



2024 LIFE  
INSURANCE  
& ANNUITY  
CONFERENCE

**Powering  
Growth**

**From Stigma to Solutions:  
Mental Health Impact on Life  
Insurance**





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## Powering Growth

*Mental health topics are at the forefront of everyday conversation, and the perceived stigma around them is lessening. As awareness increases, so do questions about what it means for the health of the population. Is the prevalence of mental health disorders increasing or have they always been there and how do we assess individual risk including the various treatment options such as micro-dosing psychedelics?*



**Elyssa Del Valle, M.D. DBIM**

*Chief Medical Officer L&H Americas*  
Swiss Re



**Marianne Purushotham, FSA, MAAA,  
Moderator**

*Corporate Vice President,  
LIMRA Research Data Services*  
LIMRA and LOMA



# AGENDA

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**Why do we need to end this talk on microdosing psychedelics?**

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**Where were we and where are we on the Mental health front?**

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**Are there any other mortality concerns related to anxiety and depression beside suicide that impact life insurance business?**

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**Burn out: The new DSM V diagnosis of the 21<sup>st</sup> century...**

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**Current FDA approved treatments for mental health conditions**

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**Alice in Wonderland – not Lewis Carroll’s version down the rabbit hole!!**

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**Finding SHROOMS!!!**

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**How is your mental health status?**



Why would there be a need to explore the world of psychedelics now?

Let's go on a journey to find out.



Various Mushroom Stones (approx 1 ft tall - 1000 B.C. to 500 A.D.)

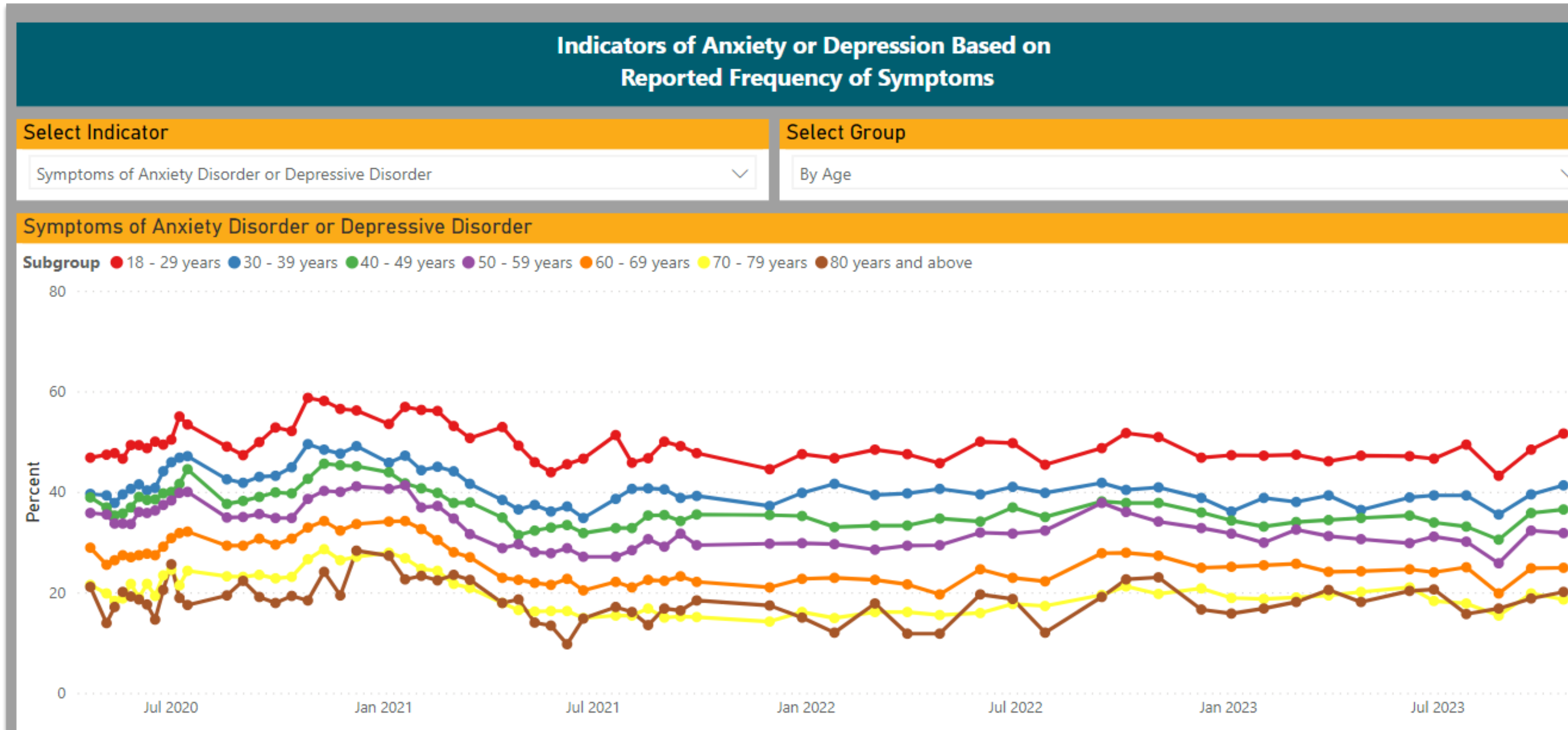
# Estimates of Mental Health Symptomatology, by Month of Interview: United States, 2019 from the National Center for Health Statistics

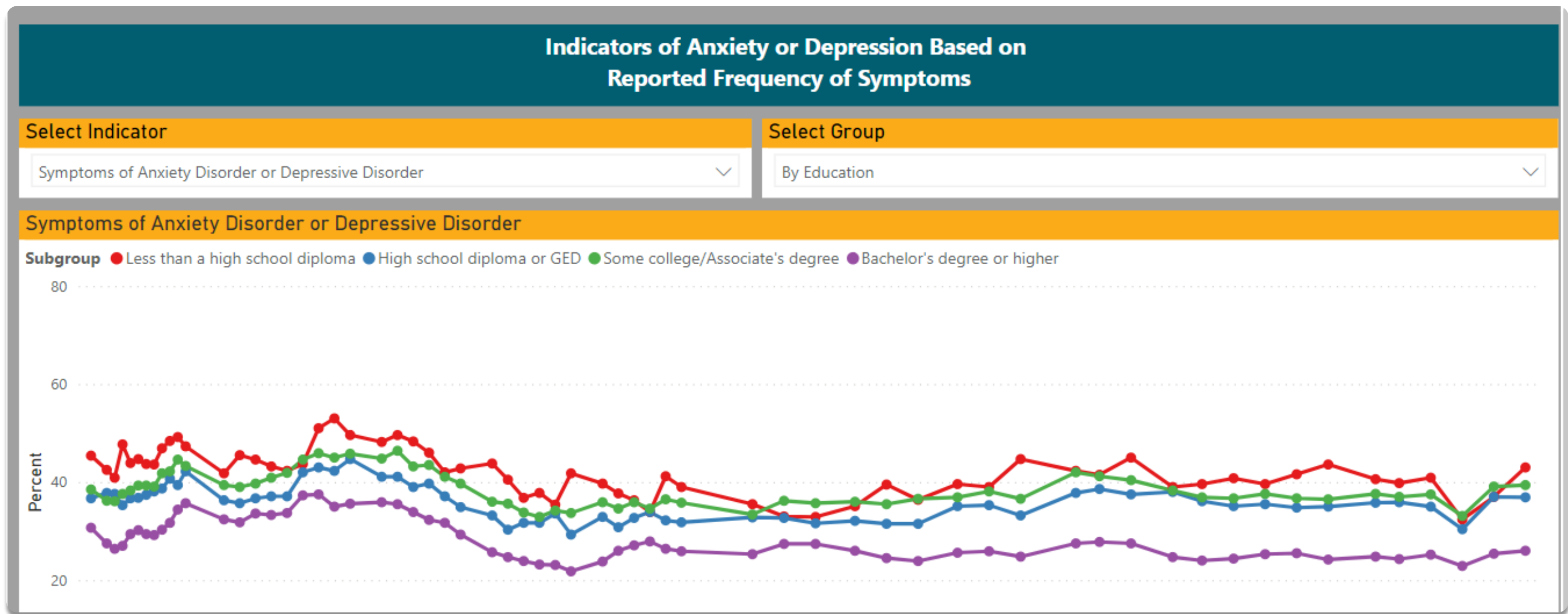
**Table. Percentages (and 95% confidence intervals) of selected mental health indicators for adults aged 18 and over, by month of interview: National Health Interview Survey, United States, 2019**

Month of Interview	Symptoms of anxiety disorder <sup>1</sup>	Symptoms of depressive disorder <sup>2</sup>	Symptoms of anxiety disorder and/or depressive disorder
Full year 2019	8.1 (7.7–8.5)	6.5 (6.2–6.9)	10.8 (10.4–11.3)
January	8.2 (6.9–9.6)	6.5 (5.5–7.8)	10.8 (9.4–12.4)
February	8.2 (6.9–9.6)	5.9 (4.8–7.1)	10.5 (9.0–12.2)
March	8.6 (7.3–10.1)	7.5 (6.3–8.8)	11.7 (10.2–13.3)
April	8.3 (6.9–9.9)	6.7 (5.6–7.9)	11.0 (9.5–12.6)
May	8.1 (6.8–9.5)	6.8 (5.6–8.1)	11.0 (9.5–12.6)
June	7.8 (6.6–9.2)	6.0 (5.1–7.2)	10.9 (9.4–12.4)
July	7.5 (6.4–8.8)	5.9 (5.0–7.0)	9.5 (8.3–10.9)
August	8.1 (6.7–9.6)	7.0 (5.7–8.5)	11.0 (9.4–12.8)
September	7.4 (6.3–8.7)	6.4 (5.3–7.7)	9.9 (8.6–11.4)
October	7.8 (6.7–9.1)	6.8 (5.7–8.1)	10.8 (9.4–12.2)
November	8.3 (7.0–9.9)	6.3 (5.0–7.8)	11.7 (10.0–13.6)
December	8.6 (7.2–10.2)	6.7 (5.3–8.2)	11.3 (9.7–13.1)

