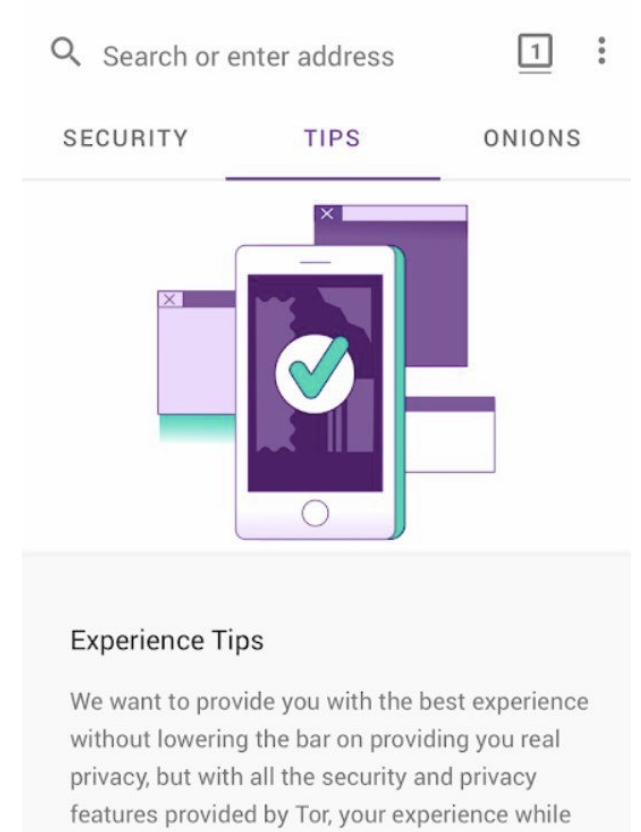
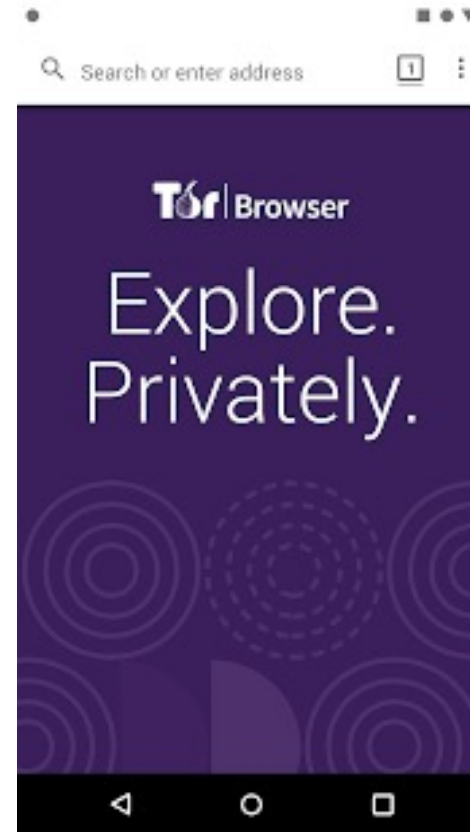
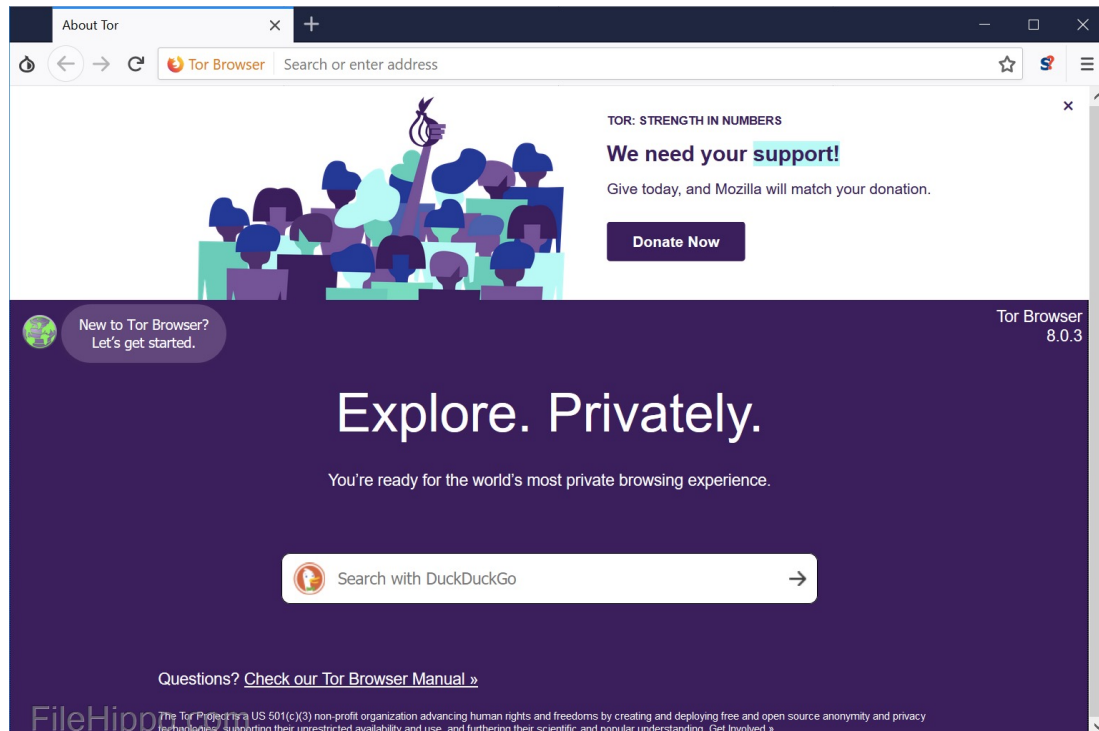
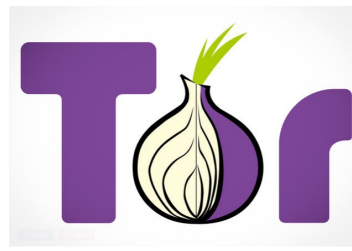
- Dream Market, Black Market, Silk Road-seized, etc

## 3. PGP encryption software (messaging buyer/seller)

## 4. Bitcoins and wallets

- QR paper wallet
- Seed phrase (12 random words)
- Hardware wallets (credit card or flash drive)

## 5. Tails (operating system on a flash drive which is encrypted, leaving nothing on a hard drive)





# Darknet Sites

*Dream Market*  
Established 2013

**Dream Market**  
Established 2013

Shop Messages: 0 Account

Browse by category

- Drugs 3079
  - Cannabis 898
  - Dissociatives 34
  - Ecstasy 452
  - Opioids 250
  - Others 147
  - Precursors 8
  - Prescriptions 193
  - Psychedelics 211
  - Stimulants 608
  - Benzos 216

Drugs (3079)

Filter

Shipping from: Any Escrow: Any

1 2 3 4 5 6 7 8 18 19 20 ... 87 88 89 90

CASABLANCA 23-5-2015

**MIDDLE EARTH**  
HOBBIT'S SOCIAL NETWORK

Search Shop Forum Info

BTC USD EUR GBP Country Find

newest title price vendor rating

Power Plant 1G 175µg Calvin & Hobb...

**Silk Road**  
anonymous market

messages 0 orders 0 account \$0.00

Search Go

Hi,  settings - logout

Drugs 229

- Cannabis 24
- Dissociatives 4
- Ecstasy 30
- Opioids 5
- Other 15
- Precursors 1
- Prescription 39
- Psychedelics 54
- Stimulants 17

Apparel 18

Art 0

Biotic materials 0

Books 11

Collectibles 0

Computer equipment 2

Custom Orders 0

Digital goods 3

Drug paraphernalia 5

Electronics 0

Erotica 0

Forgeries 16

Hardware 0

Herbs & Supplements 0

Jewelry 0




Lab Supplies 1

Lotteries & games 5

Medical 0

Money 3

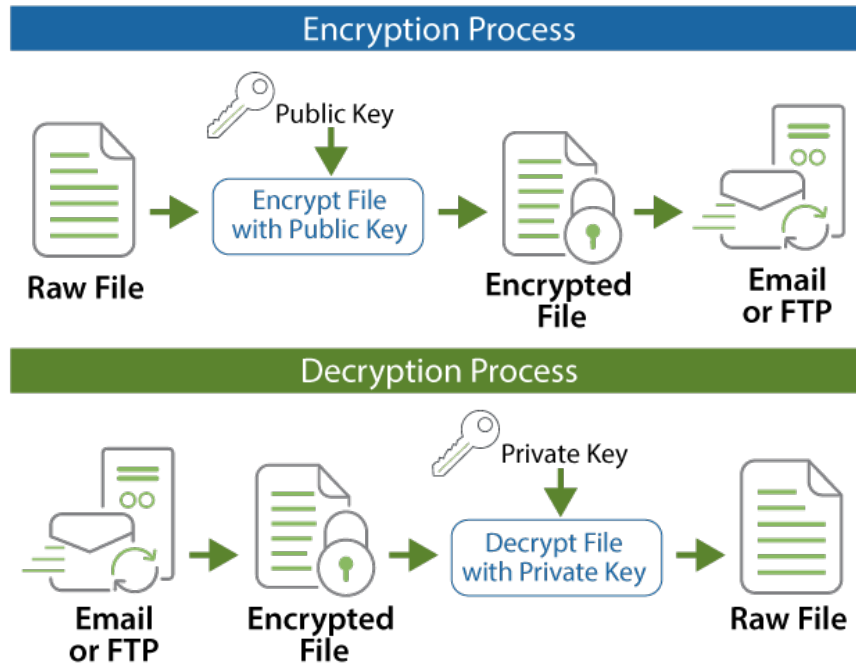
browsing drugs

item	vendor	price
 1g DMT Freebase	ringo deathstarr	\$0.35672880 add to cart
 7g (1/4oz) P.Cubensis Powder	magicted	\$0.16030500 add to cart
 FREE 25i-NBOMe 1mg blotter sample FREE	eternalpsy	\$0.00000000 add to cart

