

HEALTH

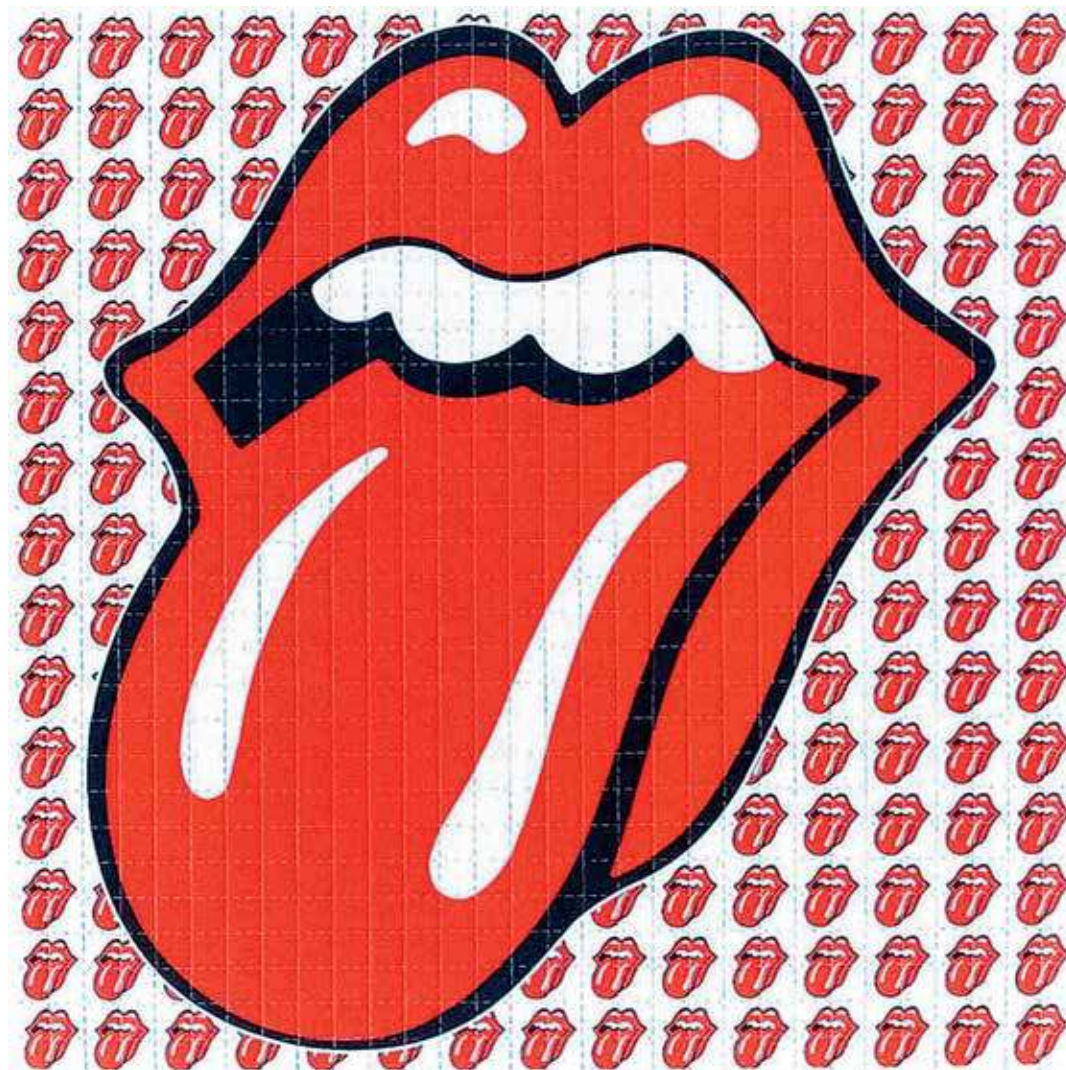
TRIP OF A LIFETIME

An increasing number of overstressed and anxious Australians are ditching modern medicine and reaching for psychedelics to treat their mental health. But just how effective – and safe – are magic mushrooms, Ayahuasca and green smoothies laced with LSD? By Fiona Macdonald.

AUSTRALIANS HAVE NEVER been so medicated, or so unhappy. Almost one in 10 adult Australians take antidepressants daily – one of the highest rates of use in the world, and one which has doubled since 2000. At the same time, the effectiveness of the drugs has dropped. It seems the most commonly prescribed medications are hardly more effective than a sugary placebo.