Pre-Pandemic Figures On Adults 18 and Over for Anxiety and Depression Symptoms

# Household Pulse Survey by US Census Bureau Based on Age 3-fold jump since pre COVID





# Based on Education



## Indicators of Anxiety or Depression Based on Reported Frequency of Symptoms

9

Select Indicator

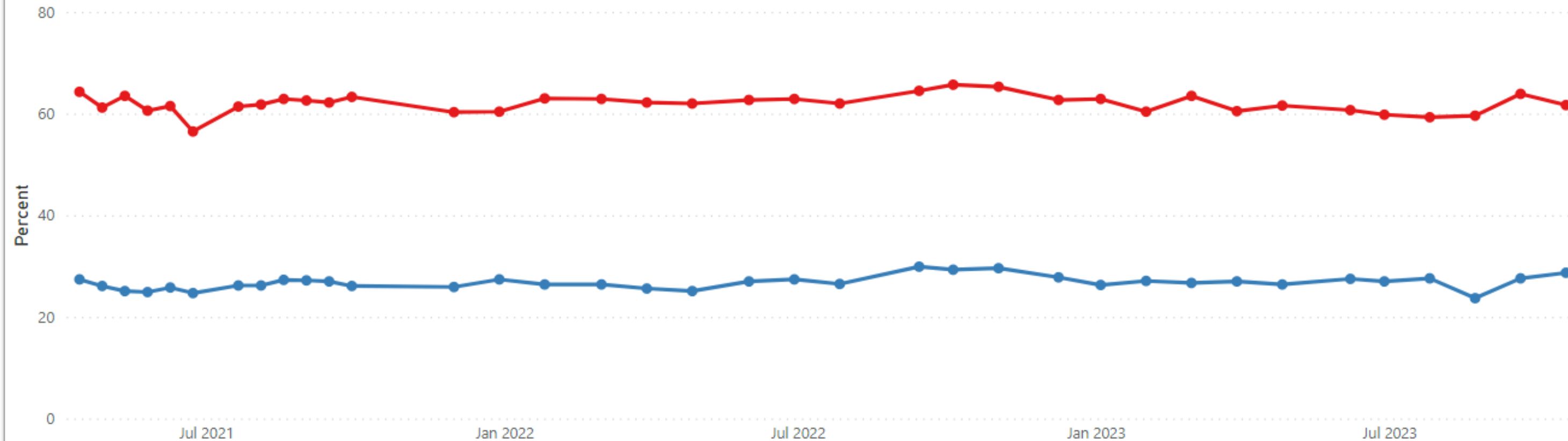
Symptoms of Anxiety Disorder or Depressive Disorder

Select Group

By Disability status

Symptoms of Anxiety Disorder or Depressive Disorder

Subgroup ● With disability ● Without disability



# Based on Disability

# Accessibility of mental health treatment by state 2022

Based on:

Number of adults with a mental illness who did not receive treatment or whose insurance did not cover their treatment.

Number of mental health professionals working in the state.

Number of kids with major depressive episode(s) who did not receive treatment.

Number of kids with severe major depressive episode(s) who received consistent treatment.



States with the least access to mental health treatment

RANK (LEAST ACCESS)	STATE
#1	Texas
#2	Alabama
#3	Florida
#4	Georgia
#5	Mississippi

States with the most access to mental health treatment

RANK (MOST ACCESS)	STATE
#1	Vermont
#2	Massachusetts
#3	Maine
#4	Wisconsin
#5	Minnesota

States with the highest prevalence of mental health disorders

RANK (HIGHEST PREVALENCE)	STATE
#1	Oregon
#2	Vermont
#3	Alaska
#4	Wyoming
#5	Utah

States with the lowest prevalence of mental health disorders

RANK (LOWEST PREVALENCE)	STATE
#1	New Jersey
#2	Florida
#3	Georgia
#4	Texas
#5	New York

# Ranking the States 2022

39	Idaho
40	Nevada
41	Mississippi
42	Kansas
43	Indiana
44	Missouri
45	District of Columbia
46	Alaska
47	Alabama
48	Utah
49	Oregon
50	Wyoming
51	Colorado

01	New Jersey
02	Wisconsin
03	Massachusetts
04	Connecticut
05	New York
06	Minnesota
07	Hawaii
08	Pennsylvania
09	Maryland
10	Illinois


States that are ranked **1-10** have lower prevalence of mental illness and higher rates of access to care for adults.

States that are ranked **39-51** indicate that adults have higher prevalence of mental illness and lower rates of access to care.



Why would  
mental health  
conditions be  
a concern for  
life insurance?





**Any other mortality risks for those  
with Generalized Anxiety Disorder and  
Depression besides suicide?**

<b>Causes of death</b>	<b>Depression</b>	<b>Anxiety disorders</b>
<b>Unnatural causes</b>		
Suicide	11.36 (10.25–12.52)	2.44 (2.11–2.80)
Accident	4.02 (3.57–4.51)	2.60 (2.24–3.01)
Homicide	2.57 (1.30–4.62)	2.34 (1.02–4.67)
<b>Natural causes</b>		
Respiratory disease	2.07 (1.51–2.77)	1.31 (0.82–1.99)
Cancer	0.82 (0.72–0.92)	0.88 (0.73–1.03)
Digestive condition	1.71 (1.45–2.00)	2.00 (1.63–2.44)
Cardiac disease	1.75 (1.49–2.06)	1.50 (1.20–1.86)
Other disease	1.59 (1.50–1.69)	1.39 (1.28–1.51)

Source: Meier, S et al. Increased mortality among people with anxiety disorders: Total population study. British Journal of Psychiatry, 2016.

# What are the leading mental health conditions?



# Mental Health Conditions Exacerbated by this Pandemic Per US Census Bureau through Household Pulse Survey (over 1.5 million respondents)

## Depression

Bereavement

Seasonal affective disorder

Major depression

## Anxiety

Situational stress

- financial stress
- relationship – divorce/breakup
- experiencing abuse
- illness or injury
- caring for ill family member/friend

## Post Traumatic Stress Disorder

Health care workers

Victims of violence

Lack of social support

## Addictive Disorders

Substance abuse

Alcohol abuse

Carb addiction?

1 in every 5 Americans currently live with a mental illness





## BURNOUT

The new DSM V  
diagnosis of the  
21st century

- Increasingly recognized as a serious occupational condition and health issue
- It is **not** a medical disease, rather an **occupational syndrome**
- Presents when occupational demands outweigh the rewards or recognition
- No set criteria yet
- Globally the range of individuals with burnout symptoms varies from **11% to over 50%** depending on age, gender, occupations and survey instrument used

### Descriptive Components:

- Emotional exhaustion
- Depersonalization - a cynical or disjointed relationship to one's job or work associates
- Diminished personal fulfilment - a feeling of lack of self-control or efficacy in the workplace or at a work task

### Treatment:

- Job change or Reassignment
- Job counselling or coaching
- Cognitive behavioral therapy
- SSRIs
- Possibly the non-Lewis Carroll's version of Alice has another solution!!

# Conventional Treatments for Anxiety and Depression

## Pharmaceuticals

### SSRI's

Lexapro, Paxil, Prozac, Celexa, Zoloft

### SNRI's

Effexor, Pristiq, Cymbalta, Remeron

### NDRI (norepinephrine-dopamine reuptake inhibitors)

Used for Depression, Parkinson, ADHD, narcolepsy)

Wellbutrin

### Benzodiazepines

Xanax, Valium, Ativan, Klonipin

### Non benzo anxiolytics

Vistaril, Buspar

## Non pharmaceuticals

### Depression

Cognitive Behavioral Therapy

Reflexology and Acupuncture

Herbal supplements: St. John's wort, Valerian root

Repetitive Transcranial Magnetic Stimulation

ECT (Electroconvulsive therapy)

### Anxiety

Cognitive Behavioral therapy – first treatment option

Exposure

Cognitive restructuring

# Serotonin Syndrome – a fatal syndrome of excess serotonergic agonism

## Definition

Drug reaction

A spectrum of clinical findings from excess serotonin characterized by mental status changes, autonomic hyperactivity, neuromuscular abnormalities

Symptoms: agitation, insomnia, confusion, tachycardia, dilated pupils, loss of coordination, high blood pressure, muscle rigidity, sweating, diarrhea, headache, shivering

Life threatening signs: High fever, tremor, seizures, arrhythmia, unconsciousness

## Causes

Combinations of SSRIs

Addition of MAOIs

Pain medications such as codeine, Oxycodone, hydrocodone, Demerol, fentanyl, tramadol

Migraine treatment: Tegretol, triptans, Depakote

Lithium

Illicit drugs including LSD, ecstasy, cocaine, amphetamines

St. John's wort, ginseng and nutmeg

OTC cough medicine like dextromethorphan

Anti-nausea: Zofran, Reglan

HIV drug Ritonavir

**With access to mental health strained and failures of current FDA approved treatments, some States decriminalizing psychedelics.**

**Have psychedelics become legit.. has their day come?**

**Let's explore further....**

# Alice in Wonderland



wiki image



LET'S GO DOWN THE  
RABBIT HOLE

7000 years in the making...

# History of Psychedelic

## ANCIENT TIMES

Year	Milestone	Region
4000 BC	First cave painting of psilocybin	Europe, North Africa
3650 BC	Evidence of ceremonial use of peyote	North and South America
1300-1521 AD	Evidence of Aztecs consuming mushrooms referred to as the “flesh of the Gods”	Central America
1500 AD	Catholic texts refer peyote as witchcraft	Europe

# History of Psychedelics

The Prohibition Era  
in the 1800s through  
the 20<sup>th</sup> century

Year	Milestone	Region
1897	Arthur Heffter isolates Mescaline from peyote cactus	Germany
1901	Jean Dybowski and Edourd Landrin isolate ibogaine	France
1912	Anton Kollisch created MDMA	Germany
1938	Albert Hofmann synthesizes LSD	Switzerland
1958	Albert Hofmann discovers psilocybin	
1962	Calvin Stevens synthesizes ketamine	USA
1966	California criminalizes LSD possession and sales	USA
1968	Staggers-Dodd bill passes making psilocybin and other psychedelics illegal	USA
1971	UN publishes the Convention on Psychotropic Substances stating LSD, DMT and MDMA are controlled substances	Global
1971	US Controlled Substances Act comes into effect moving most psychedelics to schedule I	USA
1971	UK passes Misuse of Drugs Act 1971, placing controls on most psychedelics	UK



# Counterculture of the 60s to mid 70s

## Influencers...

- **Dr. Timothy Leary** and his Harvard research called the Harvard psilocybin project. and **Concord Prison Experiment**
- Grateful Dead
- Pink Floyd
- Jimi Hendrix
- Janis Joplin
- **Beatles** – **Lucy in the Sky with Diamonds**
- Psychedelic bus with **Ken Kesey** and **Merry Band of Pranksters**



Further: Image from Wiki

# **2 Decades of Research including Controlled Randomized Studies**

## Johns Hopkins Center for Psychedelic & Consciousness Research

2000 – first research since 1970s w/published paper

2006 on positive effects of a single dose of psilocybin, sparking renewal in research on psychedelics  
2006- established safety of high dose psilocybin

