

# Mindfulness and Stroke Rehabilitation

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## Mindfulness



- Centuries old Buddhist technique of meditation
- Involves staying focused on one thing
- e.g the breath - gently returning your focus to the sensations of breathing - whenever you become aware that your mind has wandered
- Rapidly growing evidence base including systematic reviews and meta-analyses for its efficacy in wide range of health conditions

## An Outpatient Program in Behavioral Medicine for Chronic Pain Patients Based on the Practice of Mindfulness Meditation:

### Theoretical Considerations and Preliminary Results

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**Abstract:** The practice of mindfulness meditation was used in a 10-week Stress Reduction and Relaxation Program to train chronic pain patients in self-regulation. The meditation facilitates an attentional stance towards proprioception known as detached observation. This appears to cause an "uncoupling" of the sensory dimension of the pain experience from the affective evaluative alarm reaction and reduce the experience of suffering via cognitive reappraisal. Data are presented on 51 chronic pain patients who had not improved with traditional medical care. The dominant pain categories were low back, neck and shoulder, and headache. Facial pain, angina pectoris, noncardiac chest pain, and GI pain were also represented. At 20 weeks, 65% of the patients showed a reduction of 50.3% in the mean total Pain Rating Index (Molock) and 50% showed a reduction of 26.0%. Similar decreases were revealed on other pain indices and in the number of medical symptoms reported. Large and significant reductions in mood disturbance and psychiatric symptomatology accompanied these changes and were relatively stable on follow-up. These improvements were independent of the pain category. We conclude that this form of meditation can be used as the basis for an effective behavioral program in self-regulation for chronic pain patients. Key features of the program structure, and the limitations of the present uncontrolled study are discussed.

#### Introduction

This paper presents the theoretical underpinnings and reports on the structure and outcome of an outpatient service in an academic medical center

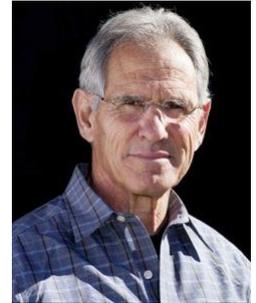
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piloted to explore the clinical effectiveness of meditation as a self-regulatory coping strategy for long-term chronic patients for whom the traditional medical treatments have been less than successful. In its first two years it has been attended by patients referred for a wide range of chronic conditions. This report presents only the summary outcome for the chronic pain patients; the complete outcome data for the pain patients, and the results with other classes of patients are presented elsewhere (1, 2). These results have recently been reported in abstract form (3).

The service, known as the Stress Reduction and Relaxation Program (SR&RP), utilizes training in a form of meditation known as mindfulness or awareness meditation as the major self-regulatory activity. All meditation practices used in the SR&RP were taught independent of the religious and cultural beliefs associated with them in their countries and traditions of origin.

#### Rationale

In the hospital, the SR&RP functions as a "net" to catch patients who tend to "fall through the cracks" in the health care delivery system, neither improving in their primary medical condition over time nor feeling satisfied with the results of the traditional



## What is Mindfulness?

- State versus trait
- Christopher Gerber notes three separate uses of the term:
  - A theoretical construct e.g. lecturing on mindfulness, books etc
  - A practice of cultivating mindfulness e.g. meditation
  - A psychological process – being mindful

## What is mindfulness (MFT)?

- Baer (2003) suggests 'the non-judgemental observation of the ongoing stream of internal and external stimuli as they arise'
- Gerber notes three elements in a definition of MFT:
  - Awareness
  - Of present experience
  - With acceptance

## What is NOT mindfulness?

- You are on 'auto-pilot'



## What is Mindfulness

- Very simple
- Very difficult

## Portals into Mindfulness

- Mindfulness includes
  - Formal practice of meditation etc.
  - Mindful awareness in everyday life e.g. brushing teeth, showering, ironing, washing dishes
- Mindfulness daily practice can include:
  - Mindfulness of breath
  - Sounds – hearing meditation
  - Movement e.g. walking meditation
  - Thoughts and feelings