It's no wonder then that people are seeking out alternative mood boosters. Increasingly, these options have been coming in the form of psychedelics: lysergic acid diethylamide (LSD), magic mushrooms, Ayahuasca and MDMA, to name just a few. They're drugs more commonly associated with the free-love days of Woodstock or the haze of Joshua Tree sunrises and yet they've found their way into doctor's offices, the tech companies of Silicon Valley and even suburban homes in Australia.

If you're a close follower of the tech world, you might already be familiar with the so-called 'psychedelic renaissance'. Over the past five years, there's been a growing number of articles published on Silicon Valley's obsession with psychedelics and their anecdotal ability to expand consciousness, unlock creativity and remove roadblocks to healing. The late Steve Jobs was a fan, and the illicit use of the drugs has become so established that a 2015 *Forbes* story questioned whether microdosing – the practice of taking tiny doses of LSD or magic mushrooms daily, sometimes mixed into smoothies – was the "new job enhancer in Silicon Valley".



It seems the rest of the world has now caught up. Documenting recent scientific trials and his own experiments, US journalist Michael Pollan took the idea of psychedelics mainstream last year, with his bestseller *How to Change Your Mind*. Australian author Liane Moriarty, of *Big Little Lies* fame, also touched on the subject in her latest novel *Nine Perfect Strangers*, set at a cutting-edge (and slightly creepy) wellness retreat. Closer to home, Australians are going to extreme lengths to access these drugs, whether for therapeutic or healing processes, or just to find their way back to a better version of themselves.

Grace (who asked not to be identified by her actual name) has suffered from anxiety since she was 19. The now 39-year-old mother of two lives in Sydney and has spent the better part of the past decade taking the antidepressant Zoloft, and going through traditional therapy without much benefit. While her symptoms were occasionally managed, she still struggled with constant negative thoughts about herself, and the all-too-familiar battle of never feeling good enough.

Two years ago, she decided to come off the medication and try a more holistic approach, including meditation, yoga and energy healing. It was through these circles she began to learn more about the ancient South and Central American ritual of drinking Ayahuasca (pronounced *eye-ah-wah-ska*), a plant known to be rich in the hallucinogenic compound dimethyltryptamine (DMT).

DMT, like LSD, has been shown to quieten down a part of the brain in the prefrontal cortex called the 'default mode network'. It acts like a conductor of our brain, controlling which of our thoughts surface to consciousness, and often appears overly active in people with conditions such as obsessive compulsive disorder and depression.

"The more I researched it, the more I began to realise the incredibly powerful healing benefits," says Grace. "Ayahuasca is often likened to condensing a lifetime of therapy into a single night. I would certainly agree with that, having experienced what I did."

Last October, she travelled to Costa Rica to try the plant herself. During a week-long retreat she drank Ayahuasca brew, an earthy tea infused with native plants, four times, as part of an hours-long overnight ritual passed down through generations and delivered by experienced shamans.

According to Grace, the experience was one of the most profound and challenging of her life. During the hallucinogenic trips she experienced moments of intense dark and light, dealing with past trauma and hurt in her life. Overall, it left her feeling as though she'd broken through a wall.

"I find it a challenge to try to describe the experience, as it's almost not of this world," she explains. "I felt this warmth, this unprecedented peace and love for myself and for everyone. To feel that relief from the anxiety ... I just felt so lucky to have this experience."

There were also measurable benefits. Upon her return home Grace found her social anxiety had lifted for the first time in her adult life. She could suddenly stand in line waiting for coffee and spark up conversation with the barista. She felt lighter, freer.

Grace's experience is one that's mirrored not only across anecdotal accounts, but also increasingly in scientific literature.

In a study published earlier this year, researchers gave the plant to 29 patients with stubborn, treatment-resistant depression. Immediately, 64 per cent saw improved symptoms after taking the psychedelic, compared to only 27 per cent who took a placebo.

