

# MDMA-assisted psychotherapy.

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**Warning:** this position paper contains content discussing trauma and self-harm, including suicide.

## What is MDMA?

MDMA – or methylenedioxymethamphetamine – is a semi-synthetic drug classified as an empathogen. Commonly known as ‘ecstasy’, MDMA tends to increase a person’s feelings of self-compassion and empathy; reduce anxiety; and, promote interpersonal trust and feelings of connectedness.<sup>1,2</sup> Side effects can include increased heart rate, blood pressure, and body temperature as well as jaw tightness, loss of appetite, and altered or impaired concentration.<sup>1,2</sup>

Note: the content of medical grade MDMA is different to illicit ‘ecstasy’ or ‘molly’, and the clinical use of MDMA includes levels of support and safety that aren’t present when someone is using illicit ecstasy.<sup>2</sup>

MDMA for clinical use is produced to a pharmaceutical standard. A regulated dose is administered for specific conditions, such as post-traumatic stress disorder (PTSD), in a controlled and supportive setting by trained mental health professionals with specialised MDMA-assisted psychotherapy training.

This is different from taking illicit ecstasy where the dose and purity of the drug is unknown. It may contain little or no actual MDMA and it may be adulterated (‘cut’) with other potentially dangerous ingredients.

The use of a pharmaceutical-grade drug in a controlled, clinical setting should not be confused with the non-prescribed use of a drug.



## Brief history of research into MDMA in psychotherapy

Early research into the apparent benefits of MDMA in psychotherapy was happening in the 1970s in Europe and North America.

Research into the use of MDMA as a medicine stopped in the mid-1980s, however, when MDMA was changed to a 'Schedule I' drug in the USA, defined as "drugs with no currently accepted medical use and a high potential for abuse."<sup>3,4</sup>

An American non-profit research organisation, the Multidisciplinary Association for Psychedelic Studies (MAPS), persisted with applications to the US Food and Drug Administration (FDA) to approve MDMA research, and was eventually successful.<sup>5</sup>

By 2004, the first U.S. clinical trial was approved to begin exploring the use of MDMA in treating PTSD.

Based on promising results of clinical trials conducted in the 2010s, MDMA-assisted psychotherapy was granted breakthrough therapy designation by the FDA in 2017 for the treatment of PTSD, facilitating rapid progression of the research.

Research has since moved to larger clinical trials, with the first of two phase 3 clinical trials being published in May 2021. This study included 91 participants with PTSD and found that 67% of participants who received MDMA-assisted psychotherapy no longer met the criteria for PTSD after the treatment, compared to 32% of participants who received a placebo during psychotherapy who no longer met the criteria for PTSD after the treatment.<sup>6</sup>

The researchers concluded that: "MDMA-assisted therapy induces rapid onset of treatment efficacy, even in those with severe PTSD, and in those with associated comorbidities including dissociative PTSD, depression, history of alcohol and substance use disorders, and childhood trauma."<sup>6</sup>

## Current research

### Potential to treat post-traumatic stress disorder

Most research into MDMA-assisted psychotherapy has been conducted by the Multidisciplinary Association for Psychedelic Studies (MAPS) and has focused on the treatment of PTSD.

PTSD develops in some people who experience a traumatic event, or repeated traumatic events, that makes them fear for their life or safety, or for those around them. An estimated 3 million Australians will experience PTSD at some point in their life.<sup>7</sup>

Symptoms can include ongoing experiences of flashbacks or distressing reminders of the event; dreams or nightmares about the event and difficulty sleeping; feelings of anger, guilt or shame; increased use of alcohol and other drugs; and suicidal ideation, suicide attempts, and completed suicide; as well as depression, anxiety, and experiences of depersonalisation. People who experience PTSD tend to have higher rates of alcohol use disorders.

### Potential to treat other issues

MDMA is also being explored for potential benefits when used alongside psychotherapy for issues, such as alcohol use disorder, social anxiety in adults with autism, and management of anxiety and distress associated with a life-threatening illness. To date, these studies have been small pilot studies and more research is required.

## How MDMA appears to help with psychotherapy in trials

Combined with a specialised form of psychotherapy, MDMA is used to aid the therapeutic process and attempt to address fundamental aspects of the problems being experienced by the patient.

A skilled and well-trained therapist is needed to support their patient through these sessions, because they can be confronting, emotional, and challenging experiences.

MDMA appears useful as a tool to help people with PTSD to revisit traumatic experiences because it decreases defensiveness and anxiety, increases relaxation, and improves mood.

This allows traumatic memories to be revisited without the patient becoming hyper-aroused due to stress and may also improve the bond between the therapist and the patient.<sup>8</sup>

Described as a ‘window of tolerance’, painful memories may be experienced as less intense, more tolerable, and patients better able to revisit the experience with increased objectivity, or with a different perspective on the event than they initially developed.<sup>9</sup> MDMA can also facilitate increased insight and memory which can result in highly productive therapeutic sessions.<sup>8</sup>

Processing the trauma(s) at the root of the person’s PTSD then helps to reduce the frequency and intensity of symptoms, such as intrusive thoughts, nightmares, and hypervigilance.

