

The A-Z of Substances in NZ



Dr Vicki Macfarlane FRNZCGP, FACHAM

“Addiction”

- DSM 5-mild/moderate and severe substance use disorders
- 4 C's
- Compulsion
- Cravings
- Consequences
- Control



Individual factors: Genetics, Life Stress

Reward
positive
reinforcement

Relief
negative
reinforcement

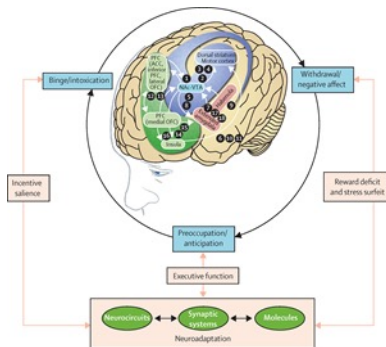
Progression of the Addictive Process

Escalating/Compulsive Use

Dependence/Withdrawal

**Protracted
Abstinence**

Relapse





Benzodiazepines

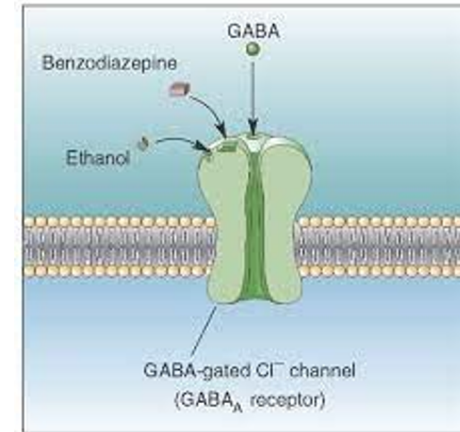
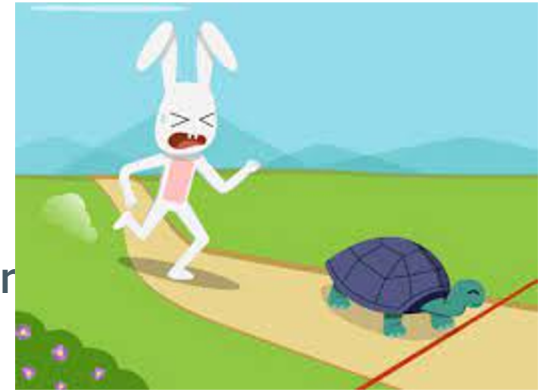
GABA A receptor agonists(positive allosteric modulator)

Different pharmacokinetics

Different actions

Dose equivalents important

Refer people with a BZD use disorder(4 C's) to CADS



Baclofen

Act on GABA-B

Risk overdose

Withdrawal seizure, psychosis

Used for relapse prevention in alcohol dependence

Taper slowly

thebmj

covid-19

Research ▾

Education ▾

News & Views ▾

Campaigns ▾

Jobs

 Rapid response to:

Baclofen is largely ineffective for alcohol use disorders, finds study

BMJ 2018 ; 360 doi: <https://doi.org/10.1136/bmj.k930> (Published 26 February 2018)

Cite this as: BMJ 2018;360:k930

Cannabis

Withdrawal definitely happens

A recent meta-analysis published in *JAMA* cites the overall prevalence of cannabis withdrawal syndrome as 47% among “individuals with regular or dependent use of cannabinoids.”

Most common symptoms-nausea, vomiting, loss of appetite, irritability, anger, anxiety, insomnia

Quetiapine or diazepam(second choice)

Short course zopiclone for sleep

Cannabis hyperemesis syndrome-vomiting ++ abdo pain relief from hot shower. IVF, anti-emetics, PPI, ?capsaicin cream

Cannabis induced psychosis

Medicinal cannabis products –watch this space

D,E,F,GHB

Waz,G, liquid fantasy

GABA B receptors-withdrawal can be serious

Often used with methamphetamine

1-2mls at a time

Overdose risk

1,4 butanediol precursor higher risk –slower onset

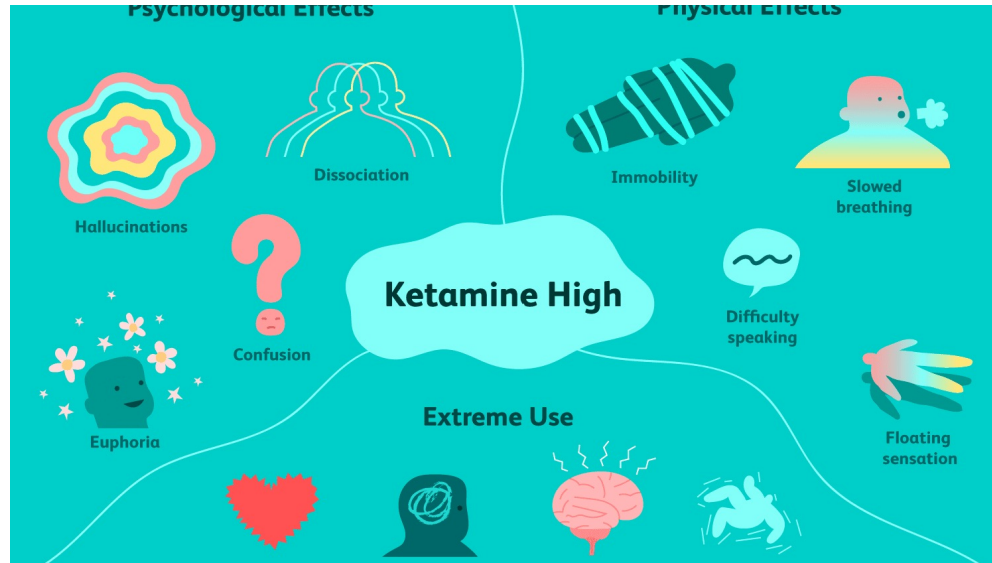
Magic amount-30mls refer to specialist service