Psychedelics come with relatively few physical side-effects compared to traditional antidepressants, too, says psychologist Dr Stephen Bright, a lecturer at Edith Cowan University in Western Australia and a founding member of not-for-profit psychedelics research group Psychedelic Research in Science & Medicine (PRISM). Most of the drugs used to treat depression, including MDMA, the active ingredient in ecstasy, can be neurotoxic, but generally only in very high doses. And LSD is known for being difficult to overdose on, something that's hard to say about other drugs we use regularly today, including alcohol. As many of us are aware, traditional antidepressants also come with their own list of potential side-effects, from low libido and arrhythmia to nausea and insomnia.

"Most negative side-effects from psychedelics aren't because of the drug, but due to its use in an illicit environment," says Dr Bright. "If these drugs are taken in a clinical setting with pure products, then most of those potential harms are controlled."

This is something that was already well established in the 1960s. Back then, LSD was less of a party drug and more the psychiatrist's medication of choice, used to assist therapy. Between 1950 and 1965, it was prescribed to about 40,000 patients, with more than 1,000 academic papers published on the topic.

But by 1971, in the fallout from Richard Nixon's 'war on drugs', LSD and magic mushrooms, as well as cannabis, were all ranked as Schedule 1

drugs in the US, alongside heroin. This is the classing for illicit substances that allegedly have "no currently accepted medical treatment", with a "high potential for abuse", and as such their use in scientific studies was prohibited. MDMA briefly replaced them in neuroscience research, but by 1986 it was also marked Schedule 1. (In Australia we call them Schedule 9 drugs, but the classification is the same.)

For almost 40 years, researchers barely mentioned psychedelics. But things are shifting. In a huge breakthrough in 2015, researchers at Imperial College London gave volunteers LSD, placed them in fMRI machines and saw their brains spark a wealth of new connections, often between parts of the brain that don't typically communicate.

Psilocybin (pronounced *si-luh-sai-bin*), the key ingredient in magic mushrooms, was also shown in 2015 to successfully reduce depression symptoms after just a single dose in patients who have exhausted all other medications. It's now being fast-tracked by the US Food and Drug Administration (FDA).

Progress has been slower in Australia, with our research and political climate notoriously conservative on the issue of drugs, especially when you consider the delay on medicinal cannabis.

But earlier this year PRISM obtained approval to give psilocybin to 30 terminally ill patients at St Vincent's Hospital in Melbourne to ease their end-of-life anxiety and crisis. It's a phase II trial, which is the second-last step before a government's regulatory body can approve a new drug. If the results are positive, it could be sooner rather than later that the government will need to decide whether it will allow psychedelics to be prescribed.

What's important to note, Dr Bright stresses, is that it's not the drug itself that's a magic bullet. In the vast majority of trials, psychedelic substances are only taken a couple of times to help open up the mind: it's still therapy that does the hard work.

It's an important distinction to make, particularly given Dr Bright often gets emails asking him how to access the substances illegally. Indeed, Grace participated in an underground Ayahuasca ceremony in Byron Bay on her return from Costa Rica, but this time around it made her more anxious, as the shamans weren't experienced enough. And several subjects of off-the-record case studies who spoke to *Vogue* are already taking part in psychedelic sessions held by therapists in their clinics after hours.

Until these treatments are available in controlled settings with trained practitioners, they're not something Dr Bright can recommend. "If people are doing it in an unregulated environment without quality control, it can be dangerous," he says. "With these drugs, the environmental setting really is everything."

This is something that 29-year-old Melissa Warner knows well. She's the education and communications officer at Mind Medicine Australia, a charity that helps fund psychedelic research for mental health, including the St Vincent's trial. Warner was studying neuroscience at the University of Melbourne when she became interested in →

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psychedelics. She'd never actually taken any ("I was the nerdy, video game-playing, science-loving kid," she says), but she was intrigued by the research.

Then, in her final year of university, she was sexually assaulted, a trauma that left her with severe post-traumatic stress disorder (PTSD). "My mind and personality completely changed; I became insular and disconnected. I dropped out of uni for a time," she explains. "I tried conventional psychotherapy, but I couldn't go back to the memory without having a panic attack."

This is something that's common for PTSD sufferers, and one of the key reasons therapy can fail. Knowing that the rate of success for antidepressants and PTSD was only around 20 to 30 per cent, she convinced her parents she should go to Portugal, a country where psychedelics have been decriminalised, to take part in a MDMA-assisted therapy session. She describes the aftermath of the experience as waking up from a deep, dark nightmare.

