Relative efficacy of mindfulness-based relapse prevention, standard relapse prevention, and treatment as usual for substance use disorders: a randomized clinical trial.

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Promising signs – but from a single study at a single treatment agency – that integrating Buddhism-inspired mindfulness-based elements creates a more effective supplement to usual (in the US context) 12-step based aftercare than a purely cognitive behavioural approach, helping patients sustain gains from initial intensive treatment.

SUMMARY The featured study tested an intervention based on Buddhism-inspired mindfulness meditation as way of sustaining the gains made by patients who have completed initial intensive treatment. 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 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 'homework' assignments. Mindfulness is 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. This approach has also been allied with cognitive-behavioural elements, notably in mindfulness-based relapse prevention programmes developed for substance use patients – a version of which was tested in the featured study.

The 286 patients in the study had completed initial 28-day inpatient or 90-day intensive outpatient treatment at one of the two clinics of a US service. Typically they were unemployed men in their thirties and forties who used several drugs with or without alcohol; for just 14% were their substance use problems confined to alcohol.

Patients were randomly allocated to one of three group therapies. The first two were structured relapse prevention programmes organised by the research team, conducted by experienced therapists trained and supervised by experts.
• One option interrupted usual aftercare for eight weeks, replacing it during this time with weekly mindfulness-based relapse prevention sessions, each lasting two hours.
• Another in the same format and occupying the same time was a purely cognitive-behavioural relapse prevention programme.
• Finally, another set of patients simply received usual aftercare – abstinence-based 12-step groups lasting about 90 minutes, conducted once or twice a week and intended to last a year.

Main findings

Patients were followed up three, six and 12 months after the eight-week relapse prevention programmes had ended; at the final follow-up, about 80% could be reassessed. Their own accounts of their substance use were largely consistent with urine tests.

By the six-month follow-up significant differences had emerged favouring the two relapse prevention programmes. Compared to treatment as usual, fewer patients had over the past three months used drugs or drank heavily, and those who drank heavily did so on a third fewer days. On these measures, the two relapse prevention programmes did not significantly differ.

By the 12-month follow-up the mindfulness option was consistently performing better than both the cognitive-behavioural programme and treatment-as-usual. Favouring mindfulness, these advantages included statistically significant differences between patients offered this versus those offered the cognitive-behavioural programme in respect of avoiding heavy drinking, and fewer days of drug use among those who had used drugs, both assessed over the past three months.

Compared to treatment as usual, across the whole follow-up year patients allocated to the two relapse prevention programmes lasted 54% longer before returning to drug use and 59% longer before returning to heavy drinking. On this measure, the mindfulness option did slightly less well in respect of drug use but as well in respect of heavy drinking as the cognitive-behavioural programme.

The authors' conclusions

These findings suggest that the three aftercare options may have been equally effective in the three months after the two relapse prevention programmes ended. After that, these programmes gained greater benefits compared to usual treatment alone, blunting the probability and severity of relapses at the six-month follow-up. By a year after they had ended, the approach incorporating mindfulness elements emerged as preferable to one based solely on cognitive-behavioural elements. Longer-term benefits may be explained by the therapy's ability to help patients recognise and tolerate discomfort associated with craving or negative emotions and moods. Continued practice in mindfulness over time can strengthen the ability to monitor and address factors contributing to well-being, bolstering long-term outcomes.

The treatment-as-usual package differed in several ways from the other two – not just in intervention content, but also intensity and duration and staff training and supervision. However, the two relapse prevention programmes were equalised in these respects, creating a rigorous test of their relative efficacy.

FINDINGS COMMENTARY Though not all statistically significant, and in some cases perhaps too slight to be of clinical significance, the consistency of the longer term gains from supplementing 12-step and cognitive-behavioural elements with mindfulness meditation is suggestive of a real effect, though one demonstrated so far only in the caseloads of two clinics run by a single treatment agency.

This advantage for a mindfulness approach versus another well structured and equally intensive therapy emerged from the largest randomised trial to date with a long follow-up. In contrast, a review of smaller and usually shorter studies found mindfulness-based approaches for substance use problems generally no more effective than other well structured therapies, but often preferable to less well structured or less quality-controlled approaches, such as the featured study's treatment-as-usual. The equivalence of well structured approaches is a general finding applicable to cognitive-behavioural therapies, motivational interviewing and

psychotherapies (1 2 3 4).

Results of the featured study are not on their own sufficient to be confident that equivalence of impact does not apply also to mindfulness-based versus other approaches; further studies would be needed to confirm what may be a single-study anomaly. Another study from some of the same researchers in which a mindfulness-based relapse prevention programme replaced the first eight weeks of usual 12-step-based aftercare did not find a long-term advantage for mindfulness. Over the first two months – roughly during the therapy period – the number of days on which substances were used had diminished significantly more steeply among mindfulness patients, but over the next two months, the figures converged. The authors argued that the usual care to which the patients had by then returned would not have promoted continuation of mindfulness practices. In the featured study, even a year later two-thirds of patients said that at least weekly they used the mindfulness skills they had been taught – fewer than the corresponding proportion (100%) after cognitive-behavioural sessions, but perhaps enough to generate long-term gains.

Even if it is the case that mindfulness is not on average preferable to other approaches, this is not necessarily true for each individual patient or for all types of patients. Also, some studies indicate that to narrowly assess mindfulness interventions on substance use outcomes alone would be to ignore improvements in emotional stability and resilience, findings which suggest these interventions will particularly benefit substance users with mental health problems.

For more on mindfulness meditation see this Findings analysis of a review of mindfulness meditation for substance use problems and the associated background notes.

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