Treat early with diazepam ?Baclofen



H, I, J, Ketamine

- “Ket” used in party environment
- Perceived as being lower risk due to increase in contamination of MDMA



Lean

- Codeine/promethazine liquid
- \$5 per 10mg codeine
- Popular in US and on social media
- Risk of overdose

MDMA

40% contains eutylone(bath salts)-sleep, anxiety

Paranoia, hallucinations

High use Auckland and Dunedin



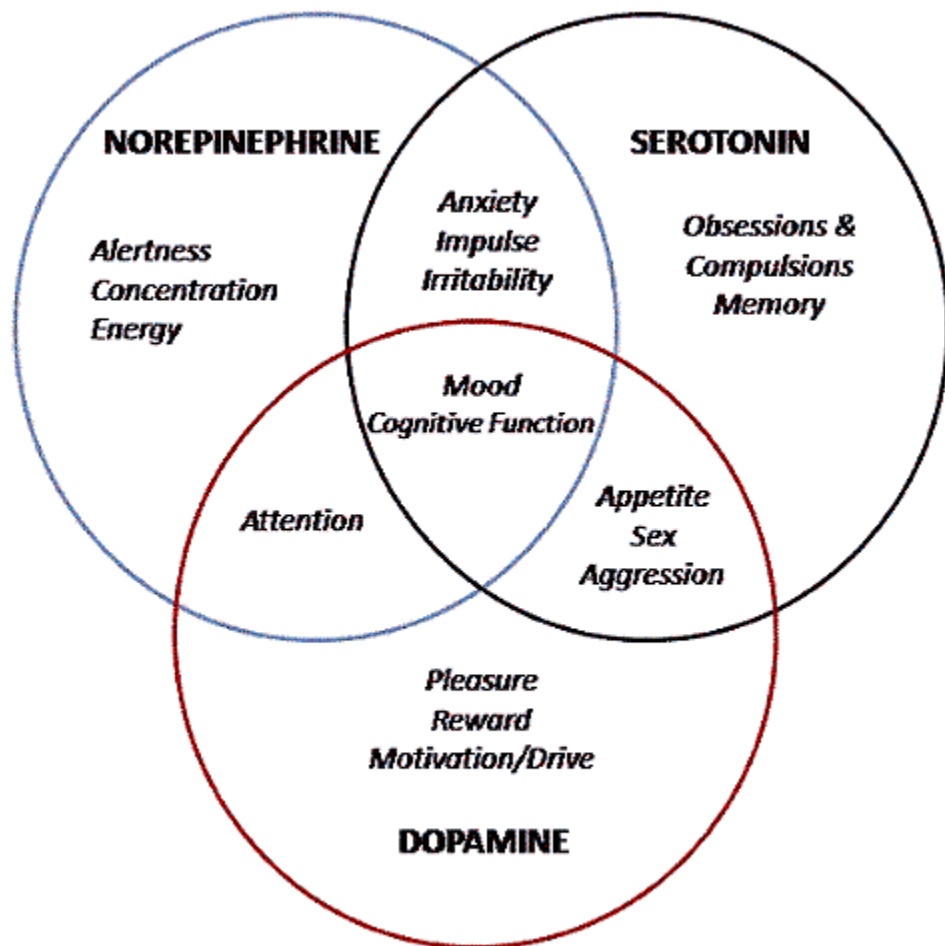
Methamphetamine

Polysubstance use common-GHB, benzo's

