




## analysis

This entry is our analysis of a review or synthesis of research findings considered particularly relevant to improving outcomes from drug or alcohol interventions in the UK. The original review was not published by Findings; click [Title](#) to order a copy. Free reprints may be available from the authors – click [prepared e-mail](#). [Links](#) to other documents. [Hover over](#) for notes. [Click to](#) highlight passage referred to. [Unfold extra text](#)  The Summary conveys the findings and views expressed in the review. Below is a commentary from Drug and Alcohol Findings.

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### ► Mindfulness meditation for substance use disorders: a systematic review.

Zgierska A., Rabago D., Chawla N. et al.

**Substance Abuse: 2009, 30(4), p. 266–294.**

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*Increasingly popular, variants of mindfulness meditation are among the 'third wave' of behavioural therapies allying Western and Eastern traditions. This first review of their application to addiction delivered a 'promising but unproven' verdict, one replicated in a later review based on more studies.*

**SUMMARY** This is the first systematic review of interventions based on [mindfulness meditation](#) as way of helping to resolve substance use problems. The therapy trains people to focus their attention on emotions, thoughts, and sensations occurring in the present moment and to adopt an accepting and nonjudgmental stance to these experiences. Such controlled attention can be learned through training in meditation, hence 'mindfulness meditation'. Benefits may for example include the detached self-observation of one's desires and plans to obtain and use drugs, dissociating these from their emotional force. Meditation has recently been incorporated in many therapeutic programmes, commonly in the form of mindfulness-based stress reduction, originally developed for management of chronic pain and stress-related disorders. The usual course consists of eight weekly therapist-led group sessions, one full-day retreat, and daily home assignments. This therapy has also been allied with cognitive-behavioural elements, notably in the mindfulness-based relapse prevention programme developed for substance use patients. Mindfulness is also central to dialectical behaviour therapy developed for borderline personality disorder, acceptance and commitment therapy for mental health problems, and spiritual self-schema therapy for substance use problems.

Reviewed studies had to be available in English and at least to have pre- and post-intervention measures of relevant outcomes, though not necessarily to have a randomly allocated control group. Using where possible a comparable measure, calculations were made of the effectiveness of the interventions for the main substance use-related outcomes reported in the studies. In all 25 studies were identified, 15 of which guided the therapy through manuals. Tested in eight studies, mindfulness-based stress reduction was the most common variant. Across all the studies an average of 75% of patients completed the programmes, ranging from about 45% to 100%.

#### Randomised controlled trials

Seven of the studies featured a randomly allocated **control** group, the securest way to eliminate other influences on whether the therapy outperforms alternatives. Participants were 383 mainly female patients followed up for on average nearly nine months, and all but one of the studies concerned users of alcohol and/or illegal drugs. All the studies reported some positive results. Generally offered as a supplementary intervention, in five studies mindfulness meditation improved both substance use-related and other outcomes relative in most cases to basic treatment alone. In the remaining two studies, substance use was not differentially affected; instead there were similar improvements after both the mindfulness-based and the control



treatments. Mindfulness meditation performed best when compared to standard care rather than pitted against another specific psychosocial therapy. In two studies mindfulness patients appeared to benefit in other ways such as motivation to avoid HIV infection, spiritual practices, self-identity, and overall psychological and social adjustment.

### Other studies

Four studies involving 609 participants did not have the safeguard of a randomly allocated control group against which to benchmark the impact of mindfulness meditation. Collectively they reported overall positive outcomes. In particular, substance use tended to decrease at follow-up compared to baseline or compared to another set of patients not offered the therapy. Similar relative improvements were also seen in potential relapse triggers such as stress, mental health and sleep problems, and certain coping styles.

### The views of the patients

Several reports focused on or included accounts of how the patients felt about the therapies. Overall mindfulness meditation was well received. There was a high degree of satisfaction with the therapy and its usefulness as a recovery-enhancing tool. Patients also saw the skills they had been taught as quite distinct from those taught in traditional addiction treatment. Four studies reported on the degree to which patients continued to practice the therapy at home after the programme had finished. A high proportion did so; in two studies about half, in two others, about 80%.