2008 – Guidelines for Human Psychedelic Research

2011 – Psilocybin increases personality domain of openness

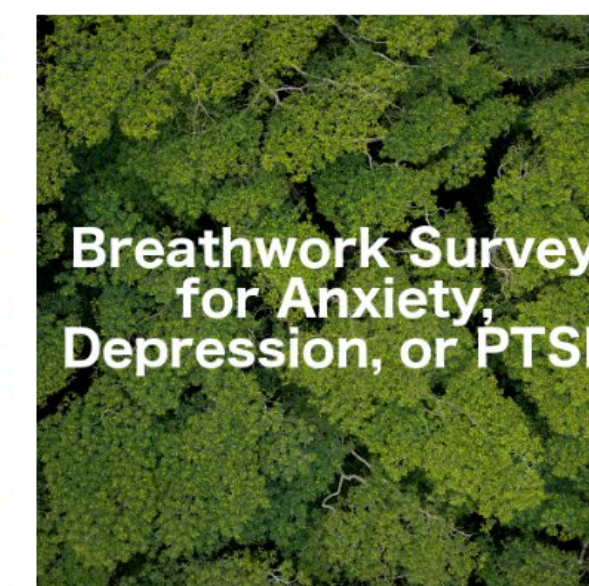
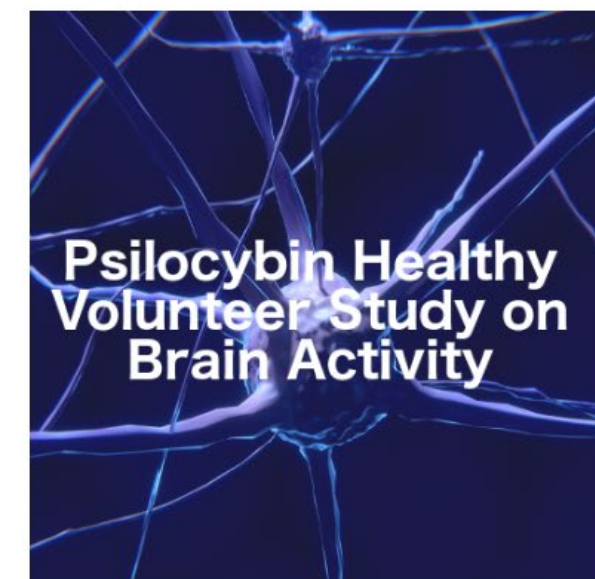
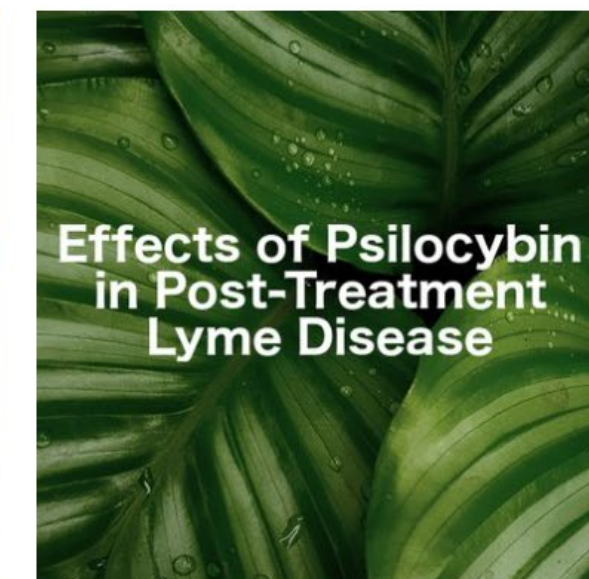
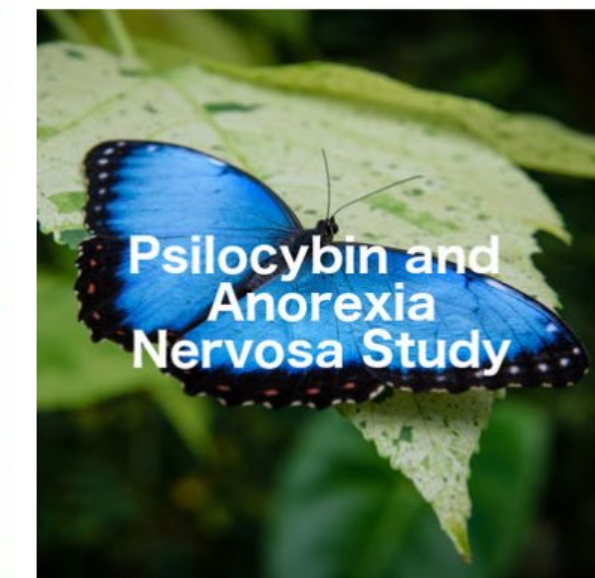
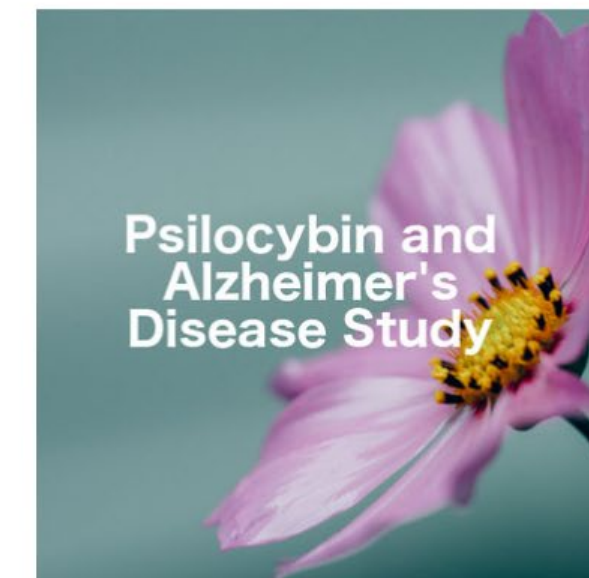
2015 – Research as potential treatment of pain and addiction (opioid, not serotonin 2A receptors)

2016 - Palliative Effects of Psilocybin treatment in Cancer Patients

2016 - NIH granted study on effects of psilocybin on brain function

2017 - Pilot study showed 80% of participants were biologically verified as smoke free 6 months after psilocybin treatment compared to 35% with conventional drugs

## RESEARCH





# Changing Minds, Altering Perceptions

The Beckley Foundation is UK-based non-profit with a long history of pioneering psychedelic research. Founder and Director Amanda Feilding has for the past years been laying the groundwork for an exciting new range of collaborations with leading research institutes around the world, largely focusing on LSD.

## Beckley Microdosing Research Program Oxford UK

28

Specific program focused on micro-dosing (LSD)

🔥 LSD microdosing on mood, cognition & pain relief

🔥 LSD microdosing, brain activity & neuroplasticity

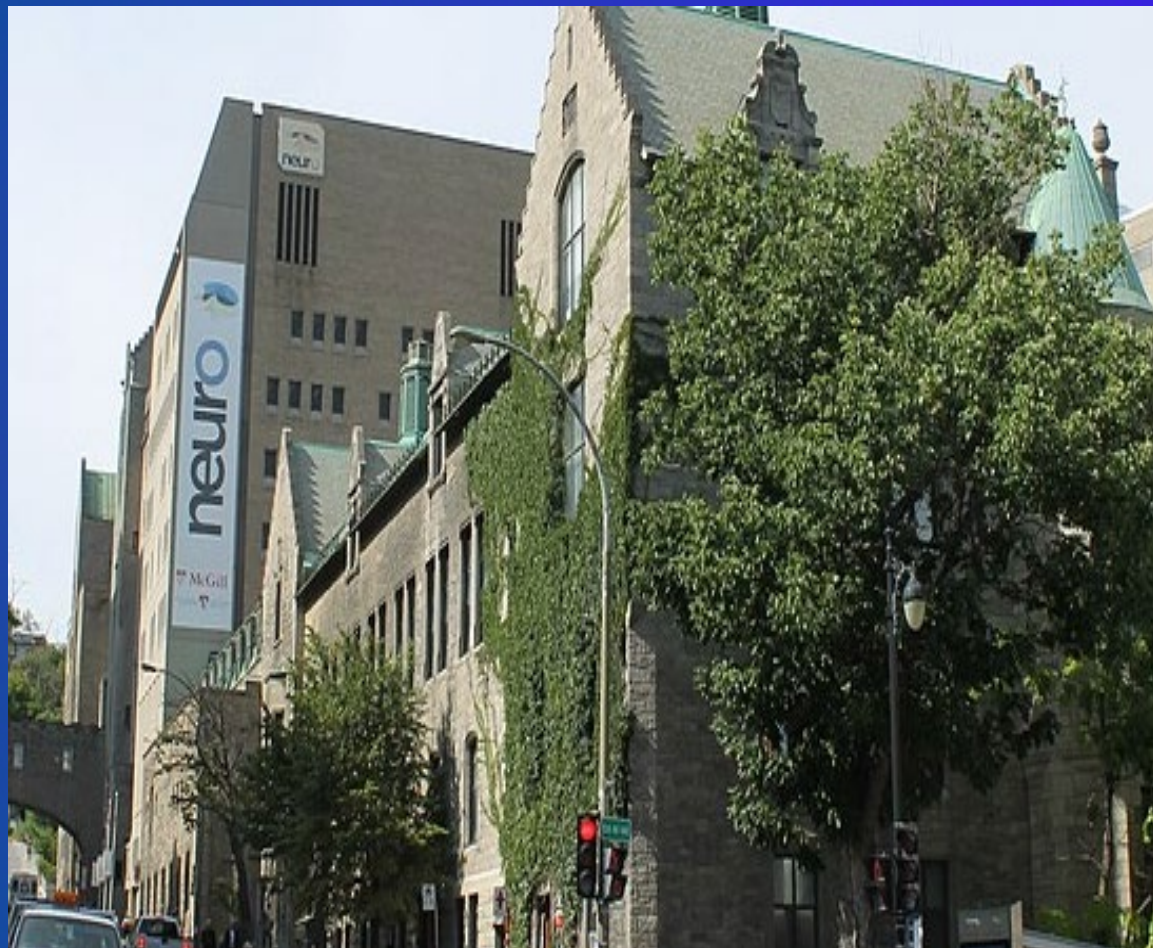
🔥 LSD Microdosing for Alzheimer's Disease