$\frac{2}{3}$ people use less than once a month

17% weekly users

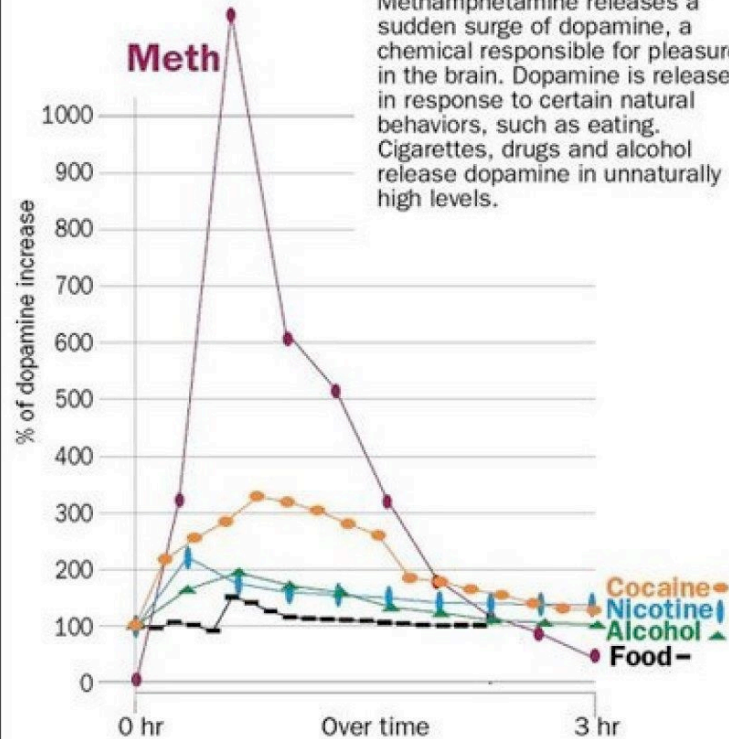




(Source: Deplin, <http://www.deplin.com/LifeWithDepression/Causes>)

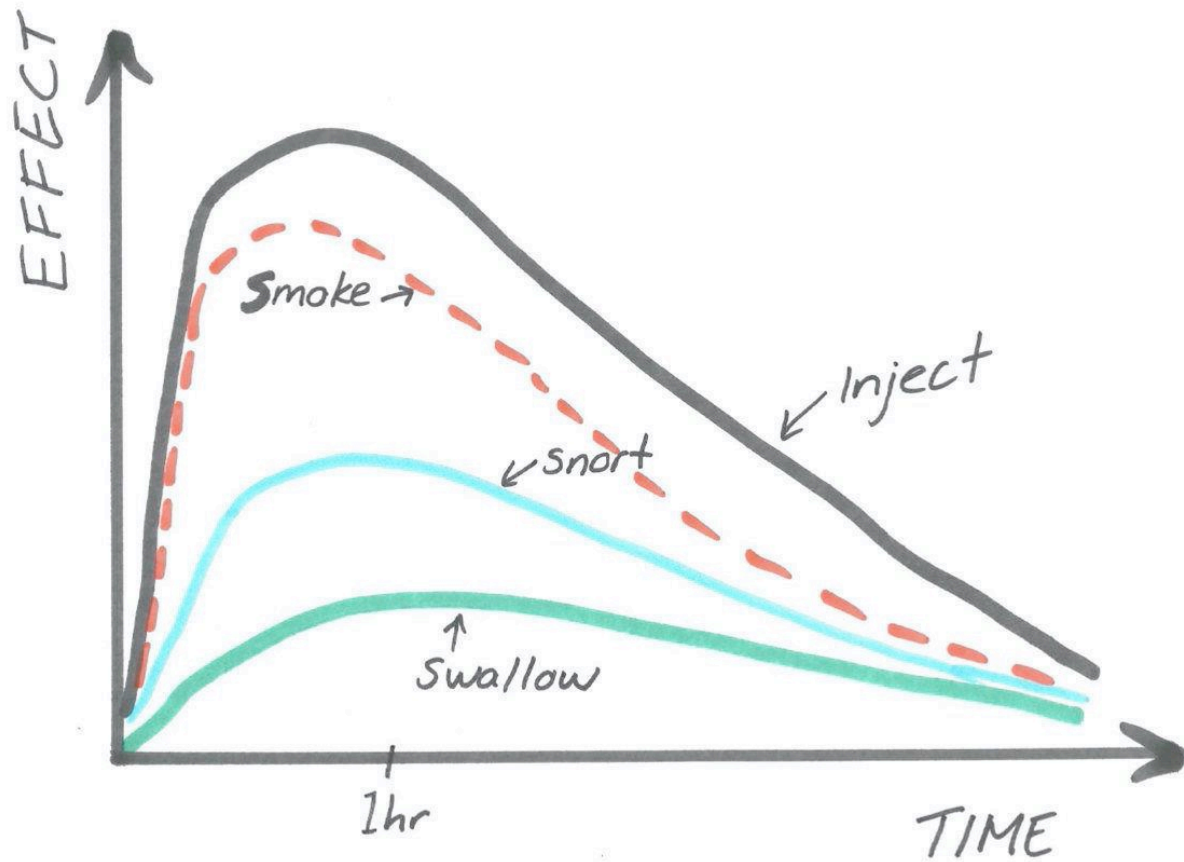
The highest high: Pleasure from meth outstrips other drugs

Methamphetamine releases a sudden surge of dopamine, a chemical responsible for pleasure in the brain. Dopamine is released in response to certain natural behaviors, such as eating. Cigarettes, drugs and alcohol release dopamine in unnaturally high levels.