"I hadn't realised how trapped I was at the moment of my trauma," she says. "With the MDMA-assisted therapy, I was able to reconnect to myself. I no longer had flashbacks and could talk about the trauma. It became an inspiration to help others."

This is because MDMA acts on serotonin receptors, which are triggered when we feel happy and relaxed. "When the brain recalls something, it doesn't just take it out of the filing cabinet, read it and put it back. It takes it out, shreds it and rewrites it," says Warner. "By remembering a traumatic memory on MDMA, which induces those feelings of safety and compassion, you re-encode that memory, altering the emotional tone.

"It's not a panacea; I still had to do work to get my confidence back and my trust back, but it helped me to break through the biggest hurdle," she says.

Two major trials on MDMA-assisted therapy and PTSD are now wrapping up in North America and Europe. In the US study, an incredible 68 per cent of treatment-resistant patients no longer had PTSD one year after their MDMA-assisted therapy sessions. Some of them had been suffering for decades.

Phase III trials are about to begin overseas, and Mind Medicine Australia predicts that by 2021 MDMA could be approved by the FDA in the US – and Australia may not be far behind.

We've already seen how quickly things can shift in the case of ketamine. While not a psychedelic, it has traditionally been considered a party drug, and yet reports published in 2013 showed that ketamine could ease symptoms of severe depression in up to 75 per cent of cases, compared to roughly 60 per cent for current antidepressants. Cut to this year and a new nasal spray antidepressant based on ketamine was approved by the FDA.

If MDMA does get approved as a medicine, it'll open the door for further psychedelic research – and not just on mental illness, but overall wellness and creativity, just like the self-prescribed experiments currently happening in Silicon Valley.

LSD microdosing is a particularly interesting phenomenon, because it only involves taking around 1/10th of a dose of LSD daily, which on paper shouldn't do much to brain activity. Of course, impacts may vary, depending on the individual. While self-reporting suggests microdosing can have profound effects, there are still very few clinical trials that have been published on the topic, which means it's still too early to know if they're effective. But, interestingly, some of the earliest results

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suggests it can alter people's neuroticism, one of the five key personality traits scientists have traditionally thought were fixed throughout a lifetime.

One advocate of microdosing is Amanda Feilding, Countess of Wemyss and March, and founder of the Beckley Foundation in the UK. She's widely known as the driving force behind the psychedelic renaissance: it was her foundation that helped fund the first brain scans of research subjects under the influence of LSD.

Now aged 76 and running the institute out of her family manor in Oxfordshire, she's made no secret of regularly experimenting with psychedelics and being blown away by their incredible potential to improve cognition and creativity.

"I've always used myself as a test subject," says Feilding. "Psychedelics can offer a new kind of paradigm shift to how we approach and treat mental illnesses but also wellbeing – and that's something that we as a society desperately need."

She says microdosing is one of her favourite ways to take the drug. It's something she did often in her 20s, and found that it gave her a much greater edge in creative pursuits and also mental tasks. She's now funding several controlled trials aiming to properly test and understand exactly how the process works, and how it can be optimised.

"My current hypothesis is that it basically changes your brain in the same way as a full dose but to a much reduced extent. So instead of really shaking your brain's control system you're just slightly nudging it. It's like a psycho-vitamin," she says.

But Feilding also warns against self-experimentation, especially with the amount of rogue substances out there. "What we need now is much more quality research to work out what these drugs can do and how we can best harness them," she says.

While the current research is already offering hope to many with mental health issues, it's still only the beginning. There are dozens more studies in the works on psychedelics, involving addiction, anxiety and mental sharpness.

Feilding would also like to test whether the drugs could benefit the ageing population and alleviate some of the symptoms of dementia and Parkinson's disease.

It's been almost 50 years since the war on drugs shut down research on these curious substances. That's long enough for most of us to forget they were ever more than the backdrop to the free love and good vibes of the 60s. But perhaps now scientists finally have the tools to study what the drugs can do and explore their possibilities for good.

"I compare taking LSD to being a good rider of a powerful horse," says Feilding. "In the right, carefully controlled, setting and with the right intention, you could use the psychedelic to achieve whatever you want.

"In my case back in the 60s, it was enhancing cognitive function and wellbeing and vitality, but we don't yet know what the real potential is. I thought then and I still think now that's an amazing ability for humanity." ■