# PGP Encryption

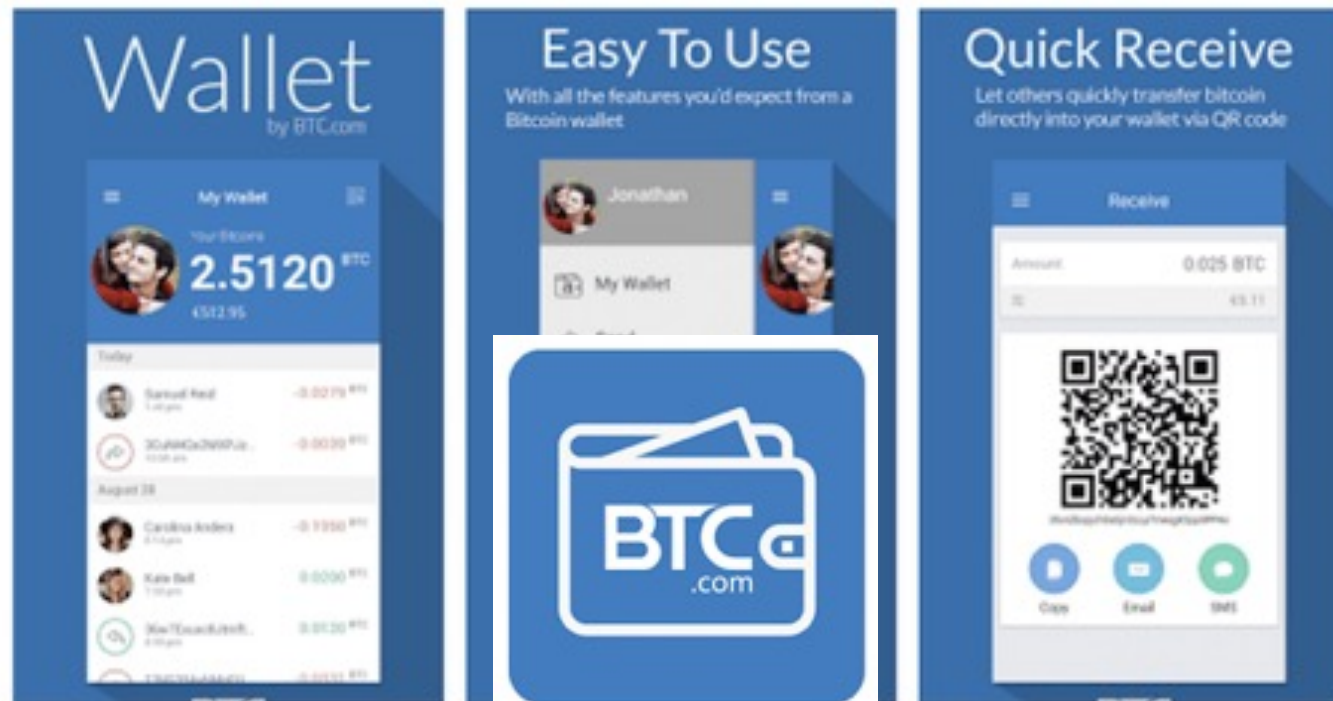
PGP: “Pretty Good Privacy”

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# Bitcoins and Wallets

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# Bitcoin: Genius or Insanity???

**yahoo!finance**

Search for news, symbols or companies



Sign in



MoneyWise

## Bitcoin hit an all-time high — so how come Warren Buffett still won't touch it?



**Ethan Rotberg**

Sat, March 13, 2021, 6:00 PM · 4 min read



Bitcoin hit an all-time high — so how come Warren Buffett still won't touch it?

## Is Tesla's Bitcoin Gambit Genius or Madness?

As with everything Elon Musk does, the answer lies somewhere in the murky middle...



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Image credit: Bloomberg | Getty Images



**James Murphy**

ENTREPRENEUR LEADERSHIP NETWORK CONTRIBUTOR

CEO of Future Fallout



**Entrepreneur**  
FRANCHISE 500

Identify your perfect franchise match!  
**Take our short quiz >>>**

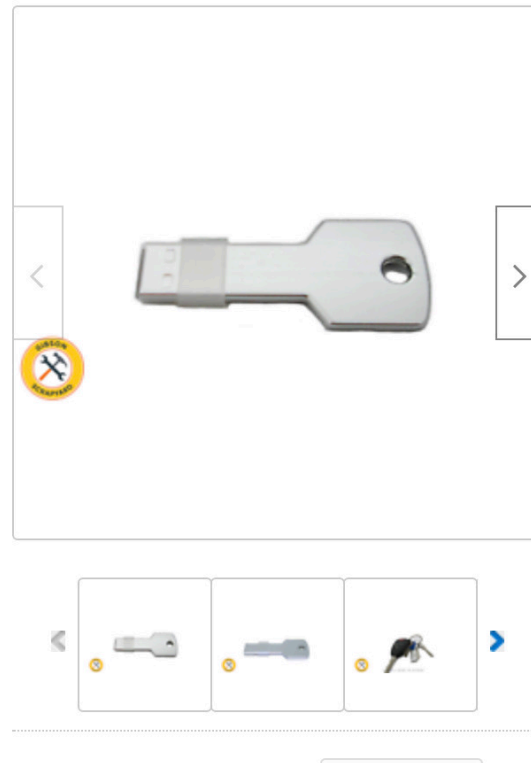
[finance.yahoo.com/news/bitcoin-hit-time-high-heres-230000602.html](https://finance.yahoo.com/news/bitcoin-hit-time-high-heres-230000602.html).  
[www.entrepreneur.com/article/365515](https://www.entrepreneur.com/article/365515).

**Free Book Preview**  
**Money-Smart Solopreneur**



# Tails

ebay



## Darkweb / Darknet Browser TAILS USB Bootable Operating System And Privacy VPN

Private Internet Surfing Communication

Condition: **Brand New**

Quantity:  4 available / **51 sold**

Price: **US \$9.99**

**Buy It Now**

**Add to cart**

[♥ Add to Watchlist](#)

☐ [2-year protection plan](#) from SquareTrade - \$1.99

**100% buyer satisfaction**

51 sold

More than 92% sold

# The War on Drugs...

I've Seen  
War.  
I Hate War.



President Theodore Roosevelt

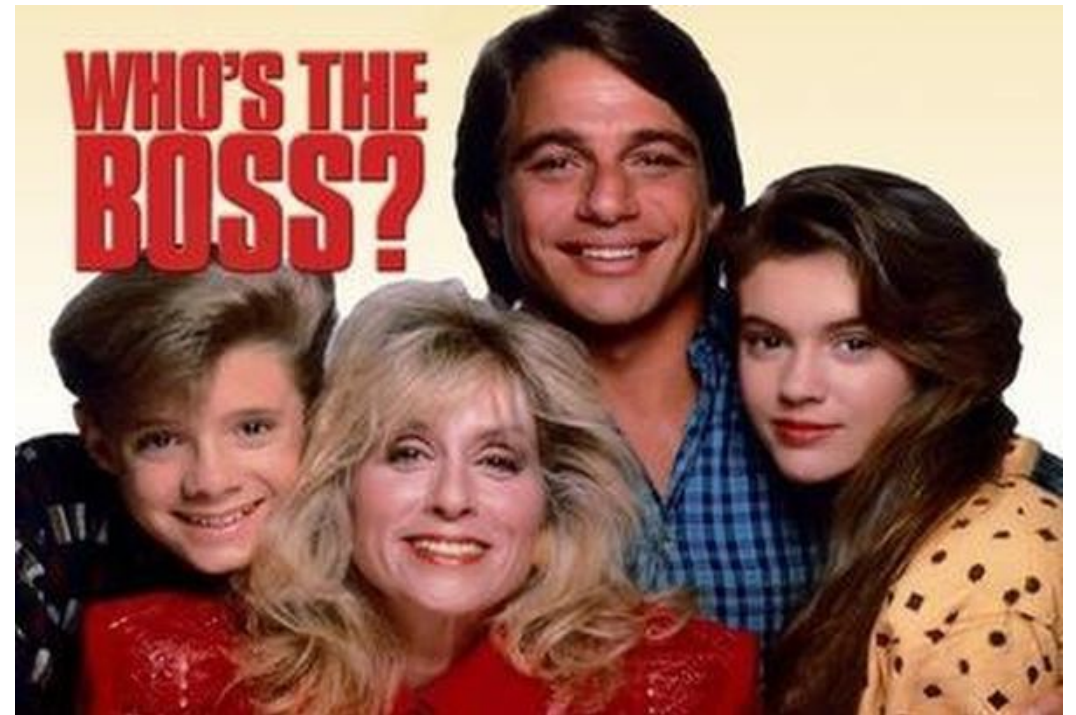


# Who's the Boss?

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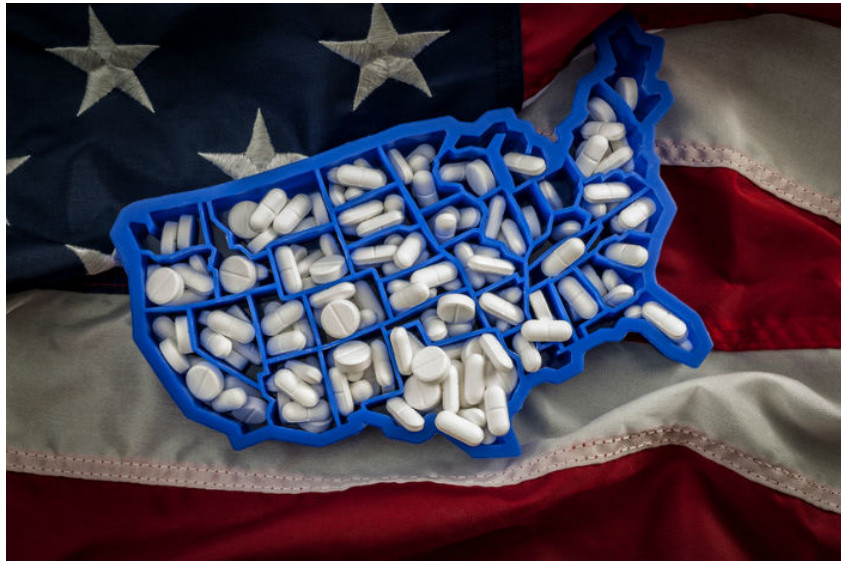
LIKE A BOSS





# A Drug PANDEMIC

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[www.dcatvci.org/6213-global-api-sourcing-which-countries-lead](http://www.dcatvci.org/6213-global-api-sourcing-which-countries-lead).



# US Laws Pertaining to Medications

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## 1832 Tariff Act

- Exempted opium from import duties

## 1842 Tariff Act

- Opium added

## 1862 Tariff Act

- Morphine added

## 1906 Food & Drug Act

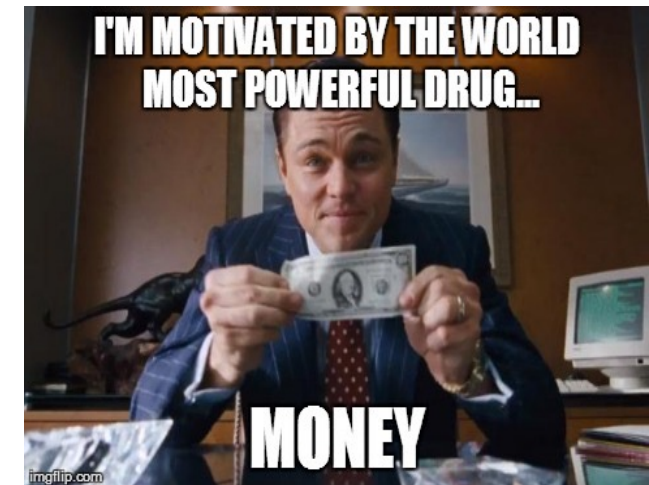
- National labeling requirement (avoid misbranding/adulteration)

## 1914 Harrison Narcotics Tax Act

- Federal tax income and criminal liability
- Physicians became sole legal source of opioids (“Script Doctors”)
- Established the IRS Prohibition Narcotics Division

## 1922 Narcotic Drug Import & Export Act

- Added cocaine to previous opium and morphine ban



# US Laws Pertaining to Medications

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## 1927 Federal Bureau of Narcotics Created

- Formerly IRS Narcotics Division, now within the Federal Treasury
- Lead by Harry Anslinger (formerly in Bureau of Prohibition)