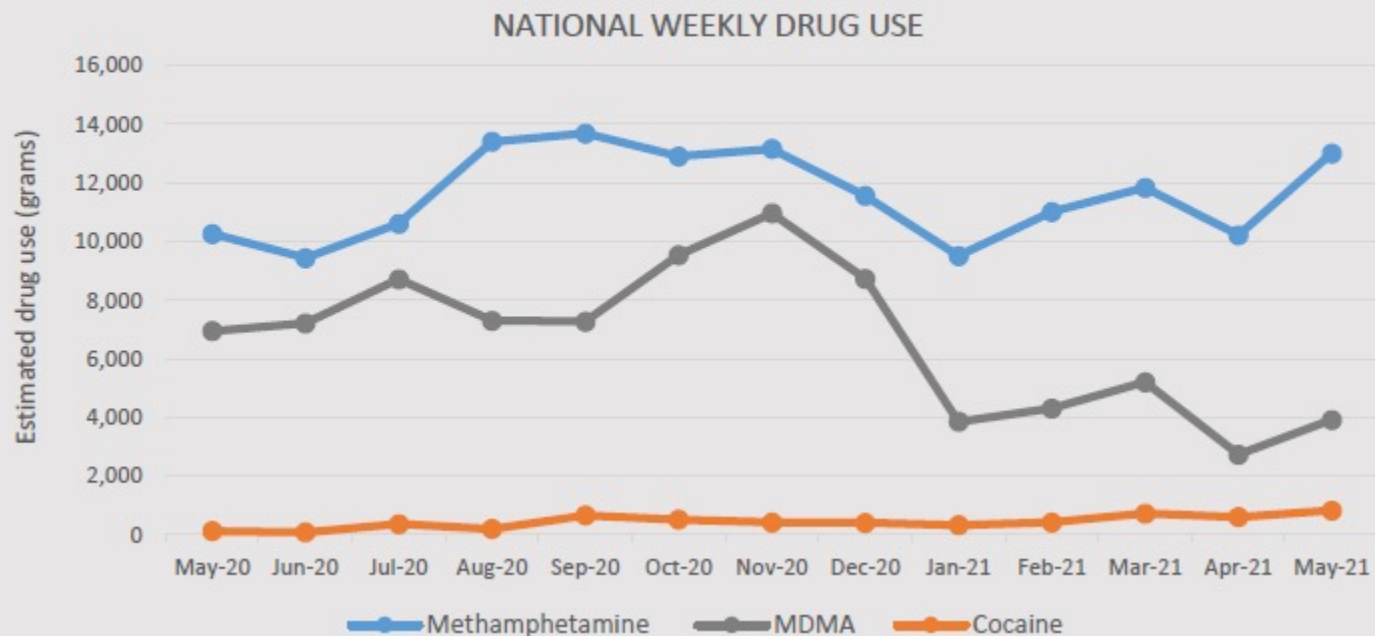


Sources: Shoblock and Sullivan of Albany Medical College and G. Di Chiara of the University of Cagliari, Italy. Compiled by Dr. Richard Rawson, University of California, Los Angeles.