## Mindfulness- growing evidence base



- Piet J & Hougaard E. (2011). The effect of mindfulness-based cognitive therapy for prevention of major depressive disorder: A systematic review and meta-analysis. *Clinical Psychology Review*, 31, 1032-1040.
- Goldberg, S. B., Tucker, R. P., Greene, P. A., Davidson, R. J., Wampold, B. E., Kearney, D. J., & Simpson, T. L. (2017). Mindfulness-based interventions for psychiatric disorders: A systematic review and meta-analysis. *Clinical Psychology Review*.
- Krägeloh, C.U., Medvedev,..... and Siegert, R.J. (2018). A pilot randomized controlled trial for a videoconference-delivered mindfulness-based group intervention in a nonclinical setting. *Mindfulness*. Published online August 1 2018. <https://doi.org/10.1007/s12671-018-1024-y>

## Could mindfulness be useful to assist people after a stroke?

- Examined mindfulness for a range of psychological and physical outcomes in people after stroke
- 4 studies – 3 ‘poor’ quality, 1 moderate strength quality
- This systematic review demonstrates;
  - MFTs may be beneficial in practice across a range of psychological, psychosocial, and physical limitations induced by TIA/stroke
  - Unlikely to cause any harm.
  - However, paucity of evidence prevents an overt recommendation to incorporate MFTs into current practice.

Lawrence, M, Booth J, Mercer S, & Crawford E (2013). A systematic review of the benefits of mindfulness-based interventions following transient ischemic attack and stroke. *International Journal of Stroke*, 8, 465-474.



## MAST Mindfulness for People After Stroke

- Feasibility study
- Funded by Health Research Council
- We are recruiting 20 participants from the Auckland area
- Must be 17 years or older
- Had stroke > six months but < 10 years ago
- Low mood (BDI-II >14)



### Participants receive:

- Seven 45 minute mindfulness training sessions
- 6 x weekly, one follow-up
- Initial telephone interview
- Pre- and post assessments (cognitive tests, questionnaires)
- Feedback interview with researcher



## Measures:

- WAIS-IV - Digit Span, Arithmetic, Symbol Search, Coding
- BDI-II primary outcome measure
- EQ-5D – quality adjusted life years
- Stroke Specific Quality of Life Scale
- Hospital Anxiety & Depression Scale
- Modified Fatigue Impact Scale
- Five Facet Mindfulness Questionnaire
- A test of effort (Word Choice subtest)
- Leeds Questionnaire to screen for alcohol/drug dependency



## Study Progress to Date

- 16 people enrolled in the study
- 14 have completed at least 1 MT session.
- 12 participants have completed the full course
- Six further participants are required to meet our target of 20
- Of the 14 who completed at least 1 MT session:
  - Ages of participants range from 46 – 89
  - 9 males / 5 females



## MAST in Practice

- 11 completed all 7 sessions
- Clustered for logistics



## The experience of facilitating

- Positives
- Relationship is essential
- Challenges



## Positives

From Insightful ...



## Positives

From Insightful ...

to Startling,

Surprising...



## Relationship is essential

- Getting alongside the person



## Relationship is essential

- Getting alongside the person
- Responding to individuals' life experience



## Challenges

- Prior understandings.
- Changing routines and habitual patterns
- Cognitive changes
- Short course
- Mindfulness as an additional “thing to do”

## The research team

- Principal Investigator: Professor Richard Siegert
- Co-Investigators: Associate Professor Alice Theadom
- Senior Research Fellow Wendy Wrapson
- Associate Professor Duncan Babbage
- Associate Professor Nicola Kayes
- Senior Research Fellow Deborah Snell (University of Otago)
- Senior Lecturer Dr Maree Roche (University of Waikato)
- Lecturer/Research Officer Sandy Rutherford
- Mindfulness Facilitator: Marlies Dorresteijn
- Biostatistician: Steve Taylor
- Project Manager: Lisa Fraser/Jill Wrapson



The logo for AUT (Auckland University of Technology), consisting of the letters 'AUT' in a bold, white, sans-serif font on a black rectangular background.

## Questions and Comments?