🔥 Microdosing and meditation

🔥 The largest placebo-controlled microdosing study

🔥 Remote microdosing research platform

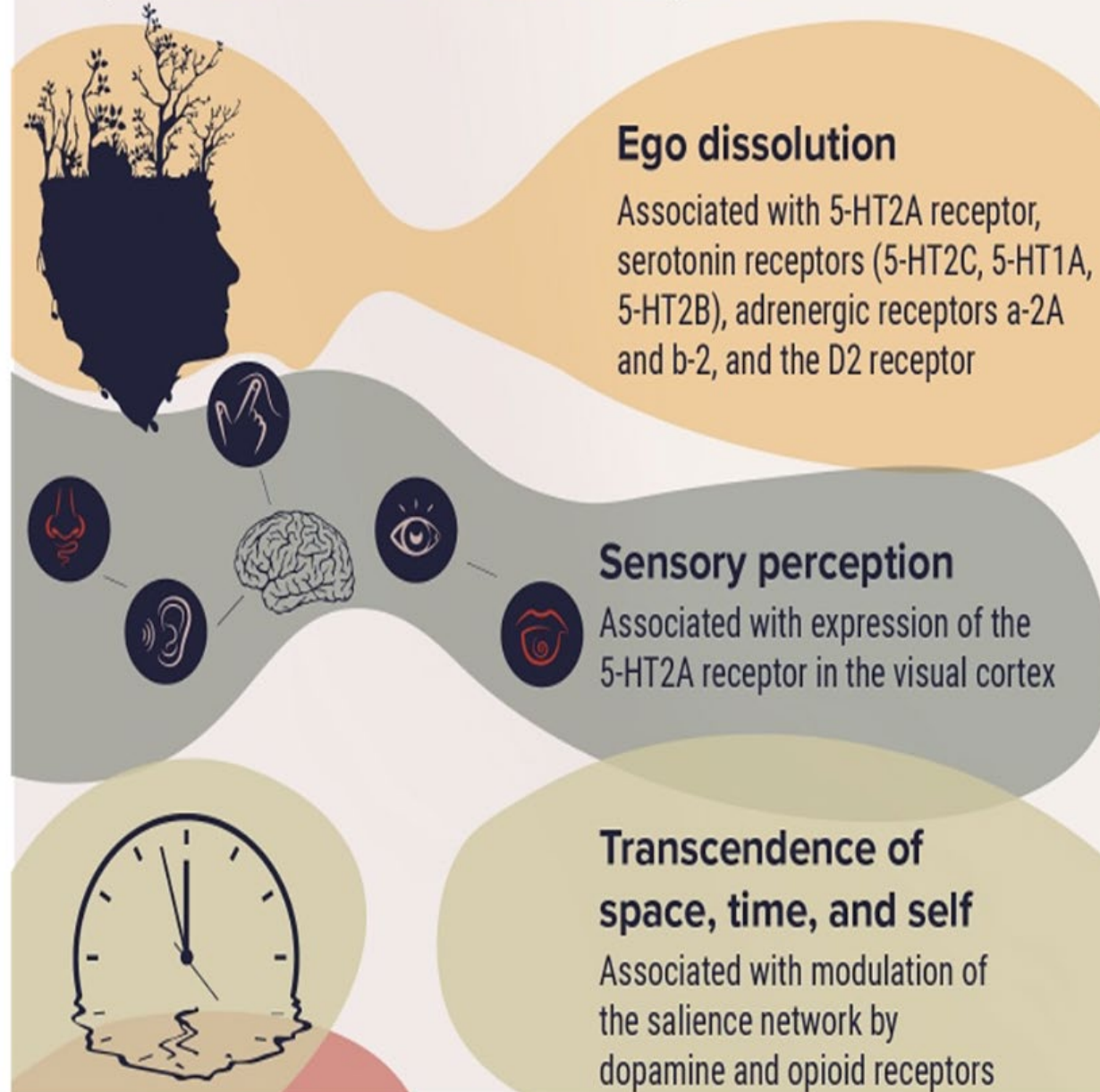
# McGill University's NEURO



## PSYCHEDELICS

Medscape

Research on nearly 7000 individuals who had taken 1 of 27 different psychedelic compounds mapped various experiences to different brain receptors.



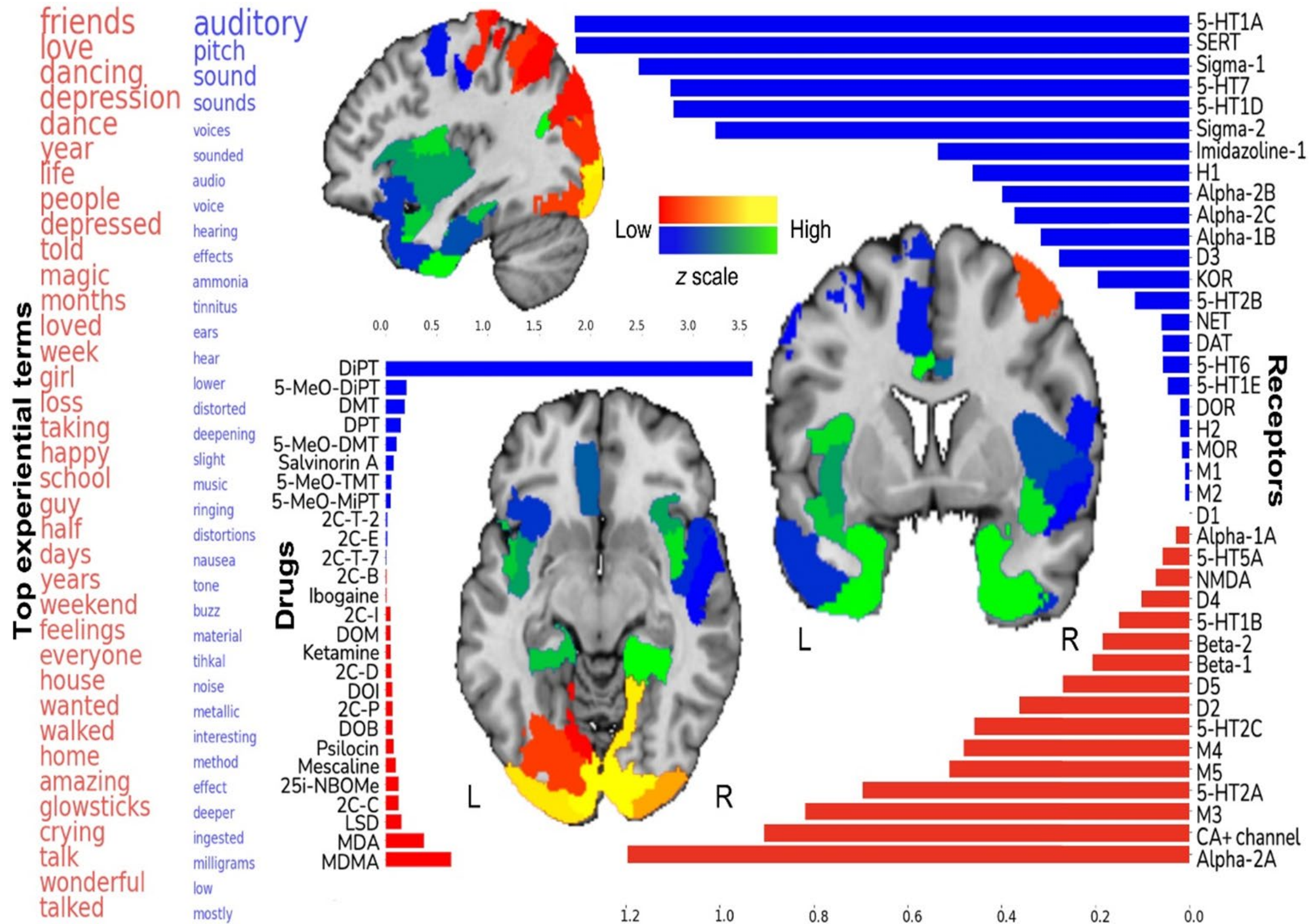
# Trips and neurotransmitters: Discovering principled patterns across 6850 hallucinogenic experiences

<https://www.science.org/doi/10.1126/sciadv.abl6989>

McGill University's Neuro dept mapped out the effects of 27 psychedelics in almost 7000 folks, creating a 3D whole brain map of brain receptors and those subjective experiences linked to them