## 1929 Porter Act

- Established 2 US Narcotic Addict Prisoner Farms
- Lexington, KY (1935) and Fort Worth, TX (1938)

## 1937 Marihuana Tax Act

## 1939 Vehicle Seizure Act

- If caught transporting illegal drugs

## 1942 Opium Poppy Control Act

- Illegal to personally grow opium without a license

## 1965 Harrison Act Amendments

- Dangerous drugs under same federal controls
- Depressants, stimulants, and hallucinogens

## 1966 Narcotic Addict Rehabilitation Act (NARA)

- Provided rehabilitative confinement for “addicts” instead of prison sentences



# 1937 Marihuana Tax Act

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- MariHuana: Derived from Mexican Spanish
- Taxed transfers of marihuana-like narcotics
  - Farmers could purchase \$1 tax stamps to grow
  - Prescribers and dispensers taxed on sales
- *Reefer Madness* (1936) movie that stimulated anti-cannabis movement
- Paper and newspaper industries feared hemp could replace wood derived paper, but hemp has less cellulose than wood-derived paper
  - Industry investors: Andrew Mellon, William Hearst, DuPont Family
- 1<sup>st</sup> person arrested: Moses Baca (Mexican-American man)
  - Personal possession of ¼ ounce of marijuana



# MKUltra

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- US sanctioned in 1953
- “MK” was used to indicate that the project was sponsored by the Technical Services Staff of the CIA
- “Ultra” was a nod to the WWII classified documents codename
- Original goal: create a truth serum (for Cold War)
  - Studied illegal drug human effects (opioids, LSD, etc)
  - Often injected stimulant in 1 arm and sedative in other
  - Adjuvant hypnosis often involved
- Multiple cities, college campuses, and hospitals
- Ended with scientist Frank Olson’s suicide after he unknowingly receiving LSD and plunged to his death at NY hotel
- 1977 Freedom of Information Act request made 20,000 MKUltra documents publicly available

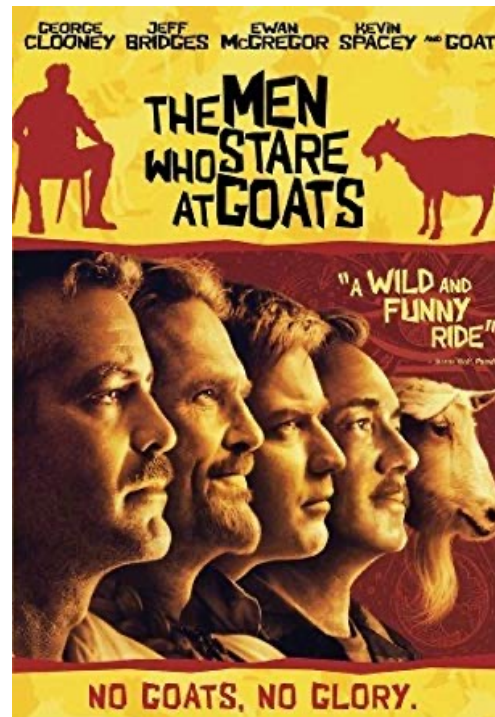
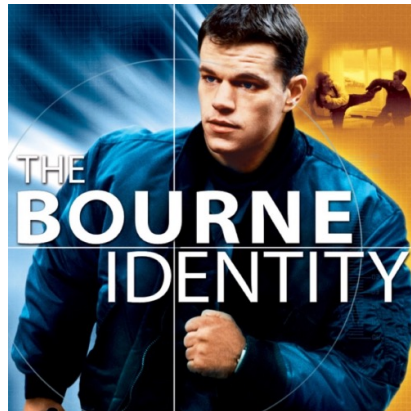


[allthatsinteresting.com/project-mkultra-mind-control-experiments.](https://allthatsinteresting.com/project-mkultra-mind-control-experiments)



# MKUltra

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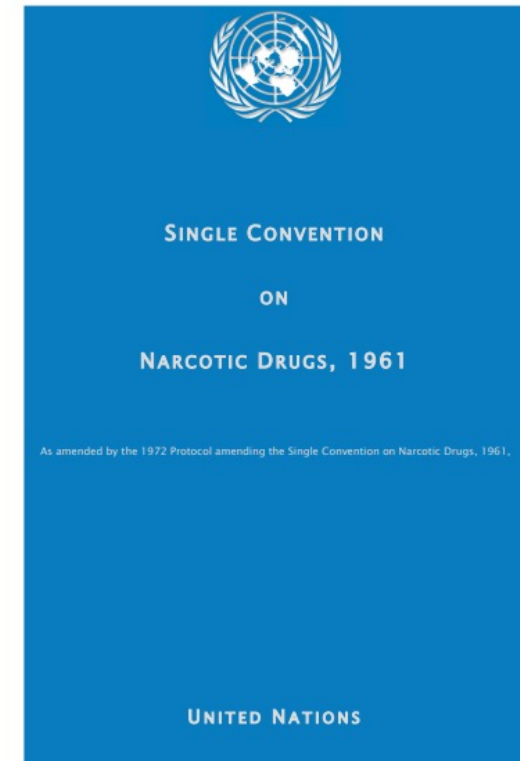
[allthatsinteresting.com/project-mkultra-mind-control-experiments.](http://allthatsinteresting.com/project-mkultra-mind-control-experiments)

# Single Convention on Narcotic Drugs

## 1961

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- 184 countries
- 4 schedules of drugs
  - Cannabis, coca, and opioid related substances



[www.unodc.org/pdf/convention\\_1961\\_en.pdf](http://www.unodc.org/pdf/convention_1961_en.pdf).

[www.incb.org/documents/Narcotic-Drugs/1961-Convention/convention\\_1961\\_en.pdf](http://www.incb.org/documents/Narcotic-Drugs/1961-Convention/convention_1961_en.pdf).

# US Controlled Substances Act

## 1970

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- Registration mandated for manufacturing and distribution
- Established Bureau of Narcotics & Dangerous Drugs (within Justice Department)
- Established 5 controlled substances classes



[www.deadiversion.usdoj.gov/21cfr/21usc/](http://www.deadiversion.usdoj.gov/21cfr/21usc/)

# Controlled Substances Classes

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Controlled Substance Class	Criteria	Medications
Four (C4)	Medical Use Low Abuse Potential	tramadol & pentazocine/naloxone
Three (C3)	Medical Use Moderate Addiction Potential	buprenorphine, dihydrocodeine/APAP-ASA, & APAP/codeine
Two (C2)	Medical Use High Addiction Potential	tapentadol, morphine, hydrocodone, hydromorphone, oxycodone, oxymorphone, methadone, fentanyl, cocaine, & methamphetamine
One (C1)	No Accepted Medical Use High Addiction Potential	Diacetylmorphine (heroin) Cannabis

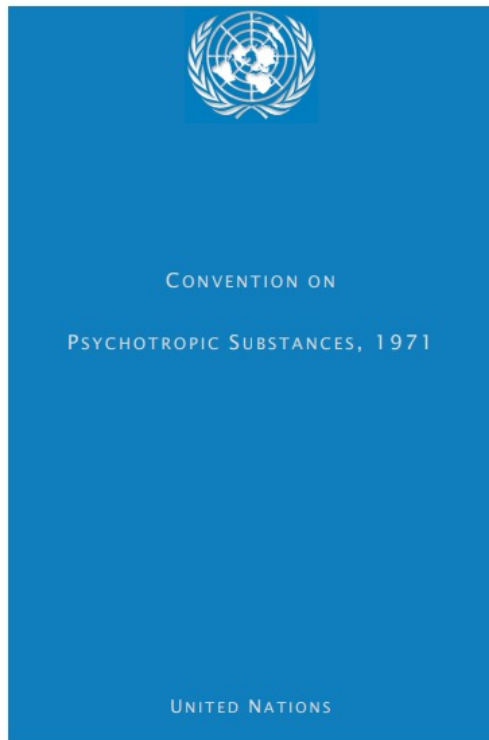
[www.deaiversion.usdoj.gov/schedules/](http://www.deaiversion.usdoj.gov/schedules/).



# Convention on Psychotropic Substances

## 1971

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- 184 countries
  - Same as 1961
- Added psychoactive substances to 1961 list
  - Amphetamines, barbiturates, benzos, and psychedelics
- US passed “Psychotropic Substances Act” to align

4 Schedule Classes	
ONE	<ul style="list-style-type: none"><li>• No therapeutic value, yet harmful</li><li>• THC, LSD, MDMA, cathinones</li></ul>
TWO	<ul style="list-style-type: none"><li>• Delta-9-THC (dronabinol), amphetamine, and methylphenidate</li></ul>
THREE	<ul style="list-style-type: none"><li>• Buprenorphine and flunitrazepam</li></ul>
FOUR	<ul style="list-style-type: none"><li>• Phenobarbital, modafinil, phentermine, and rest of benzos</li></ul>

[www.unodc.org/pdf/convention\\_1971\\_en.pdf](http://www.unodc.org/pdf/convention_1971_en.pdf).