This can dramatically improve the quality of a person’s life.

## The Australian situation

Trials using MDMA-assisted psychotherapy are being developed in Australia. As of April 2022, these include:

- At Monash University, An open-label safety and efficacy trial of MDMA-assisted psychotherapy for severe PTSD. This trial was the [first in Australia to offer accredited MDMA training](#) in partnership with MAPS.
- At Edith Cowan University, in collaboration with Psychedelic Research in Science and Medicine (PRISM), MDMA-assisted psychotherapy for PTSD, now registered on the Australian New Zealand Clinical Trials Registry.<sup>a</sup>
- At Emyria’s clinic in Melbourne, in collaboration with Mind Medicine Australia, an open-label clinical trial of MDMA-assisted psychotherapy for treatment-resistant PTSD.

Funding for further research was announced in January 2022, including research into MDMA-assisted psychotherapy for treatment resistant social anxiety in young adults with autism spectrum disorder and research into MDMA-assisted psychotherapy for alcohol use disorder.<sup>10</sup>

a <https://www.anzctr.org.au/Trial/Registration/TrialReview>.

## Potential risks

### Adverse effects of MDMA on patients in clinical settings

When used in clinical environments, side effects commonly include:<sup>11</sup>

- increased heart rate
- increased blood pressure
- increased temperature
- jaw tightness, or teeth clenching or grinding
- loss of appetite
- reduced concentration
- loss of balance.

In clinical trials, these effects have been transient, and no serious issues with safety or tolerability have been reported. The phase 3 study of MDMA for PTSD, published in May 2021, found that: “there were no major safety issues reported in the MDMA arm of this study.”<sup>6</sup>

### Patient desire to use MDMA outside the clinical setting

Results from research to date indicate that patients have not expressed desire or intention to use non-prescribed MDMA outside of treatment.<sup>11, 12</sup>

Furthermore, due to the controlled dosing under supervision, risks such as potential for overdose and potential for dependence are considered extremely low.

## Future challenges

### Need for accredited training in Australia

Experts in the field have spoken and written extensively on the critical need for appropriately screened, trained, and supervised therapists to deliver this novel treatment approach.

Over the past decade, MAPS has developed a training procedure and manual on the safe and appropriate use of MDMA-assisted therapy.

Alongside therapist training that includes months of coursework, video case presentations, process training, and supervised practice with patients, therapists also have the option to experience MDMA-assisted therapy themselves.<sup>6</sup>

Should MDMA-assisted psychotherapy become available outside trials in Australia, appropriate therapist training is essential.

### Blinding in randomised control trial study design

Randomised control trials (RCTs) are a way of exploring the effects of a treatment. Participants are randomly assigned to one of two groups, only one of which will receive the new treatment.

In the case of the RCTs for MDMA, both groups received psychotherapy but only one group received MDMA. The other group was given an inactive drug (placebo).

Blinding in these trials meant that participants and therapists didn't know which group participants had been assigned to. This is a way to reduce bias.

However, because of the effects of MDMA, the blinding of both patients and therapists is a challenge as both parties will usually become aware if that patient is in the MDMA arm or the placebo arm of the trial.

Future research may need to consider alternate study designs to improve the effectiveness of blinding or consider different trial approaches that compare MDMA-assisted psychotherapy with evidence-based combination treatment using pharmacotherapies with psychotherapies.

## Cost and equitable access

Should MDMA-assisted psychotherapy as a service be made available in Australia, the issue of how it can be provided in an equitable way, as opposed to only treating those who can afford it, needs to be addressed. The costs associated with providing the therapy could be substantial.<sup>b</sup>

An economic analysis of the cost-effectiveness of MDMA-assisted psychotherapy for PTSD concluded that while the cost of the therapy may be substantial upfront, if the outcomes are sustained it's likely to deliver significant savings in terms of both medical expenses and indirect social costs of PTSD.<sup>13</sup>

The cost effectiveness of the treatment will become an important area to explore if considering MDMA-assisted psychotherapy as a service within the framework of Medicare and Australian health insurance.

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b <https://insight.qld.edu.au/training/mdma-as-a-prescription-medication-for-the-treatment-of-ptsd-and-alcohol-use-disorder/detail>

## ADF positions

1. The ADF supports carefully conducted, robust research to contribute to the evidence base around the safety and clinical efficacy of MDMA-assisted psychotherapy.
2. The issues of developing accredited training and addressing cost and equity will need to be addressed prior to making MDMA-assisted psychotherapy available by prescription in Australia.
3. The ADF recognises the need to provide clear and substantiated information to the public about the marked differences between MDMA-assisted psychotherapy and substances illicitly sold as MDMA.

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