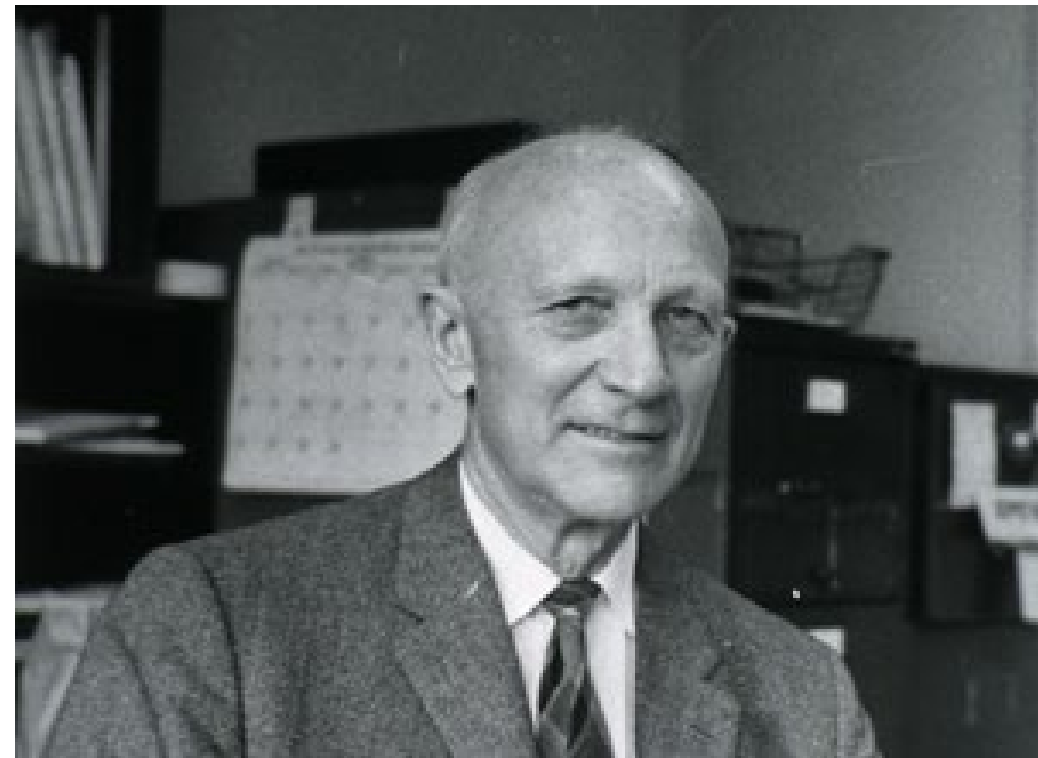
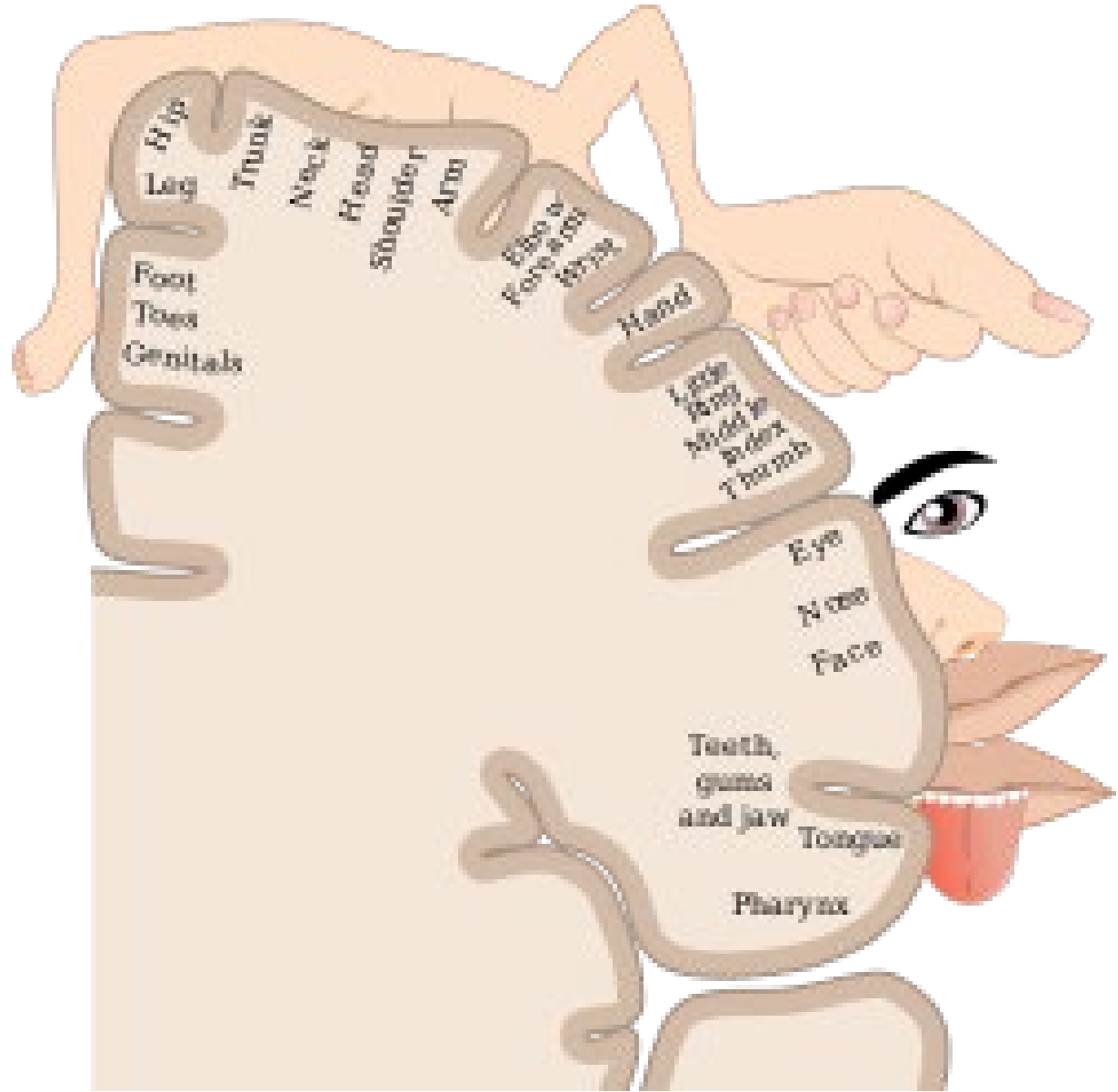
"Hallucinogenic drugs may very well turn out to be the next big thing to improve clinical care of major mental health conditions," senior author **Danilo Bzdok, MD, PhD**, associate professor, McGill University, Montreal, Canada, said in a press release.

Published March 2023



# Dr. Wilder Penfield – Father of Mapping Brain Function

## The Homunculus – The Little Man





**THE FIRST LONGITUDINAL  
CASE STUDY SHOWS  
REMARKABLE IMPROVEMENT  
IN CHRONIC PTSD AFTER A  
SINGLE DOSE OF 5-MEO-DMT**












CASE REPORT article

Front. Psychiatry, 23 November 2023  
Sec. Psychopharmacology  
Volume 14 - 2023 | <https://doi.org/10.3389/fpsy.2023.1271152>

This article is part of the Research Topic  
Beyond Psilocybin: Exploring the Clinical Potential of Alternative  
and Novel Psychedelics

[View all 6 Articles >](#)

**5-MeO-DMT for post-traumatic stress disorder: a  
real-world longitudinal case study**

 Anya Ragnhildstveit<sup>1,2\*</sup>  Ryan Khan<sup>1</sup>  Paul Seli<sup>1,3</sup>  Lisa Claire Bass<sup>1,4</sup>  River Jude August<sup>1,5</sup>  
 Miriam Kaiyo<sup>1,5</sup>  Nathaniel Barr<sup>6</sup>  Laura Kate Jackson<sup>1</sup>  Michael Santo Gaffrey<sup>3,7,8</sup>  
 Joseph Peter Barsuglia<sup>9</sup>  Lynnette Astrid Averill<sup>10,11,12</sup>

Other  
studies to  
show  
promise in  
efficacy





# How Do Psychedelics Work?



# **Efficacy of Psychedelics for Treating Mental Illness is Linked to Ego Dissolution**

Dissolution of boundaries between Self and World

Ego is self-identity – how you view self determines how you see the world

Ego determines how you interact with others and the degree of self-esteem

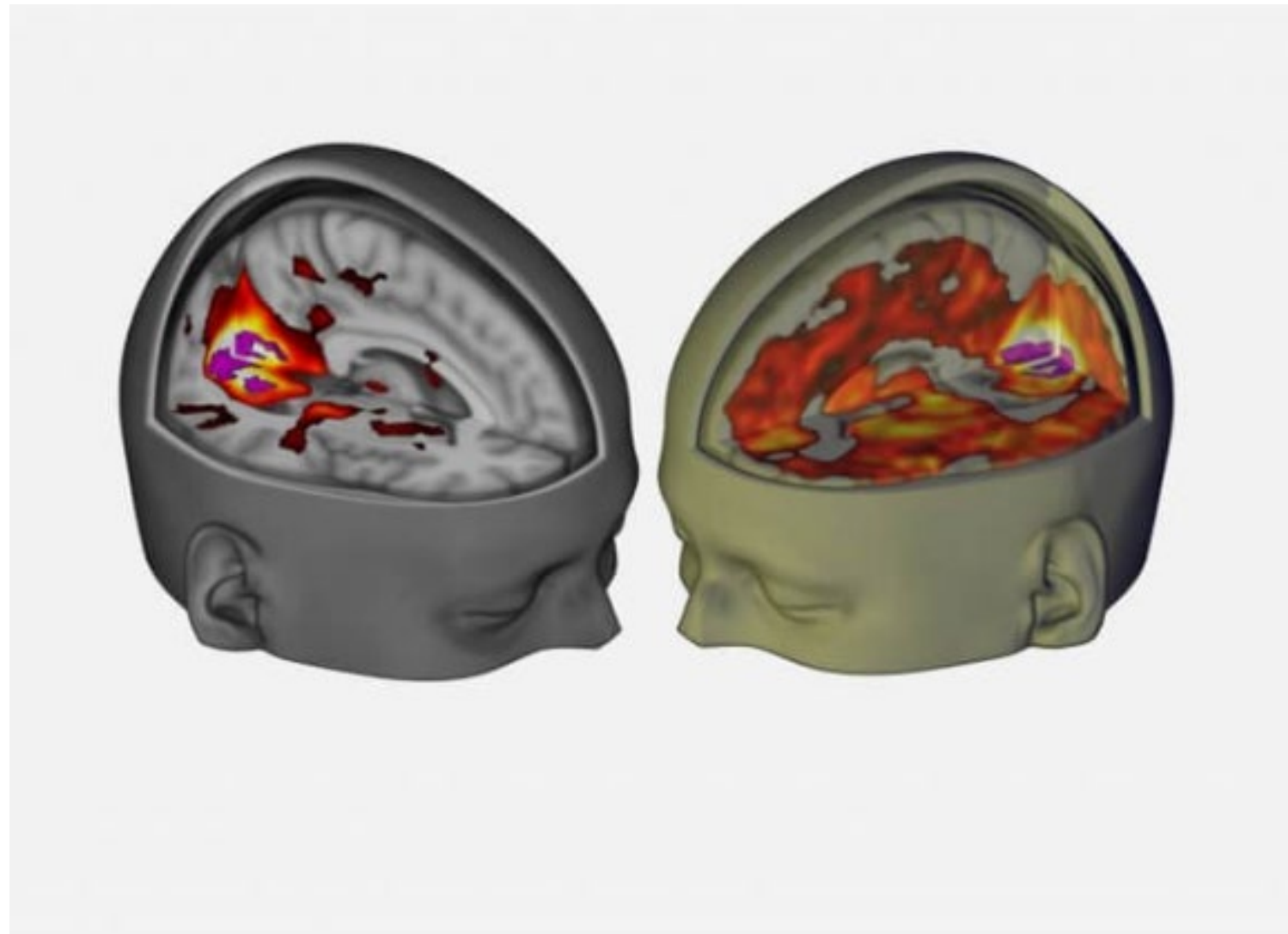
EGO Death – Losing yourself – feeling of letting go of oneself and identity

Hx of ego death traced to old religious and spiritual practices such as Zen Buddhism

Highly personal.... can be scary or cathartic and blissful..... very unpredictable