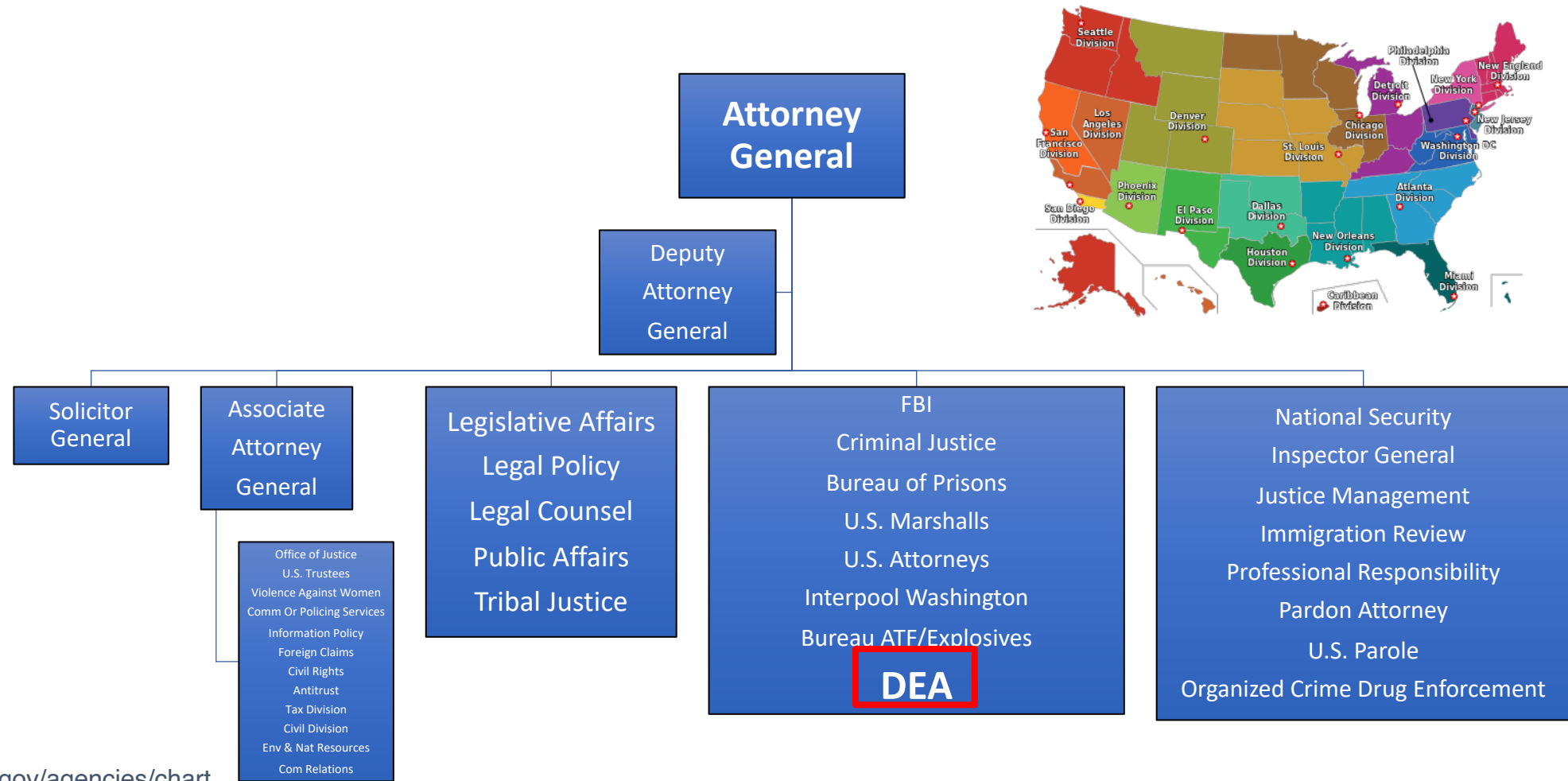
# US Laws Pertaining to Medications

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- 1972: Office for Drug Abuse Law Enforcement
  - President Nixon Executive Order
- 1973: Drug Enforcement Agency (DEA)
  - President Nixon Executive Order
- 1986: Anti Drug Abuse Act
  - Federal supervised release changed
    - Rehabilitative system to a punitive system
  - New mandatory minimum sentences for drugs (including marijuana)



# Department of Justice Leadership



# DEA Orange Book

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CONTROLLED SUBSTANCES - BY CSA SCHEDULE -				
SUBSTANCE	DEA NUMBER	CSA SCH	NARC	OTHER NAMES
(1-(4-Fluorobenzyl)-1H-indol-3-yl)(2,2,3,3-tetramethylcyclopropyl)methanone	7014	I	N	FUB-144
1-(1-Phenylcyclohexyl)pyrrolidine	7458	I	N	PCPy, PHP, rollicyclidine

Lists of:

Scheduling Actions  
Controlled Substances  
Regulated Chemicals



# 1986 Federal Controlled Substance Analog Enforcement Act

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- Allowed any chemical “substantially similar” to a controlled substance scheduled in class 1 or 2 to be treated as if it were also listed in those schedules, but only if intended for human consumption
- Analogs are often referred to as “designer drugs”

This Act may be cited as the “Anti-Drug Abuse Act of 1986”.

**SEC. 2. ORGANIZATION OF ACT.**

This Act is organized as follows:

**TITLE I—ANTI-DRUG ENFORCEMENT**

Subtitle A—Narcotics Penalties and Enforcement Act of 1986

Subtitle B—Drug Possession Penalty Act of 1986

Subtitle C—Juvenile Drug Trafficking Act of 1986

Subtitle D—Assets Forfeiture Amendments Act of 1986

Subtitle E—Controlled Substance Analogue Enforcement Act of 1986

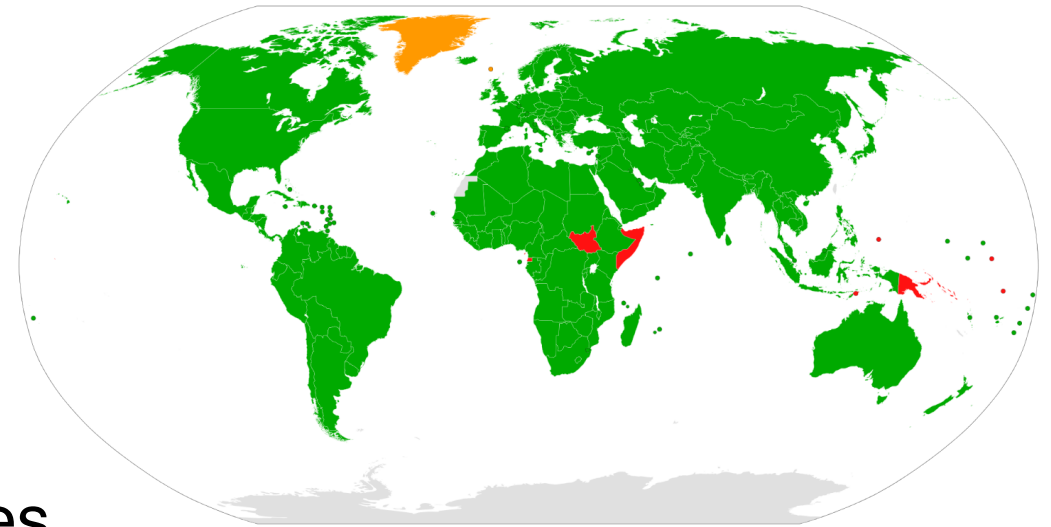


# Convention Against Illicit Traffic in Narcotic and Psychotropic Substances

1988

---

- 188 countries
- Regulates chemical precursors
  - 1961 and 1971 convention substances



- **COUNTRIES INVOLVED**
- **TERRITORY NOT INVOLVED**
- **COUNTRIES NOT INVOLVED**

[www.unodc.org/unodc/en/commissions/CND/conventions.html](http://www.unodc.org/unodc/en/commissions/CND/conventions.html)

# Office of National Drug Control Policy

---

- 1988
  - President Reagan created
- Director of ONDCP
  - “Drug Czar”
- 1993
  - President Clinton raised Director to cabinet status



# 1986 Federal Controlled Substance Analog Enforcement Act

## CHALLENGES

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806 F. Supp. 232 (1992)

UNITED STATES of America, Plaintiff,

v.

Damon S. **FORBES**, et al., Defendants.

Cr. A. No. 92-CR-105.

United States District Court, D. Colorado.

November 20, 1992.

U.S. v. **WASHAM**

No. 02-1681.

[Email](#) | [Print](#)

[View Case](#)

[Cited Cases](#)

[Citing Case](#)

312 F.3d 926 (2002)

*UNITED STATES of America, Appellee, v. Thomas William WASHAM, Appellant.*

United States Court of Appeals, Eighth Circuit.

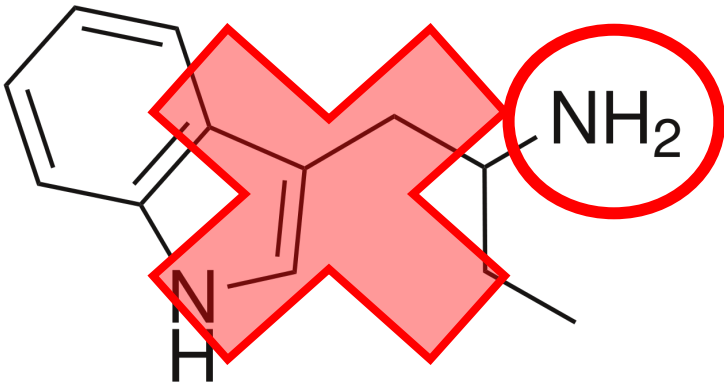
Submitted: October 10, 2002.

Filed: December 11, 2002.

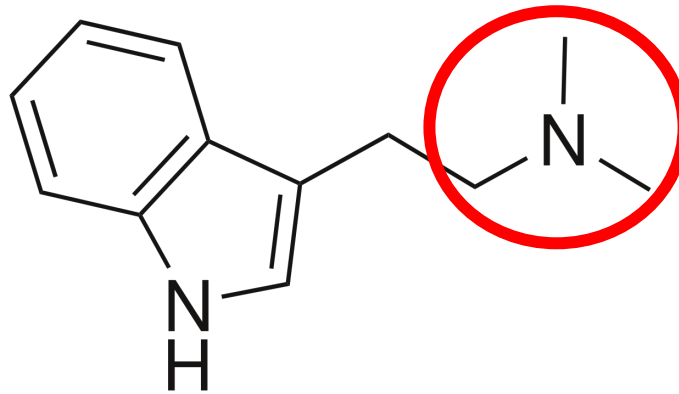
Rehearing and Rehearing Denied: January 14, 2003.

# 1992: United States vs Forbes

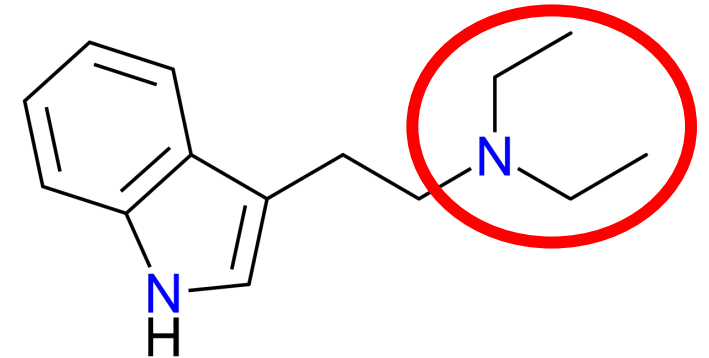
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Alpha-Ethyl-Tryptamine  
AET



Di-Methyl-Tryptamine  
DMT

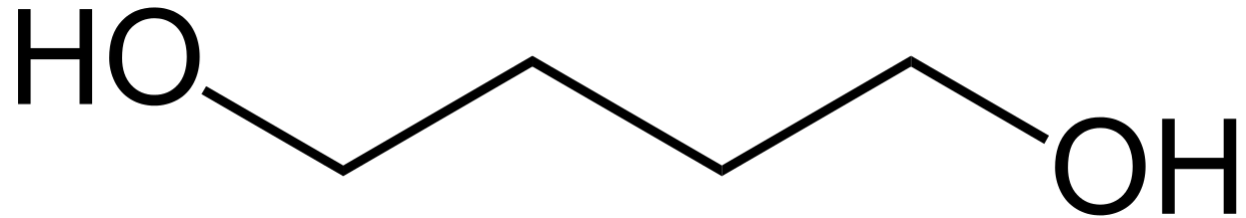


Di-Ethyl-Tryptamine  
DET

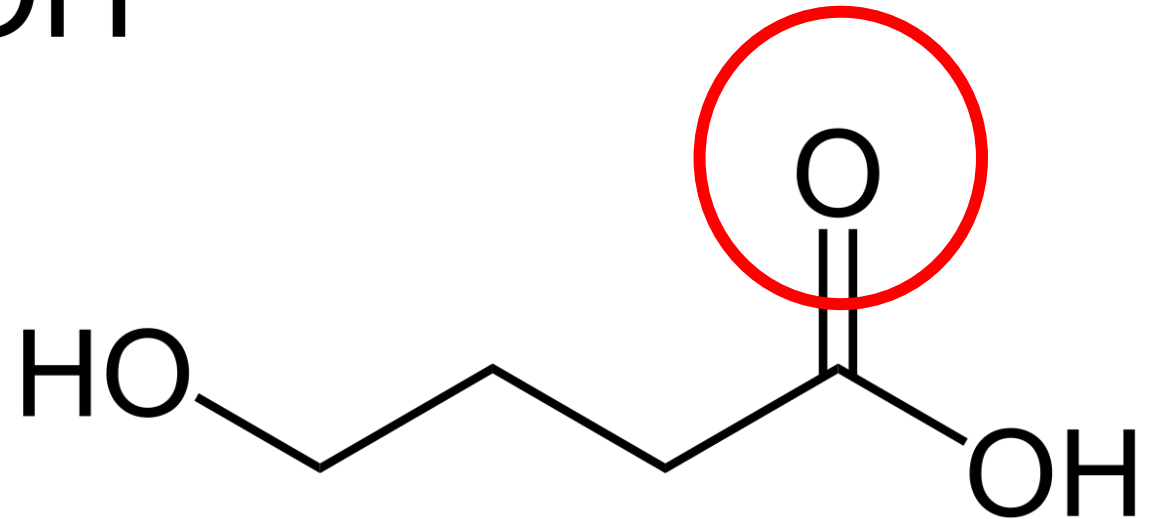
[law.justia.com/cases/federal/district-courts/FSupp/806/232/1747696/.](http://law.justia.com/cases/federal/district-courts/FSupp/806/232/1747696/)