NCT



National Wastewater Testing Results – May 2021



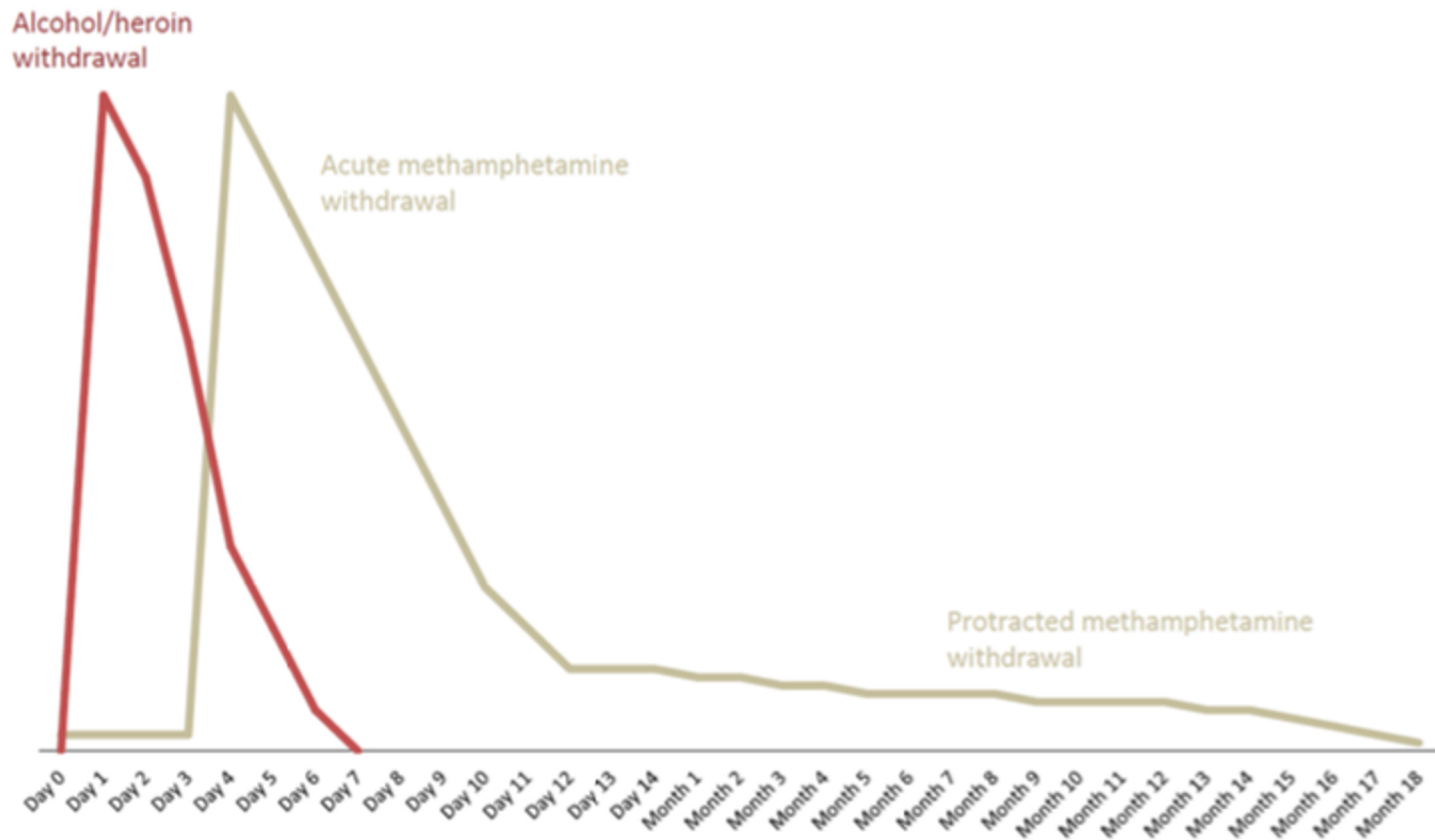
Year	ED attendances	Admissions to acute adult and older adult mental health inpatient units (WDHB)	Admission to CADS medical detoxification unit (regional)	New referrals to CADS community services ¹
	(WDHB)			(regional)
2008	12	5	17	592
2009	17	13	14	6062
2010	17	21	13	1431
2011	31	28	15	1670
2012	10	16	17	1735
2013	16	23	20	1827
2014	23	29	23	1937
2015	32	34	50	2116
2016	36	51	47	2334
2017	56	54	41	2058

Darke et al 2017

- Almost doubled past 6 years 2009-2015
- Accidental toxicity 43%(5.5% MAP only)
- Cardiac 25%
- Suicide 18%
- Accident 15%
- Other drugs in 82%-opioids 43% esp methadone /BZD 38% /20% alcohol/18% anti-psychotics
- Not related to dose/level in blood

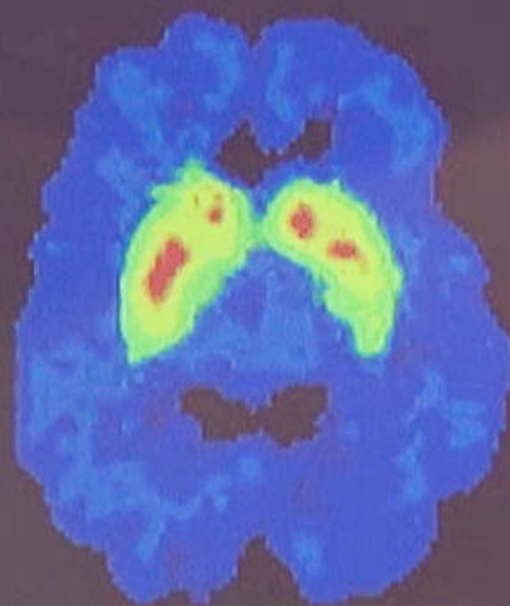
Table 2 Manner and circumstances of death of methamphetamine-related fatalities in Australia, 2009–15.