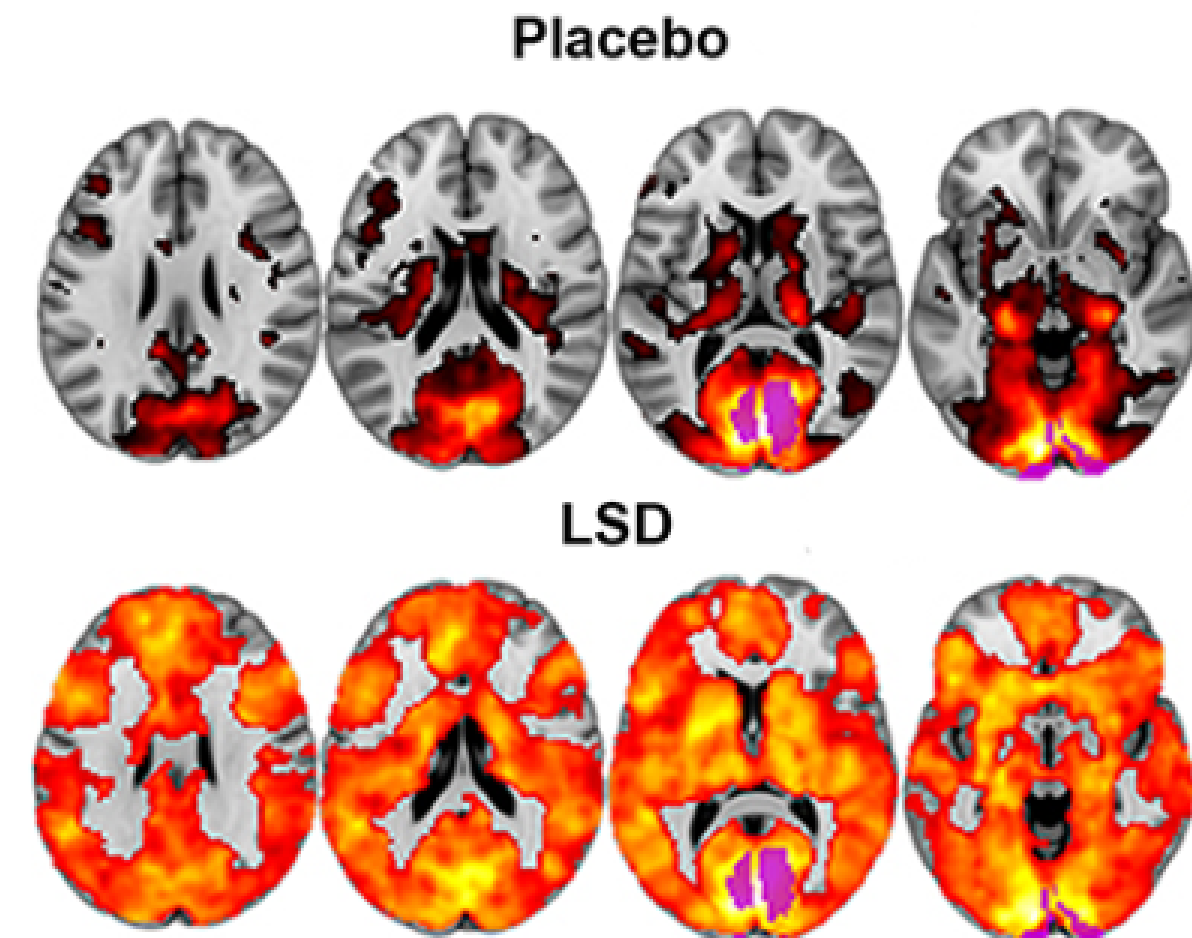
Examples of BAD trips include nausea, sleep problems, dry mouth, sweating, panic, paranoia and psychosis which can be unpleasant and potentially fatal

## The World's First Images of the Brain on LSD – 2016 via functional MRI brain published in Proceedings of the National Academy of Sciences



Increase in the brain connectivity after LSD (right), compared to placebo (left).

Ego dissociation- DMN disintegrates under LSD, allowing for a magnificent increase in communication between brain networks that are normally highly segregated. This produces a more integrated pattern of connectivity throughout the entire brain, producing more fluid modes of cognition and enriching consciousness



**This image shows how, with eyes-closed, much more of the brain contributes to the visual experience under LSD than under placebo. The magnitude of this effect correlated with participants reports of complex, dreamlike visions.**

LSD decreases the communications between the brain region of the Default Mode Network – which is like a conductor in orchestra. This DMN controls amount of sensory information and controls and represses consciousness.... that is referred to as the EGO

- Tendency of brain to keep developing, changing and healing itself
- Brain is plastic or malleable
- Previously, believed that brain did not change after a certain point in time  
We know now, brain can change and develop throughout our lifetime
- **Evidence: vitro study on cortical neurons of animals – formation of new neurites, more dendritic branches, more synapses with low dose psychedelics**
- Neuroplasticity is directly proportional to blood levels of **BDNF**, a protein responsible for brain cell growth and survival
- BDNF is secreted by neurons and is a component of synaptic plasticity.
- BDNF is low among those with Alzheimer's and other neurodegenerative disorders like Parkinsons, Huntington's and bipolar
- BDNF found in hippocampus and cortex – site that is enhanced with exercise – study found 10 mins of high intensity aerobic exercise has beneficial effect on cognition.

Neuroscience Letters Volume  
630, 6 September 2016, Pages  
247-253

## Raises levels

Exercise 80% max HR x 40 mins

Low carb diet, intermittent fasting

coffee –beneficial effects on memory in animal models – reduced age-related memory impairment

magnesium – and improves depression

being outdoors... hiking with Adam

blueberries, green tea. cumin, cacao, omega 3 fatty acids, green leafy veggies, red grapes

Ketamine

Lithium enhances expression of BDNF... may be mechanism of why it treats bipolar

## Lowers levels

long term exposure to stress

inflammation

high fat and high carb diets

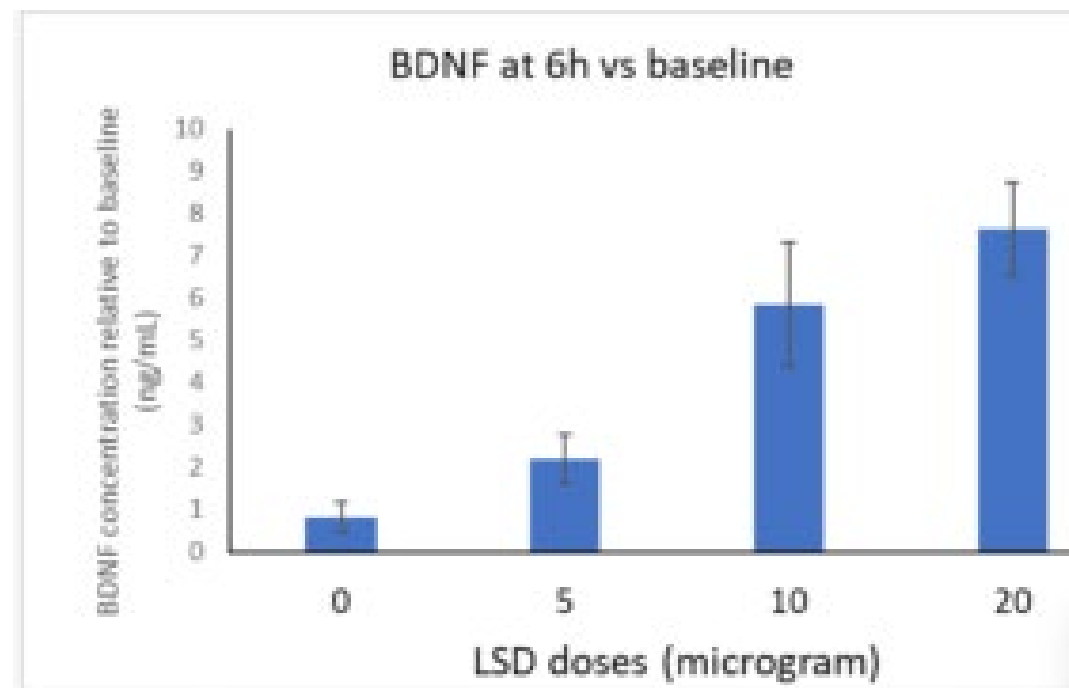
sedentary and indoor lifestyle

UPF

# Effects of LSD micro-dosing on Neuroplasticity

Study on 24 health volunteers on physiological and psychological effects of low dose LSD at 5, 10 and 20 ug vs placebo

## Cognitive Function



Brain –derived neurotrophic factor is key marker in neurodegenerative and neuropsychiatric disorders

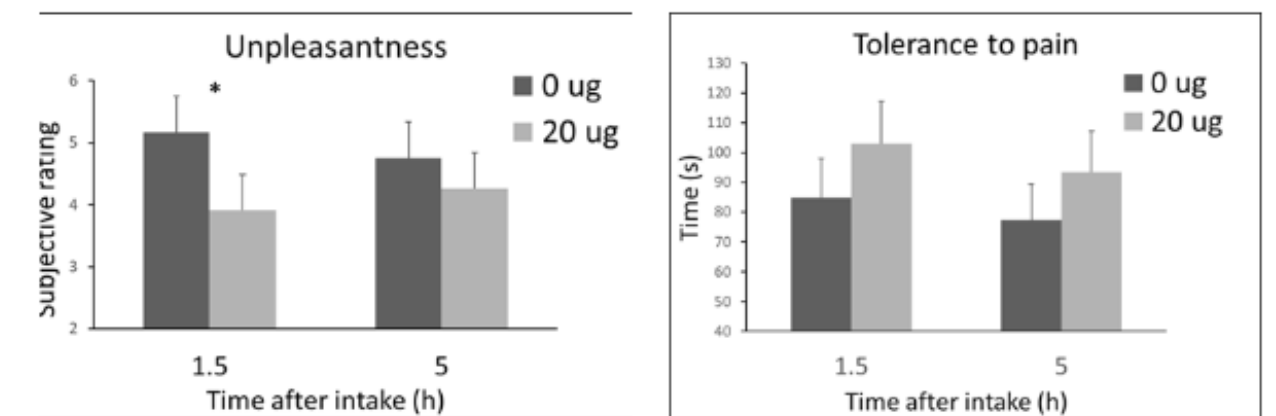
BDNF is linked to OCD, Alzheimers, DM and eating disorders

BDNF is a marker of neuroplasticity

## Mood

Low dose LSD demonstrated enhanced mood as well as vigilance at dose of 20 mcg

## Pain Management



- Cold Pressor Test used (submerge hands into 3 degrees celcius water)
- 20 mcg dose had significant reduction of pain perception
- 20 mcg had 20% increase in pain tolerance
- reduction in subjective pain and increase in pain tolerance comparable in magnitude to those observed with opioids

# Classifying Psychedelic drugs

Psychedelic drugs	Dissociative drugs	Other
<p>Drugs that primarily influence the way the brain processes the chemical serotonin. They can bring on vivid visions and affect a person's sense of self.<sup>2</sup></p> <p><i>Includes: psilocybin, LSD, DMT, mescaline, NBOMes</i></p>	<p>Drugs that primarily affect how the brain processes the chemical glutamate. These drugs can make people feel disconnected from their body and environment.<sup>6</sup></p> <p><i>Includes: ketamine, PCP</i></p>	<p>Drugs such as MDMA,<sup>7</sup> ibogaine,<sup>8</sup> and salvia<sup>9</sup> affect a variety of brain functions to cause psychedelic and/or dissociative effects.</p>

NBOMes – N-methoxybenzyls

# Dosage

Substance	Mega heroic dose	Moderate Dose	Museum concert Dose	Minidose	Microdose
Psilocybin	4+ grams	2-3 grams	0.75-1.5 grams	0.35-0.50 grams	0.1-0.3 grams
LSD	200+ micrograms	150 micrograms	50-100 micrograms	15-30 micrograms	5-15 micrograms
MDMA	200+ milligrams	80-150 milligrams			5-40 milligrams
Ketamine	150-200 milligrams	75-100 milligrams		25-50 milligrams	



# Set & Setting- relevant for micro-dosing if research is to be reliable and consistent

- **Set** (short for **mindset/mental state**)
- Preparation & Expectations
- What do you hope to learn ?
- What are your goals ?
- **Setting** is the physical and social environment
- Should be a neat, comfortable room with a couch or bed to lay on with soft lighting
- A peaceful, safe outdoor setting works too
- Music (mellow, instrumental)

Hartogsohn, I., Petranker, R. Set and setting in microdosing: an oft-overlooked principle. *Psychopharmacology* 239, 3771–3777 (2022). <https://doi.org/10.1007/s00213-022-06249-8>

# Micro-dosing Protocols...

**Stamets's** Protocol --also called the “beginner’s protocol”, and uses “stacking” of Lion’s Mane supplement, psilocybin, and niacin (vitamin B3) on days 1-4 and 8-11 of 14 for 4 weeks, then rest 2 to 4 weeks.