# 2003 United States vs Washam

---



1,4-Butanediol



GHB



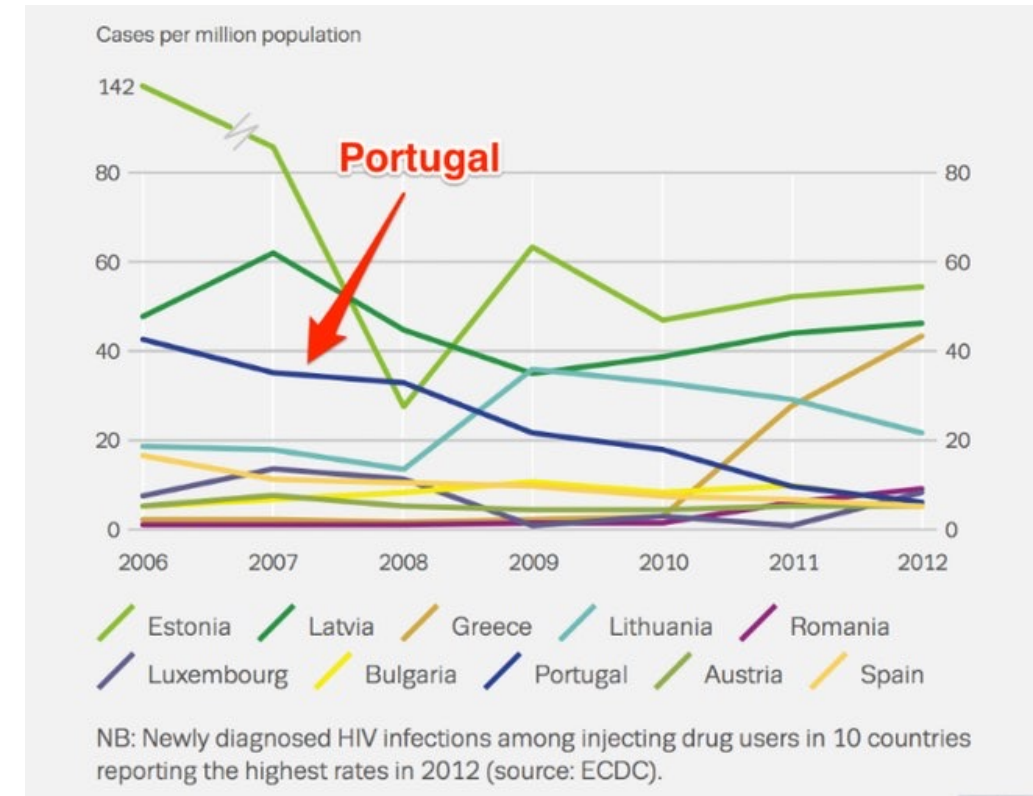
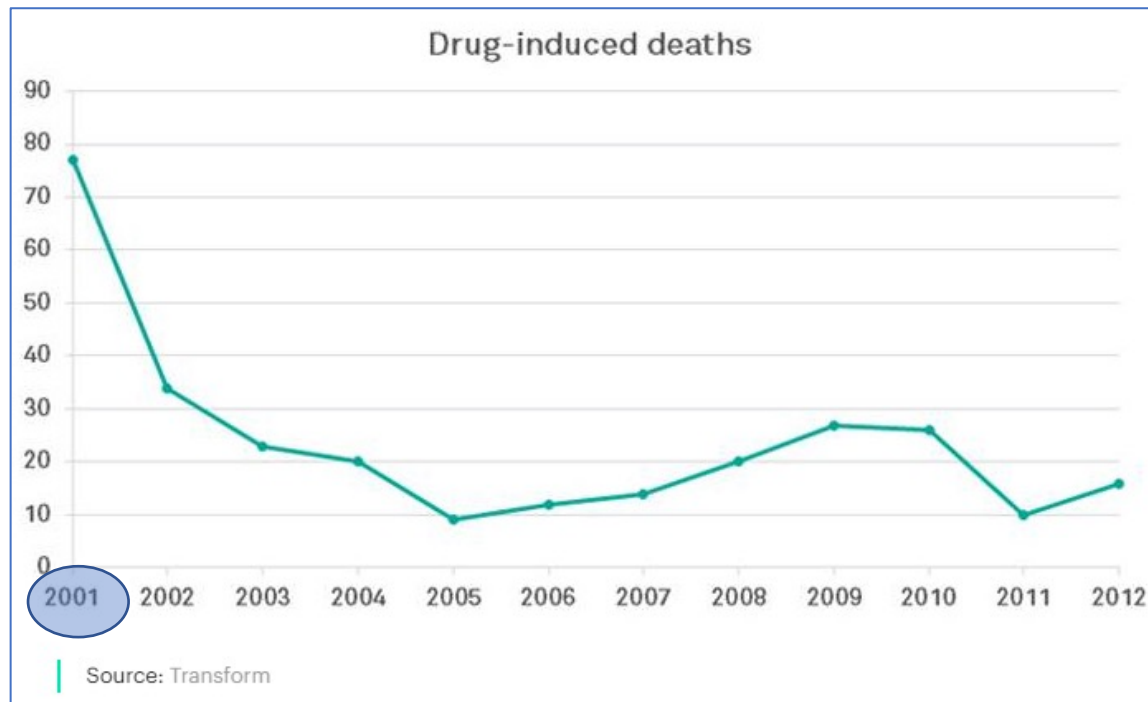
# Portugal's Decriminalization of Drugs

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Portugal's Drug Laws Governing Psychoactive Drugs		
	Before 2001	After 2001
Personal possession/use	Criminal Offense  Law 15/93 of January 22, 1993, Chapter IV, Article 40–41	Administrative Offense— “Decriminalized” Law 30/2000 of 29 November 2000, Art 2. (Entered into force July 2001)
Production, sale, and distribution	Criminal Offense Law 15/93 of January 22, 1994, Chapter III, Article 21–28, & Chapter IV, Article 40 regarding cultivation for consumption	Criminal Offense Law 15/93 of January 22, 1992, Chapter IV, Article 40–41

Laqueur. *Law Soc Inquiry*. 2014;40(3):746-781.

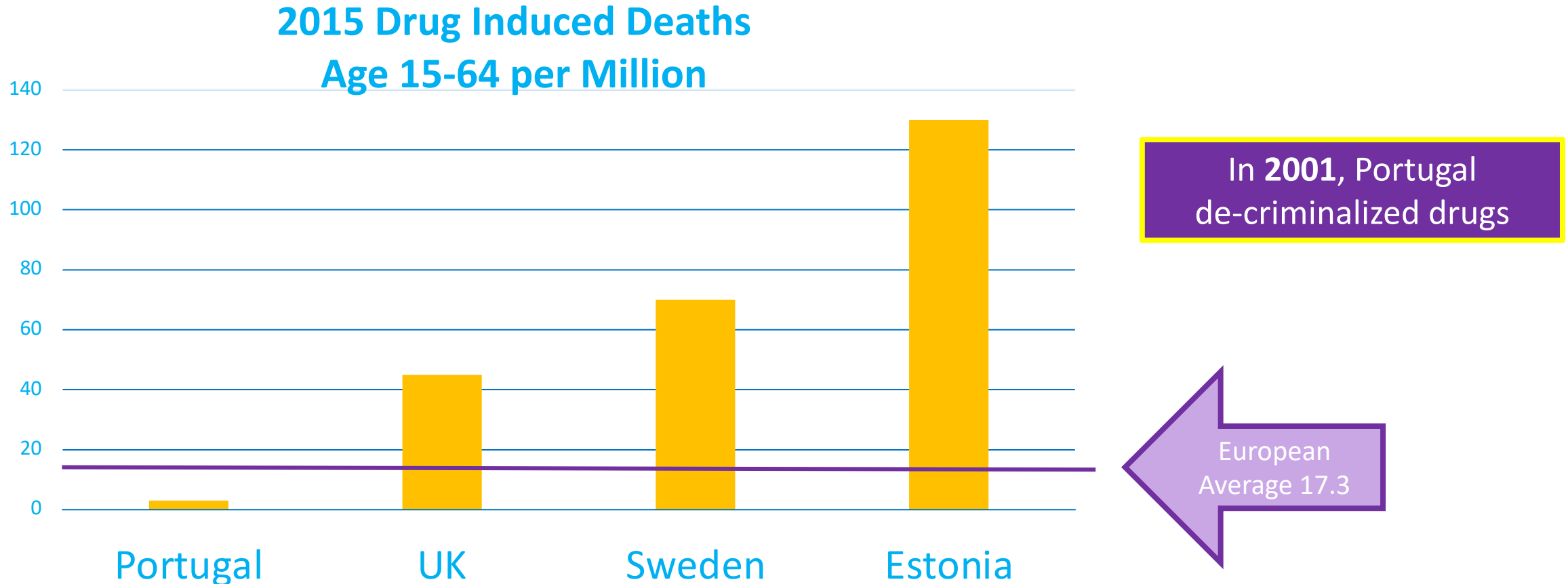
# Portugal's Decriminalization of Drugs



European Drug Report 2014: Trends and Developments/EMCDDA.

[mic.com/articles/110344/14-years-after-portugal-decriminalized-all-drugs-here-s-what-s-happening#.W7gnIIPG6](http://mic.com/articles/110344/14-years-after-portugal-decriminalized-all-drugs-here-s-what-s-happening#.W7gnIIPG6).