	Males (n = 1 292)	Females (n = 357)	All cases (n = 1 649)
<i>Circumstances of death (% , n)</i>			
Accidental drug toxicity	40.7 (526)	52.1 (186)	43.2 (712)
Methamphetamine only	6.1 (79)	3.4 (12)	5.5 (91)
Multiple drugs	34.6 (447)	48.7 (174)	37.7 (621)
Natural disease*	23.0 (297)	19.6 (70)	22.3 (367)
Coronary disease	18.0 (233)	11.8 (42)	16.7 (275)
Ischaemic heart disease	11.6 (150)	5.0 (18)	10.2 (168)
Cardiomegaly	2.7 (35)	1.4 (5)	2.4 (40)
Cardiomyopathy	1.9 (24)	1.4 (5)	1.8 (29)
Sudden cardiac arrhythmia	1.2 (15)	2.5 (9)	1.5 (24)
Hypertensive heart disease	1.0 (13)	0.8 (3)	0.9 (16)
Other coronary disease	0.9 (11)	1.4 (5)	0.9 (16)
Intracranial haemorrhage	1.7 (22)	4.2 (15)	2.2 (37)
Ischaemic stroke	0.01 (1)	0.0 (0)	0.1 (1)
Kidney disease	0.6 (8)	0.6 (2)	0.6 (10)
Liver disease	0.5 (6)	1.1 (4)	0.6 (10)
Pulmonary thromboembolism	0.3 (4)	0.6 (2)	0.4 (6)
Other pulmonary disease	1.2 (16)	0.8 (3)	1.2 (19)
Other	1.6 (21)	1.1 (4)	1.5 (25)
Suicide	17.9 (231)	19.3 (69)	18.2 (300)
Violent means	15.6 (201)	15.4 (55)	15.5 (256)
Hanging	12.5 (162)	13.7 (49)	12.8 (211)
Exsanguination	1.0 (13)	0.6 (2)	0.9 (15)
Firearms	0.9 (11)	0.0 (0)	0.7 (11)
Other	1.2 (15)	1.2 (4)	1.2 (19)
Poisoning	2.3 (30)	3.9 (14)	2.7 (44)
Drug overdose	1.1 (14)	3.4 (12)	1.6 (26)
Carbon monoxide	1.2 (16)	0.6 (2)	1.1 (18)
Accident	16.8 (217)	7.8 (28)	14.9 (245)
MVA ^b (single vehicle)	6.3 (81)	2.5 (9)	5.5 (90)
MVA (multiple vehicles)	4.6 (60)	1.7 (6)	4.0 (66)
Drowning	1.4 (18)	2.5 (9)	1.6 (27)
Fall	1.1 (14)	0.6 (2)	1.0 (16)
Pedestrian	0.7 (9)	0.3 (1)	0.6 (10)
Other	2.7 (35)	0.3 (1)	2.2 (36)

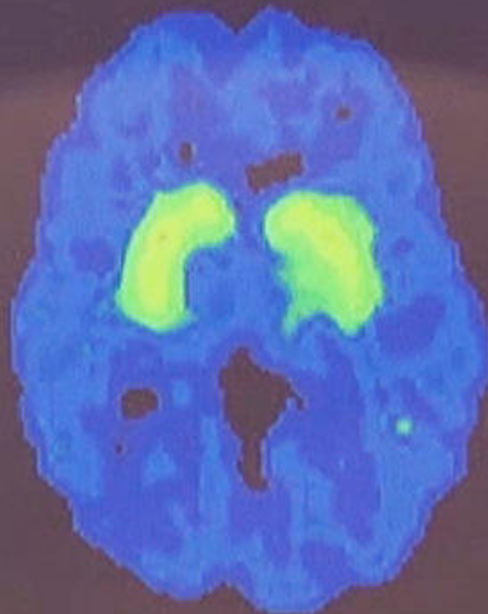


(Roche, A 2016 www.nceta.flinders.edu.au)

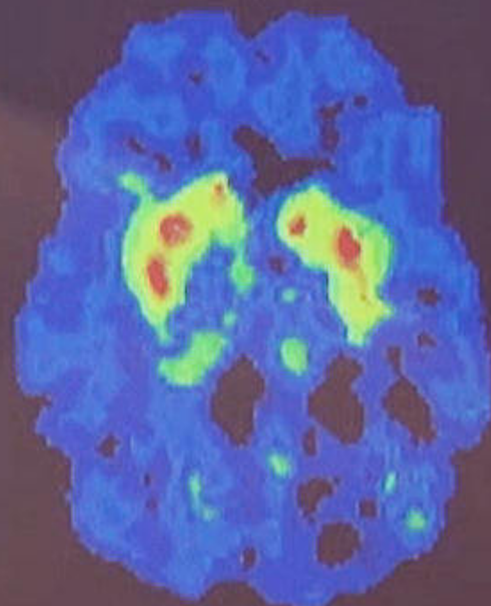
BRAIN RECOVERY WITH PROLONGED ABSTINENCE