Paul Stamets is an American mycologist from Ohio. Advocate of treatment cancer and Alzheimer’s with psilocybin.

Also advocates for bioremediation, using living organisms to clean up our environmental contaminants.

**Fadiman** protocol--microdosing every third day for 4 to 8 weeks, then rest 2 to 4 weeks. Using LSD or psilocybin at dosage of 5-10% of the recreational dose, taken in morning. the 2 days off allows to fully metabolize the substance and avoid potential tolerance or build up.

Dr. James Fadiman is an American writer known for research in microdosing psychedelics

co founded the Institute of Transpersonal Psychology which later became Sofia University

**Micro-dosing Institute** Protocol (MDI)—microdosing every second day for 4 to 8 weeks, then rest 2 to 4 weeks.

# Microdose movement

Institutes such as "microdosing institute"

Education, research and community

GLOBAL

Online access to tutorials and "coaching" that helps users in the process of microdosing.

Research information, protocols, different substances, etc.

They have a shop where you can access different substances in different parts of the world.

It goes beyond mental disorders. It refers to **mental health.**

Microdosing Institute is a global education, community, and research platform. We build vital connections in society and bring together ancestral wisdom with modern science to allow for safe, conscious, and effective microdosing with psychedelics.



## EDUCATION

Here at Microdosing Institute you'll find everything you need to microdose safely, consciously, and effectively. We provide evidence-based education and guidance in various forms to foster the most transformative microdosing experiences.

[Learn About Microdosing](#)



## COMMUNITY

Through our global microdosing community, we aim to provide accessible and honest microdosing education, foster healthy conversations about microdosing and psychedelics, and provide connection and high-quality support for those who need it.

[Join Our Global Community](#)



## RESEARCH

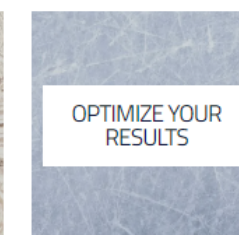
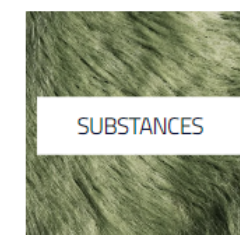
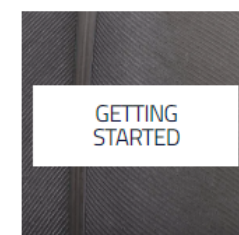
Microdosing research enables us to better understand how, when, and by whom microdosing can be safely and effectively used. Here, we have gathered and summarized most scientific research publications on microdosing and its effects to date.

[Explore Research](#)

## Learn How To Microdose

*Now, let's get practical.*

The practical guide below provides a starting roadmap for your journey. This microdosing guide features detailed, comprehensive information about microdosing substances, protocols, getting started, and optimizing your microdosing experience. Remember, a small dose can lead to big changes – over time and when done with intention.



# Legal environment on psychedelics

## USA, Oregon 2020

Oregon was first U.S. state to legalize psilocybin.

From January 2023 psychotherapists can treat their patients with psilocybin

## Canada 2022

Health Canada made a amendment in January 2022

Allows doctors request access to certain psychedelics for any serious, life-threatening situation, or treatment-resistant condition

## USA 2022

Two amendments were approved in the US House of Representatives in July 2022

Psychedelic Assisted Treatment Authorized for Veterans and Active-Duty service suffering from PTSD,

## Canada, Alberta 2022

Alberta first Canadian province

It allows the use of psychedelics for therapeutic use.

## Australia 2023

Australian Therapeutic Goods Association, February 2023

Authorized the use of MDMA for the treatment of Post-Traumatic Stress Disorders that does not respond to treatment

Psilocybin as a treatment for treatment-resistant depression.

## 2 States in USA (listed #49 Oregon and # 51Colorado) have legalized Psilocybin

- In 2020, **Oregon** voters approved Oregon Ballot Measure 109. The measure allowed Oregon residents to manufacture and administer psilocybin.
  - Oregon residents can consume “magic mushrooms” in supervised facilities. The Oregon Psilocybin Services program issues licenses for these facilities and creates regulations for them.
  - The current regulations are not strict. A distributor does not need a medical license in order to run a facility. Employees do not have to watch people take mushrooms, though a safety plan must be in place to help people on bad trips.
  - **You cannot use magic mushrooms in your home in Oregon. You must go to a facility to get your supply and you must remain there while taking the mushrooms.** Oregon also requires you to have a prescription from your doctor for psilocybin, though personal use is decriminalized.
  - Ketamine and DMT are decriminalized. But you still face fines for possessing or transporting these drugs in Oregon.
- In 2020, House Bill 19-1263 went into effect across **Colorado**. Possession of Schedule I drugs, including psilocybin, is now a misdemeanor. However, misdemeanors in Colorado are punishable by prison sentences and fines.
  - **In 2022**, Colorado voters passed another ballot initiative. This initiative finally **decriminalized psychedelic mushrooms across the state. The state will also create healing centers where people can take mushrooms.**
  - The initiative will take effect in 2024. The state has until then to draft regulations.
  - Under **current regulations, residents 21 and older can grow and share mushrooms in their homes.** However, they cannot sell them for personal use. People with possession convictions can apply to have their records sealed.
  - You will not need approval from your doctor to get mushrooms. This makes it possible to use them recreationally. Counties cannot vote to ban centers, though they can regulate them.

# What about safety?



LOGO

# Safety Profile of Psychedelics

Original Paper

**Adverse experiences resulting in emergency medical treatment seeking following the use of magic mushrooms**

Emma I Kopra<sup>1</sup> , Jason A Ferris<sup>2</sup> , Adam R Winstock<sup>3,4</sup> , Allan H Young<sup>1,5</sup> and James J Rucker<sup>1,5</sup> 



*Journal of Psychopharmacology*  
2022, Vol. 36(8) 965–973  
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DOI: 10.1177/02698811221084063  
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Results: Out of 9233 past year magic mushroom users, 19 (0.2%) reported having sought emergency medical treatment, with a per-event risk estimate of 0.06%. **Young age** was the only predictor associated with higher risk of emergency medical presentations. The most common symptoms were psychological, namely anxiety/panic and paranoia/suspiciousness. **Poor ‘mindset’, poor ‘setting’** and **mixing substances** were most reported reasons for incidents. All but one respondent returned back to normality within 24 h

# HPPD – Hallucinogen – persisting perception disorder

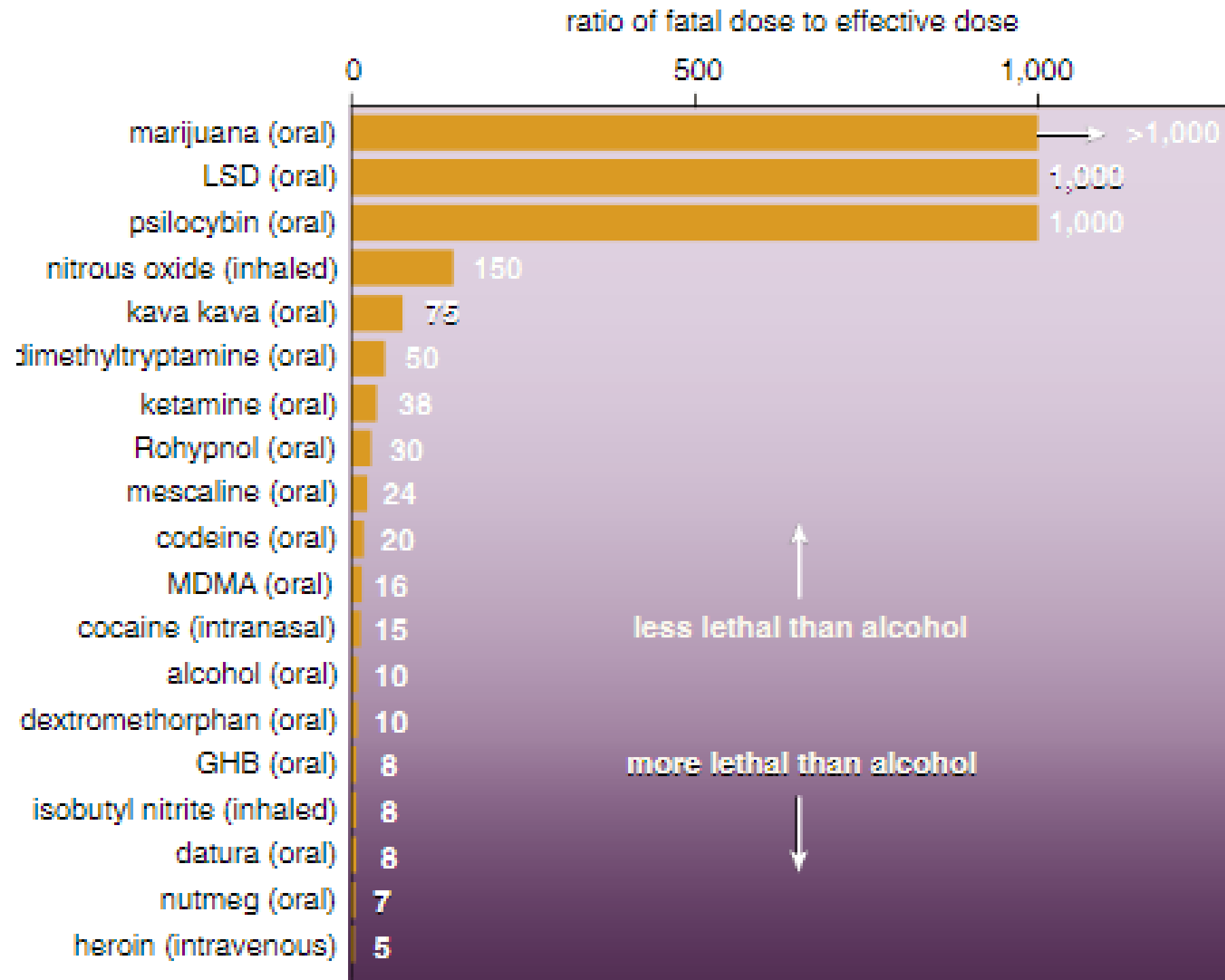
Orsolini L, Papanti GD, De Berardis D, Guirguis A, Corkery JM, Schifano F. The “endless trip” among the nps users: psychopathology and psychopharmacology in the hallucinogen-persisting perception disorder. A systematic review. *Front Psychiatry*. 2017;0. doi:10.3389/fpsy.2017.00240