# Is “Micro-Management” Ever Successful?

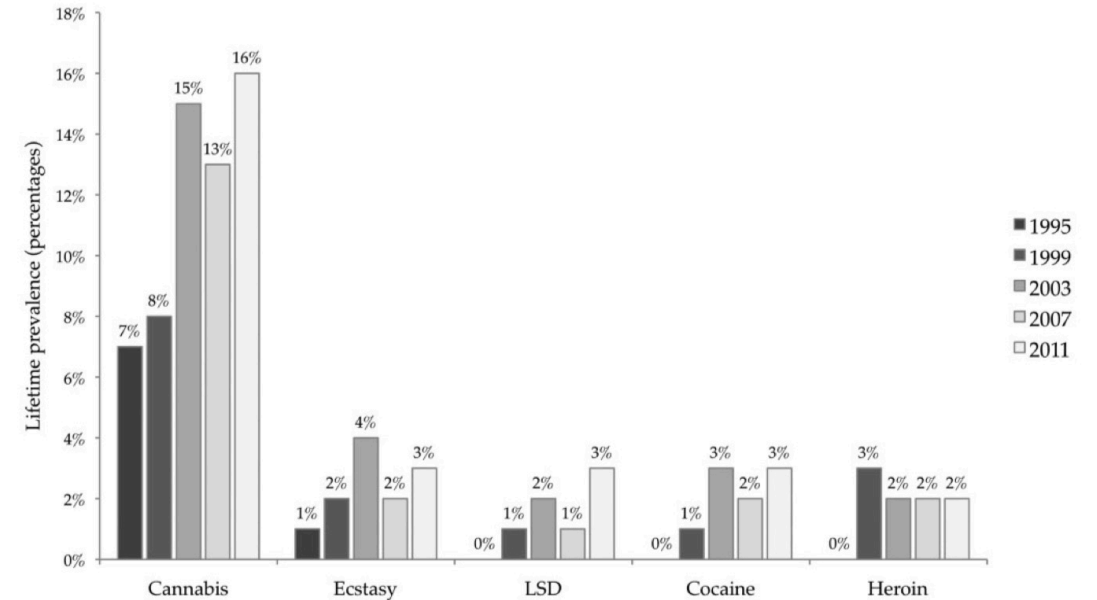
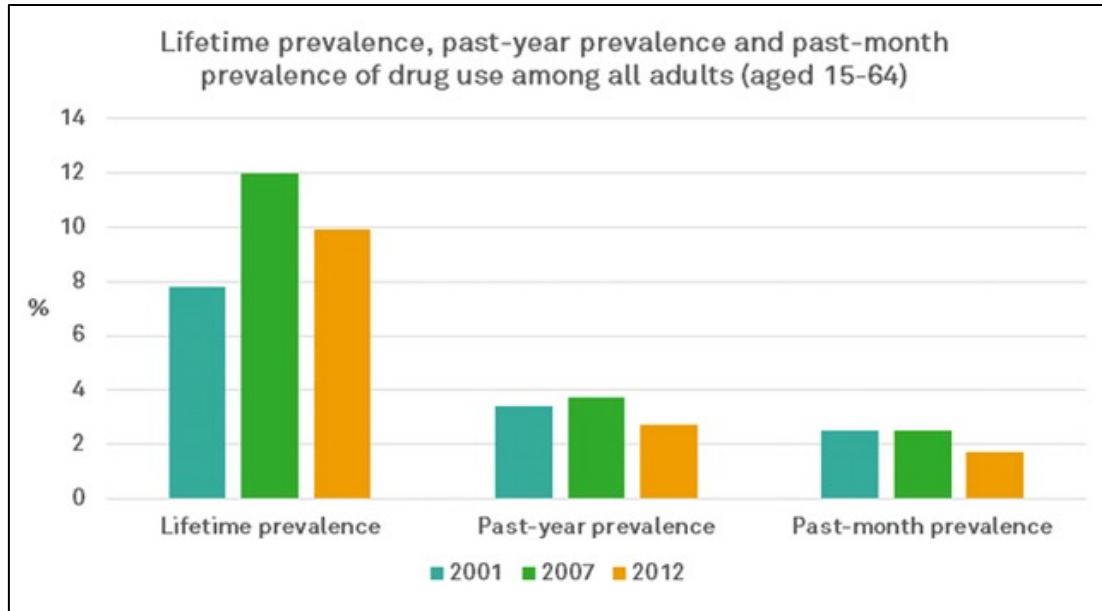


[www.mic.com/articles/110344/14-years-after-portugal-decriminalized-all-drugs-here-s-what-s-happening](http://www.mic.com/articles/110344/14-years-after-portugal-decriminalized-all-drugs-here-s-what-s-happening).

[www.washingtonpost.com/news/wonk/wp/2015/06/05/why-hardly-anyone-dies-from-a-drug-overdose-in-portugal/?utm\\_term=.145c38d2a1b4](http://www.washingtonpost.com/news/wonk/wp/2015/06/05/why-hardly-anyone-dies-from-a-drug-overdose-in-portugal/?utm_term=.145c38d2a1b4).

# Portugal Decriminalization of All Drugs

## Drug Utilization Continued...



**FIGURE 8.**  
Lifetime Reported Prevalence of Psychoactive Substance Use Among Students 15-16 Years Old: 1995-2011

Source: 2011 ESPAD Report on Substance Use Among Students in 36 European Countries.

[www.mic.com/articles/110344/14-years-after-portugal-decriminalized-all-drugs-here-s-what-s-happening](http://www.mic.com/articles/110344/14-years-after-portugal-decriminalized-all-drugs-here-s-what-s-happening).

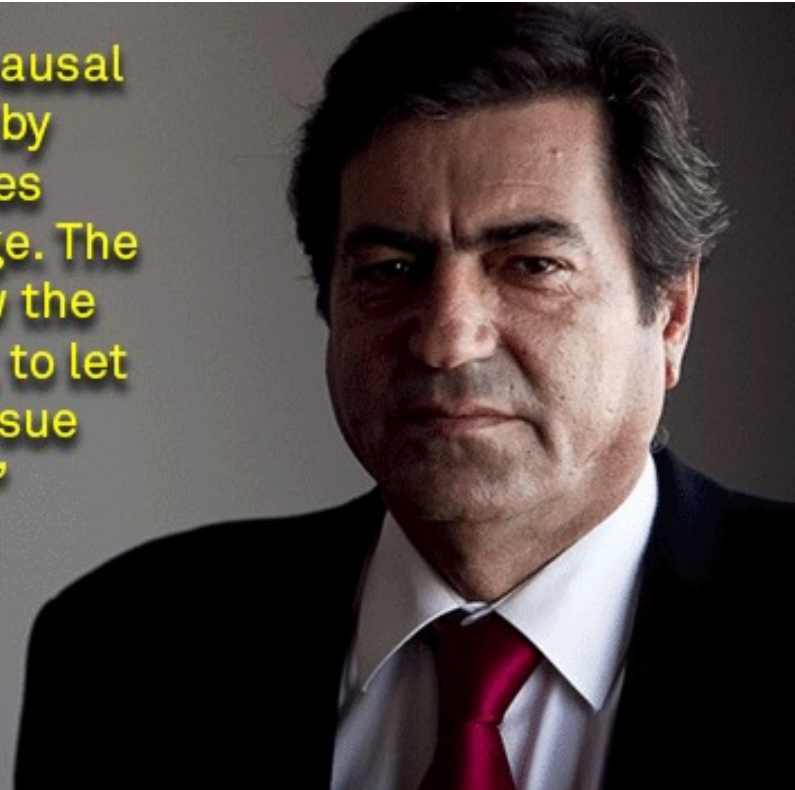
Laqueur. *Law Soc Inquiry*. 2014;40(3):746-781.

# Portugal Decriminalization of All Drugs

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“It’s very difficult to identify a causal link between decriminalisation by itself and the positive tendencies we’ve seen ... It’s a total package. The biggest effect has been to allow the stigma of drug addiction to fall, to let people speak clearly and to pursue professional help without fear.”

Dr João Goulão  
Architect of Portugal’s  
decriminalisation policy



[transformdrugs.org/drug-decriminalisation-in-portugal-setting-the-record-straight/](https://transformdrugs.org/drug-decriminalisation-in-portugal-setting-the-record-straight/)



# 2003 Illicit Drug Anti-Proliferation Act

## “Rave Act”

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- Amends the Controlled Substances Act to prohibit knowingly opening, maintaining, leasing, renting, or using, or intentionally profiting from, any place, whether permanently or temporarily, for the purpose of manufacturing, storing, distributing, or using a controlled substance
- Subjects violators to a civil penalty of the greater of \$250,000 or twice the gross receipts derived from each violation



[www.congress.gov/bill/108th-congress/senate-bill/226](http://www.congress.gov/bill/108th-congress/senate-bill/226).

# 2005 Combat Methamphetamine Epidemic Act

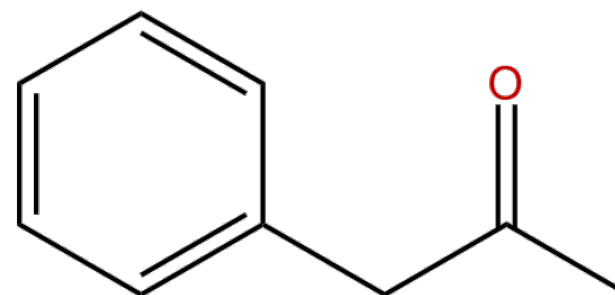
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- a. The change to 21 U.S.C. § 830 that adds a new subsection (d) SCHEDULED LISTED CHEMICALS; RESTRICTIONS ON SALES QUANTITY; REQUIREMENTS REGARDING NONLIQUID FORMS:
- i. This sets the daily sales limit of ephedrine base, pseudoephedrine base, or phenylpropanolamine base at 3.6 grams per purchaser, regardless of the number of transactions.
  - ii. Affects regulated sellers and persons required to submit mail order reports under 21 U.S.C. 830(b)(3).
  - iii. Requires all nonliquid forms (including gel caps) to be in 2-unit blister packs (with exception when blister pack is not technically feasible, the product may be in unit dosage packets or pouches).
- b. The change to 21 U.S.C. § 830 that adds (2) MAIL-ORDER REPORTING; VERIFICATION OF IDENTITY OF PURCHASER; 30-DAY RESTRICTION ON QUANTITIES FOR INDIVIDUAL PURCHASES:
- i. This requires the mail-order seller to confirm the identity of the purchaser prior to shipping the product.
  - ii. Limits such sales to 7.5 grams per customer during a 30-day period.
- c. The change to 21 U.S.C. § 844(a) entitled RESTRICTIONS ON QUANTITY PURCHASED DURING 30-DAY PERIOD:
- i. This makes it unlawful for any person to knowingly or intentionally purchase at retail more than 9 grams during a 30 day period (of which no more than 7.5 grams can be imported by private or commercial carrier or the Postal Service).

# METHods of METH Production

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- Reduction
  - P2P (phenyl-2-propanone)
    - Catalytic hydrogenation (Shake & Bake)
    - Reductive amination
  - Pseudoephedrine
    - Birch/Nazi
    - Nagai
  - P2P precursors
    - Nitrostyrene
    - Decarboxylation



# 2009 Ley de Narcomenudeo (Small-Scale Drug Law)

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- Mexico decriminalized personal drugs (General health law)
- Amended 1994 federal criminal code: Article 478
- “3 Strikes” system
  - 3<sup>rd</sup> officer apprehension results in “mandatory” treatment

DRUG	MEXICO POSSESSION LIMIT
Opium	2 g
Heroin	50 mg
Marijuana	5 g
Cocaine	500 mg
LSD	0.015 mg
MDMA MDA Meth	40 mg (powder, granulate, crystal)
	200 mg (one unit tablet or caplet)

[www.ncbi.nlm.nih.gov/pmc/articles/PMC4234880/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4234880/).