Healthy Person

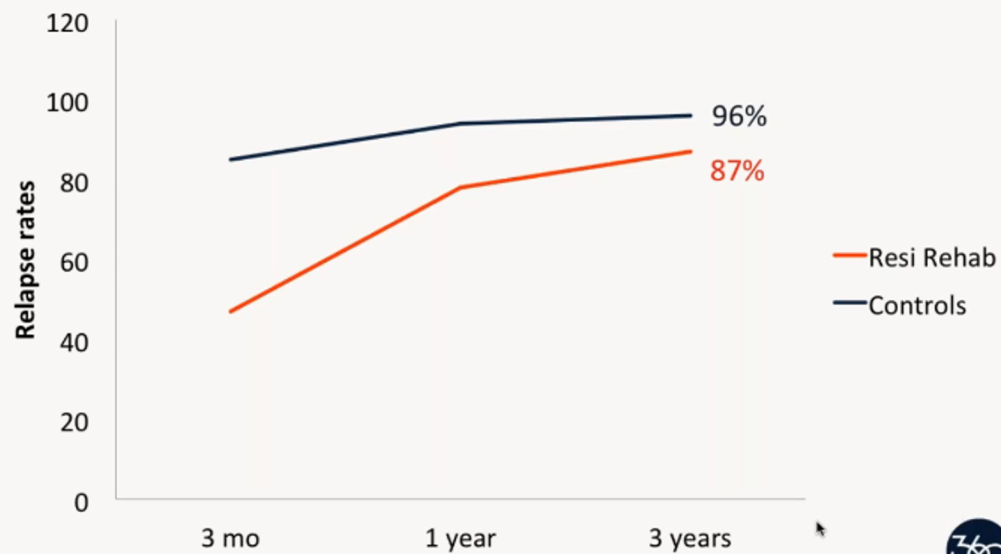


**METH Abuser
1 month abstinence**



**METH Abuser
14 months abstinence**

(r)



McKetin et al., 2012; Baker et al., 2005; Lubman et al 2014



Dr. Nicole

Opioids

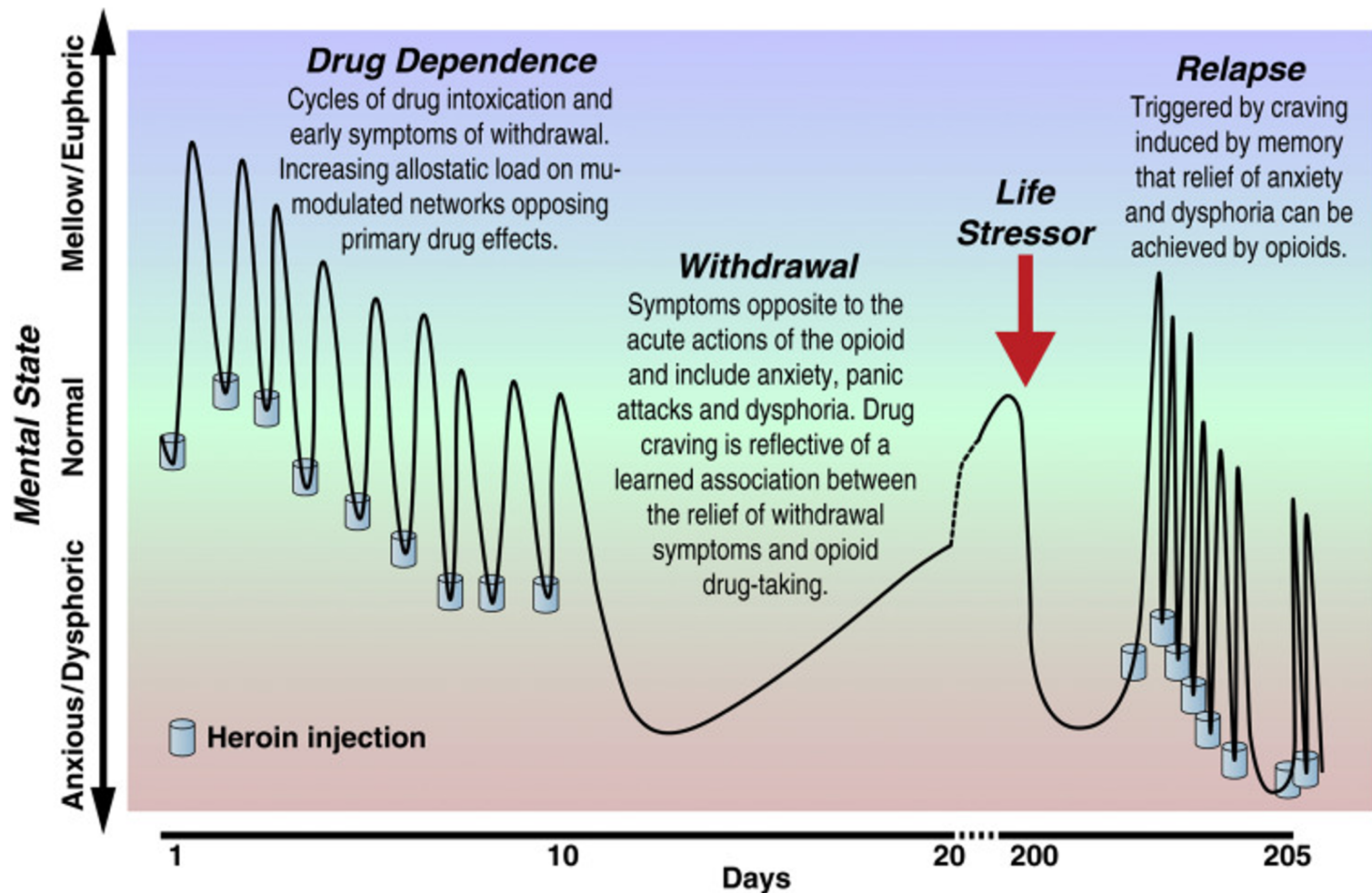
Prescribed and illicit including tramadol