Risk of developing flashbacks : This disorder can lead to individuals re-experiencing the effects of the hallucinogen that were experienced while intoxicated with the substance. HPPD can lead to visual perceptual disturbances that can last for weeks, months, or even years and significantly impact one’s life

DSM-5 diagnosis criteria for HPPD:

- ▶A) following cessation of use of hallucinogen, the reexperiencing of one or more of the perceptual symptoms that were experienced while intoxicated with the hallucinogens (e.g. geometric hallucinations, false perceptions of movement in the peripheral visual fields, flashes of color, trial images of moving objects, positive after images, haloes around objects, macropsia and micropsia
  
- ▶B) symptoms in criterion A, cause clinically significant distress or impairment in social, occupational or other important areas of functioning
  
- ▶C) symptoms are not due to a general medical condition and are not better accounted for by another mental disorder





Ranking psychoactive substances by their ratios of lethal dose to effective dose gives a general picture of how likely each is to precipitate an acute fatal reaction. By this measure, many illicit drugs are considerably safer than alcohol.

# Lethal doses of various drugs

American Scientist,  
Volume 94

POLLING Question:  
A. Favorable  
B. Could be better  
C. Need assistance

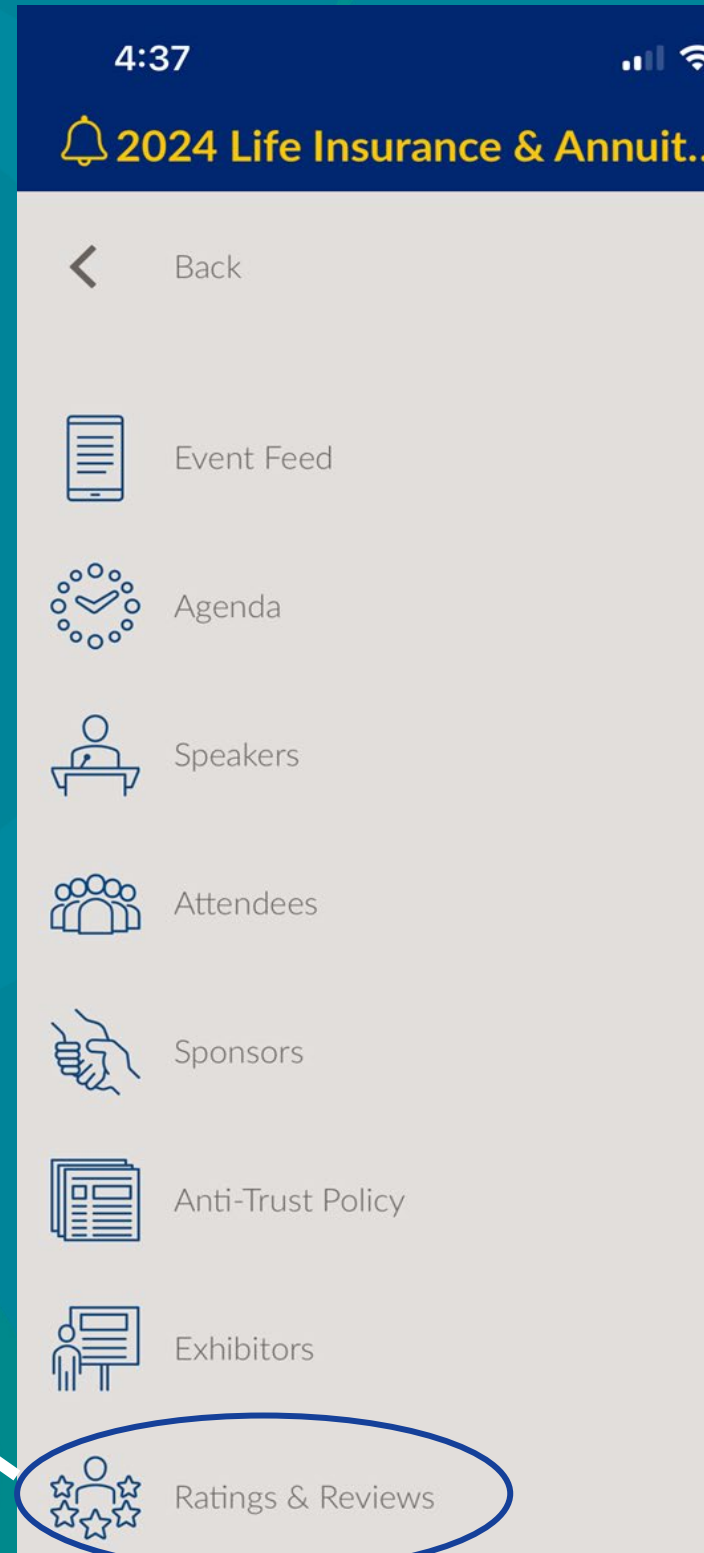


# 10 top things learned by research per AFSP

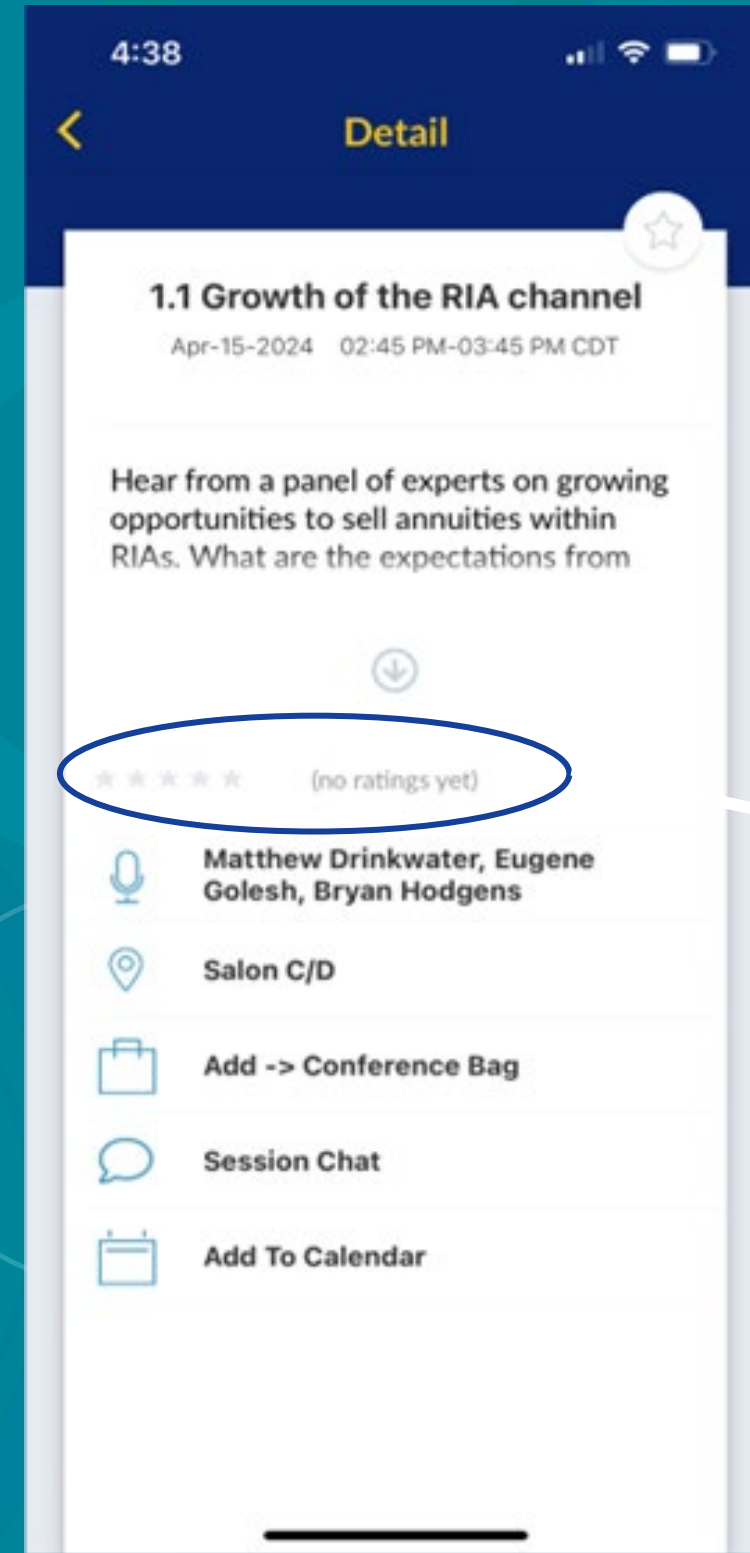
- Suicide related to brain functions, affecting decision making and behavior control
- Limiting access of methods of suicide can limit rates
- 90% who die have potentially treatable mental health conditions
- Depression, bipolar and substance abuse are major risk
- There are treatments like CBT that work
- No one single reason someone tries; It's combined risk factors: such as childhood trauma, substance abuse, chronic pain
- Asking someone if they are thinking of suicide DOES NOT put idea in their head. On contrary, most are relieved that someone is starting the conversation!!!!
- Some meds proven they reduce suicidal thoughts and behavior
- If someone can get through an intense suicide crisis moment, chances are they won't die
- 85-95% who survive an attempt go on to engage in life

# Please Provide Your Feedback on the Conference App

## OPTION 1



## OPTION 2



# Thank You