# 2012 Synthetic Drug Abuse Prevention Act

---

- Part of the FDA Safety and Innovation Act of 2012
- Outlawed 26 varieties of synthetic cannabinoids and cathinones
- Amends the CSA to add as C1s:
  1. Any material, compound, mixture, or preparation which contains specified cannabimimetic agents (or the salts, isomers, or salts of isomers thereof);
  2. Specified additional hallucinogenic substances (or the salts, isomers, or salts of isomers thereof)
- Attorney General may temporarily schedule a C1 substance to avoid a public safety hazard to 2 years with a 1 year extension (was 1 year with a 6 month extension)
- Drug formulations, likely synthesized in response to Act, are readily available
  - *Wired Magazine*: “Obsolete before the ink of President Obama’s signature dried”

[www.congress.gov/bill/112th-congress/senate-bill/3190/text](http://www.congress.gov/bill/112th-congress/senate-bill/3190/text).



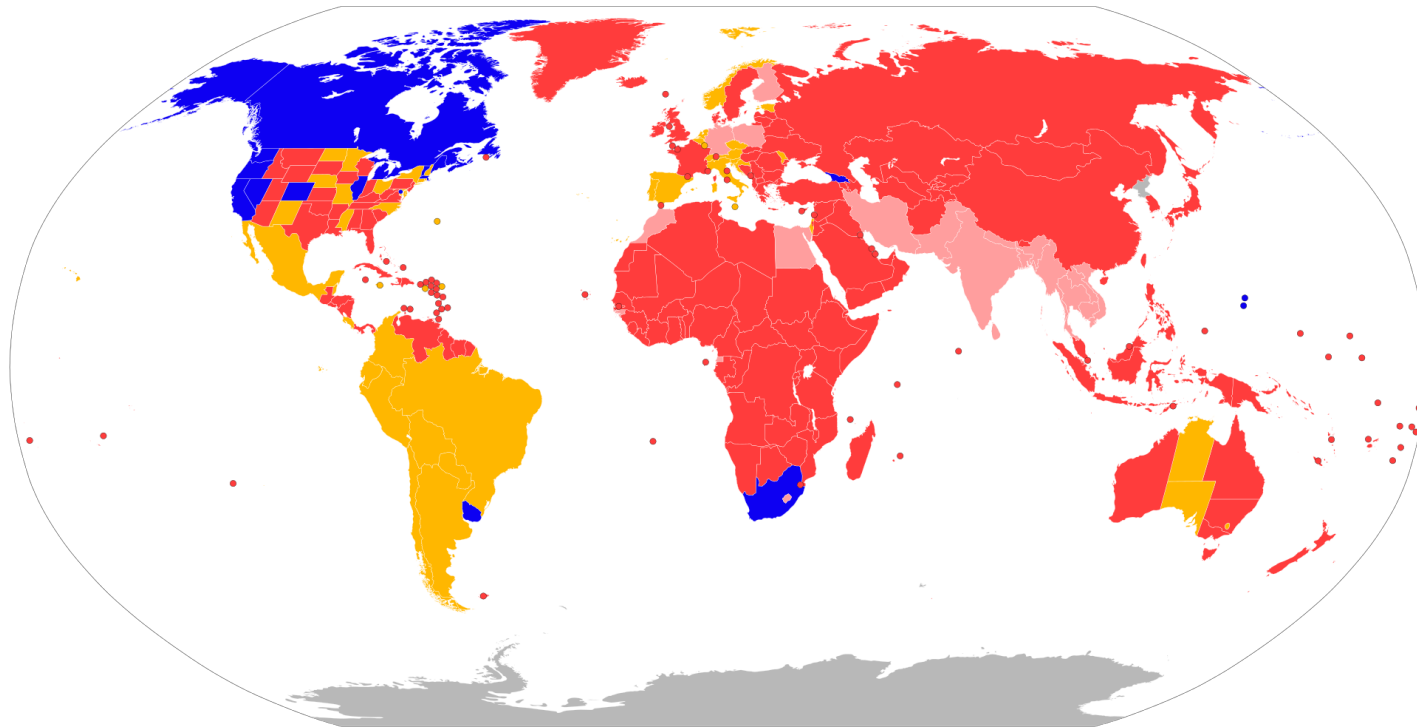
# Global Decriminalization

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- Personal possession of “small quantities” decriminalized, often only bearing administrative penalties/fines instead
  - Armenia
  - Chile
  - Colombia
  - Costa Rica
  - Croatia
  - Czech Republic
  - Ecuador
  - Estonia
  - Italy
  - Latvia
  - Netherlands (criminal, but non-prosecution policy)
  - Paraguay (people must register for drug use)
  - Peru
  - Portugal
  - Slovenia
  - Spain
  - Uruguay (never criminalized to begin with)

# International Cannabis Laws

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- **LEGAL**
- **ILLEGAL BUT DECRIMINALIZED**
- **ILLEGAL BUT OFTEN UNENFORCED**
- **ILLEGAL**

[blog.marketresearch.com/the-state-of-the-medical-marijuana-market-in-2020](https://blog.marketresearch.com/the-state-of-the-medical-marijuana-market-in-2020).

# A Sobering Volkow Thought...

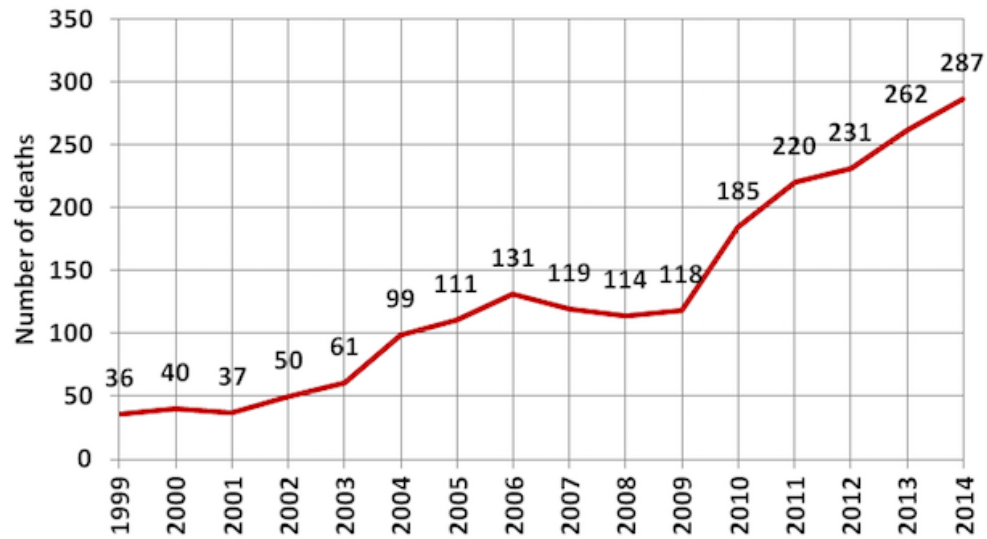
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- “Repeated marijuana use during adolescence may result in long-lasting changes in brain function that can jeopardize educational, professional, and social achievements.”
- “The effects of a drug (legal or illegal) on individual health are determined not only by its pharmacologic properties but also by its availability and social acceptability.”
- “Legal drugs (alcohol and tobacco) offer a sobering perspective, accounting for the greatest burden of disease associated with drugs, not because they are more dangerous than illegal drugs, but because their legal status allows for more widespread exposure.”

Substance	US Annual Deaths (Approx.)
“Drugs”	70,000
Alcohol	100,000
Tobacco	500,000
Marijuana	18