Refer for OST if opioid use disorder(4 C's)-refer to CADS on line

Withdrawal classic symptoms-diarrhoea,abdo cramps, flu like symptoms, **restless legs, poor sleep**, anxiety

Manage symptomatic relief-hyoscine, loperamide, ibuprofen, paracetamol, clonidine, sedatives?

Overdose risk-think about naloxone



Pregabalin and Quetiapine

Pregabalin

Prescriptions increasing for pain and anxiety

Commonly misused and risky

Withdraw over 1-2 weeks

Quetiapine

Commonly prescribed and commonly misused

Can have withdrawal symptoms

Briefing

May 20th 2017 edition >

Exploration and desperation

The expanding universe of synthetic drugs

From “legal highs” to fentanyl, there are more drugs on offer than ever before



Research chemicals “RC’s”

- Research Chemicals: These are drugs that have a purpose for research but are also used recreationally (for fun). It is also a label put onto newly made drugs to bypass the laws.
- Easy to buy on the internet
- Benzodiazepines especially “Xanax”, etizolam and flubromazepam. Powder mixed with liquid and sold as 1ml doses (\$10)-risk of oversedation



HIGH ALERT

Pill testing

- Synthetic cathinones are a group of synthetic or chemical drugs, one dangerous variety, Eutylone, is being increasingly found mixed into samples of MDMA.
- Last summer, drug-checking agency Know Your Stuff found the substance in 40 percent of all samples tested at a university orientation week.
- Eutylone consumption can leave users experiencing symptoms that vary from paranoia and vomiting to seizures and trouble sleeping.

The New York Times

Are Your Illegal Drugs Pure? New Zealand Will Check Them for You.

A law will allow controlled substances to be tested without penalty to ensure their authenticity. The goals are to reduce health risks and, perhaps, change users' behavior.



High Alert

- <https://www.highalert.org.nz/>



Drug Information and Alerts
Aotearoa New Zealand

Alerts & notifications

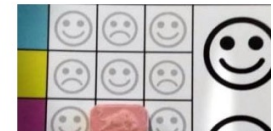
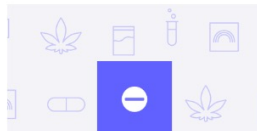
Identify a drug & get help

Articles

NZ's early warning system for
dangerous drugs



Latest Alerts & Notifications



Synthetic cannabinoids

MMB-2201, MDMB-4en-PINACA and 5F-MDMB-PICA are usually described as white, brown or orange powders, that are then dissolved and sprayed on dehydrated plant material and smoked. It can also be vaped, or consumed orally. The appearance and effects can vary wildly among synthetic cannabinoids.

Immediate effects of synthetic cannabinoids may include:

- Fast or irregular heartbeat
- High blood pressure
- Nausea, or vomiting
- Seizures
- Tremors
- Sedation, drowsiness
- Slowed reaction times
- Confusion, loss of touch with reality
- Paranoia, anxiety and panic attacks
- Loss of consciousness



T, U, V, W, X, Y and Z

Zopiclone





The NEW ENGLAND JOURNAL of MEDICINE

Perspective

APRIL 2, 2020

Stigma and the Toll of Addiction

Nora D. Volkow, M.D.

Each day in 2018, an average of 185 people in the United States died from a drug overdose.¹ In fact, recent declines in U.S. life expectancy are being attributed to direct and indirect effects of

alcohol and drug use disorders. Expanding the number of people receiving evidence-based addiction treatment is crucial for reversing these trends. But among the many challenges in delivering appropriate care to the nearly 20

causes beyond those that apply to most other conditions. People who are addicted to drugs sometimes lie or steal and can behave aggressively, especially when experiencing withdrawal or intoxication-triggered paranoia. These be-

people with addictions³ that may even lead them to withhold care. In emergency departments, for instance, health care professionals may be dismissive of someone with an alcohol or drug problem because they don't view it as a medical condition and therefore don't see its treatment as part of their job. People who inject drugs are sometimes denied care in emergency departments and other hospital settings because they are

“

People with substance use disorders need treatment, not punishment, and **drug use disorders should be approached with a demand for quality care and with compassion for those affected.** With a will to achieve racial equity in delivering compassionate treatment and the ability to use science to guide us toward more equitable models of addressing addiction, I believe such a goal is achievable.

— **Nora D. Volkow, M.D.**

National Institute on Drug Abuse Director



**National Institute
on Drug Abuse**