### The reviewers' conclusions

There is no conclusive evidence for mindfulness meditation as a treatment or component therapy for addictive disorders, though preliminary evidence suggests it has been both effective and safe in clinical research settings. Most reviewed studies found some positive outcomes compared to patients' pre-treatment symptoms or compared to standard care, or roughly equivalent outcomes when compared instead to other behavioural interventions. Its promise is supported by the consistency of results across study designs, variants of the approach, treatment modalities, types of patients, and types of addictive disorders. Additional support comes from studies of the treatment of other complaints including stress, anxiety, depression, poor emotional regulation, and avoidance coping, and from its impact on known risk factors for relapse to dependent substance use, suggesting that it may be particularly helpful for patients with both substance use and mental health disorders. Some of these studies found effects lasting several years.

However, studies to date have generally suffered from significant methodological limitations. Also they cast little light on what types of patients might benefit most from mindfulness interventions in general or from certain variants. And while there are indications that mindfulness interventions work through different psychological processes than conventional therapies (in particular, cognitive-behavioural therapy) and can have different impacts, this remains to be confirmed. If this is the case, then mindfulness meditation may usefully compliment cognitive-behavioural therapy.

Given these uncertainties, and though mindfulness meditation is already used to treat addictive disorders, it is premature to recommend for or against it.

**FINDINGS COMMENTARY** A [later review](#) published in 2014 confined itself to studies of mindfulness therapy for substance use problems which featured a **control** group offered no intervention or an alternative one, against whom the progress made by the mindfulness patients could be benchmarked. Instead of just seven trials in which patients had been allocated at random to mindfulness or a control group, it found 14. The lead author may not have been an entirely neutral reviewer as he was described as an "instructor of mindfulness-based stress reduction and mindfulness-based cognitive therapy". The review found mindfulness approaches promising, but on the basis of studies "replete with methodological limitations". Particularly unconvincing was whether mindfulness has been shown to outperform other well structured therapies, though it was more consistently preferable to no treatment or only treatment as usual, to which it was sometimes added, conflating the amount of therapy with its type.



This review and the featured review are similar to reviews of other major psychosocial therapies for substance use problems in finding that generally any well structured therapy is as effective as any other, but often preferable to less well structured approaches ([1](#) [2](#) [3](#))

4). Though this may be true on average, it is however not necessarily true for each individual patient or for all types of patients. Also some of the reviewed studies and others (see below) show that to narrowly assess mindfulness interventions on substance use outcomes alone would be to ignore improvements in emotional stability and resilience, findings which strongly suggest these interventions will particularly benefit substance users with mental health problems.

By the same token however, mindfulness interventions, while they benefit most people, **may aggravate** symptoms for a few. The featured review's conclusion that these interventions are safe was based largely on the lack of attention paid to safety in the studies rather than the systematic observation of unwanted side-effects. One concern is that actively depressed patients might initially be overwhelmed by negative content encountered during meditation. A [British study](#) made allowances for this through optional variations in meditation techniques and few obvious problems were noted. But in [another UK study](#), four of 47 depressed patients became more depressed after the therapy, two seriously, though whether the therapy actually caused this deterioration was unclear. Some patients may simply drop out of the therapy because they find it aversive. In another [British study](#) 10 of 33 dropped out. They tended to be patients who might have benefited most from meditation had they been able to see the programme through, patients who ruminated and brooded on depressive thoughts and quickly fell in to these thinking patterns when they felt low.

Studies not able to be included in the featured review do not contradict its conclusions, but neither do they particularly bolster support for mindfulness-based therapies. Among these were trials which randomly allocated patients to a control group to help isolate the impact of a mindfulness intervention. The most positive was a large and relatively rigorous [US trial](#) which found extra substance use reductions (but only short-lived) compared to usual 12-step-based aftercare, seemingly because mindfulness patients were less likely to react to symptoms of depression by feeling they needed to use drugs. In two other randomised trials ([1](#) [2](#)), too few patients were retained in the mindfulness and comparison treatments to support a robust analysis, showing none of the therapies exercised much 'holding power'. Perhaps the key difference to the first trial was that in these trials the therapy was the main treatment rather than aftercare for people who had already demonstrated a degree of motivation and stability by completing intensive treatment. More on these and other studies in the [background notes](#).

An [earlier review](#) focused on mentally ill problem substance users usefully supplements the featured review with more detail about the presumed or known theoretical and neurochemical bases of mindfulness and meditation approaches. A [recent review](#) has used [meta-analysis](#) techniques to combine findings from research on mindfulness-based therapy for patients suffering anxiety and depression disorders. The conclusion was that before-to-after improvements were substantial and robust, though whether another therapy might have done as well was not investigated.

*Thanks for their comments on this entry in draft to Sue Gardner of South Oxfordshire NHS and Warneford Hospital. Commentators bear no responsibility for the text including the interpretations and any remaining errors.*

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