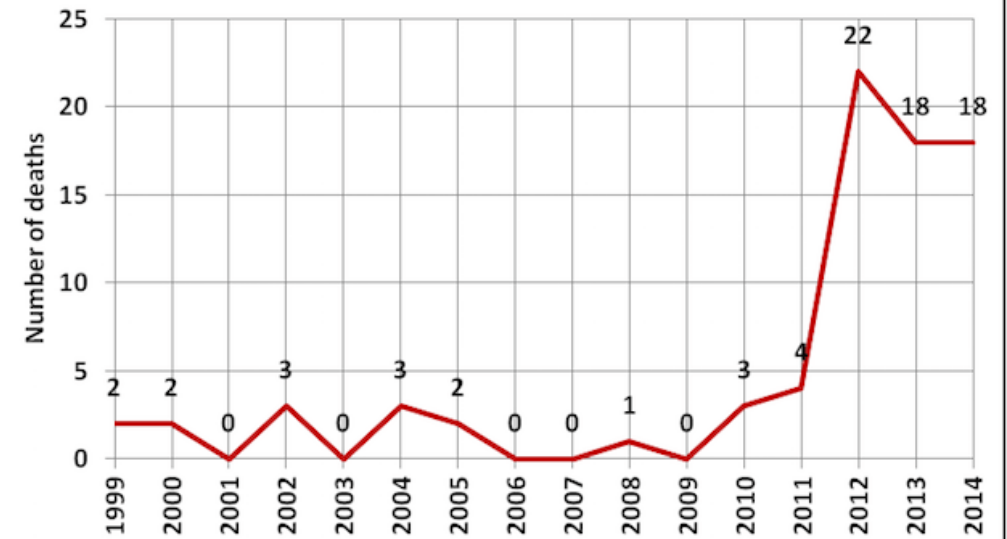
# US Marijuana Deaths

Figure 1. Number of marijuana poisoning deaths US 1999-2014



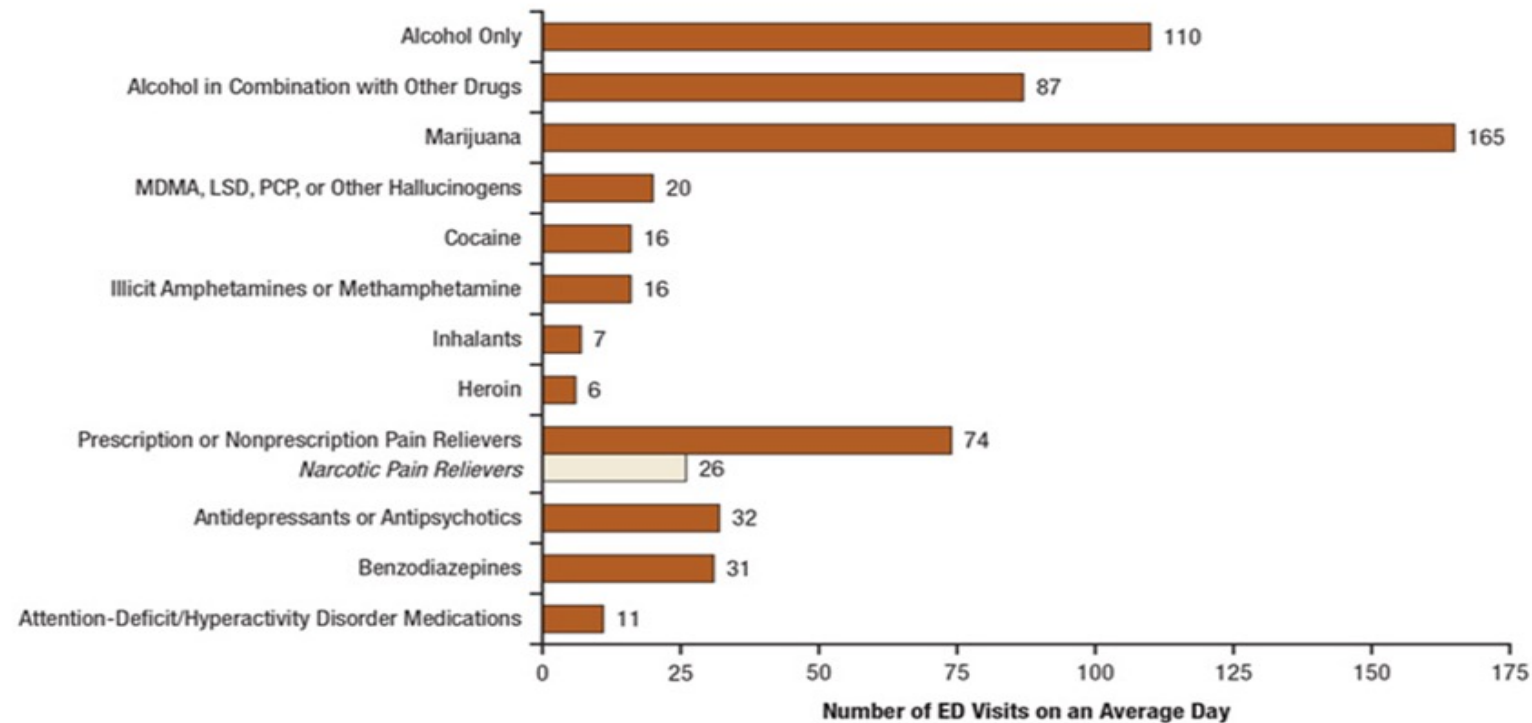
Combined with Other Substances

Figure 2. Poisoning deaths due to cannabis alone US 1999-2014



# Emergency Room Substance Abuse Visits

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Source: 2011 SAMHSA Drug Abuse Warning Network (DAWN).

[www.medicalnewstoday.com/articles/327126](http://www.medicalnewstoday.com/articles/327126).



# Just Say NO

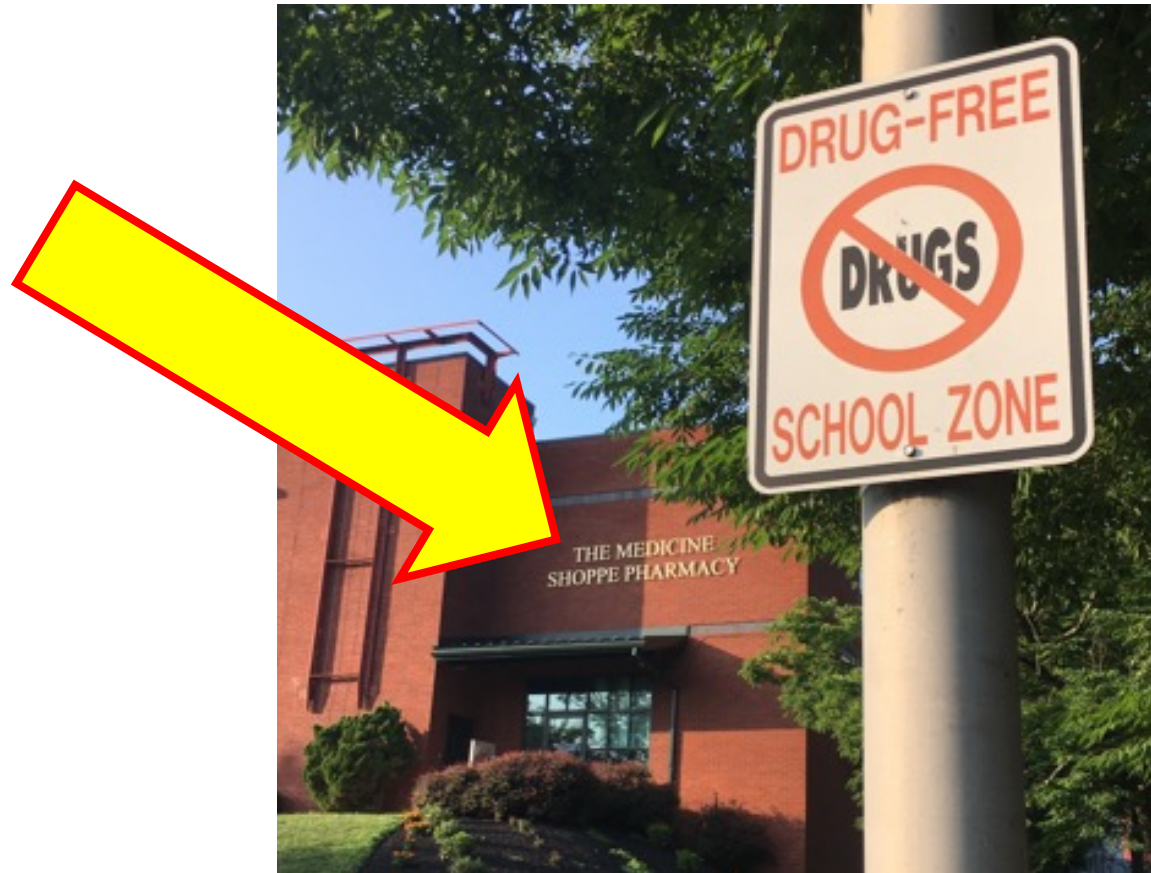
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[www.scientificamerican.com/article/why-just-say-no-doesnt-work/](http://www.scientificamerican.com/article/why-just-say-no-doesnt-work/).

# Rethinking the “War on Drugs”

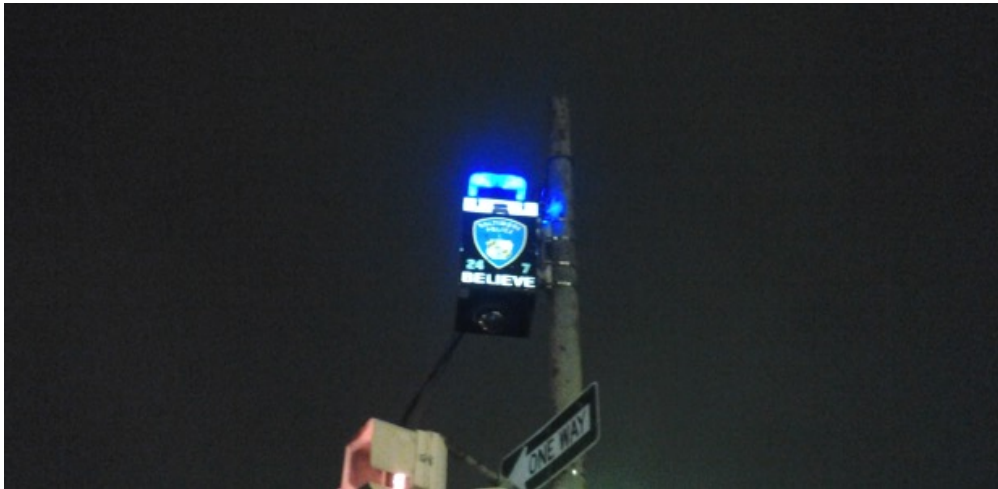
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Lancaster, PA

# Blue Light Efforts...

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**BLUELIGHT** 

Baltimore, MD



# Pink Zone Effort...

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## Berlin park creates 'pink zone' spaces for drug dealers to carry out transactions

'This method has pure

Adam Forrest | @adamtomforrest | 14 hours ago | |



[www.independent.co.uk/news/world/europe/berlin-drug-dealers-park-legal-pink-zone-goerlitzer-cengiz-demirci-a8907311.html](http://www.independent.co.uk/news/world/europe/berlin-drug-dealers-park-legal-pink-zone-goerlitzer-cengiz-demirci-a8907311.html).

# Cracolândia Sao Paulo, Brazil

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"Hamsterdam"



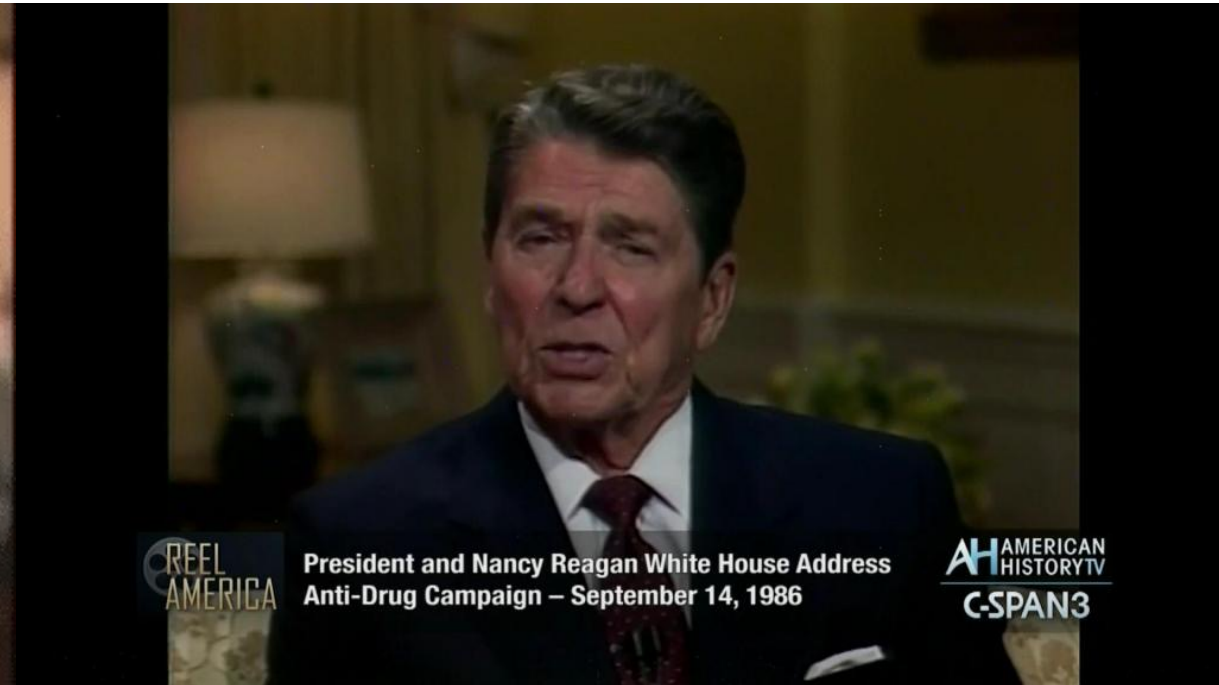
# Meanwhile...Back in America

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# Just Say **KNOW**

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**Pain**week.

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### Drug Markets, Pricing, and Policy

Mark Garofoli, PharmD, MBA, BCGP, CPE