

USING YOGA FOR COGNITIVE STIMULATION FOR PEOPLE WITH DEMENTIA

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Photo: Blue Clay Creatives

Introduction

This article provides an overview of the use of yoga within Cognitive Stimulation Therapy (CST) and the use of yoga for cognitive stimulation outside of CST programs. It has been developed for people facilitating (or interested in facilitating) CST programs for people with mild to moderate dementia and for yoga professionals (teachers and therapists) providing (or interested in providing) yoga for people in aged care and/or dementia settings.

[Official training](#) is required before commencing CST programs and guidance from a yoga professional should be used when including yoga within CST.

Additional training is recommended before commencing yoga programs for people in aged care and/or [dementia](#) settings. Due to specialized training, yoga professionals should either deliver yoga programs in these settings or provide guidance materials to aged care staff (such as activities coordinators or allied health professionals) through standardized programs or protocols.

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Background

In November 2020, I was awarded an Australian Churchill Fellowship to explore the use of yoga within CST for people with a diagnosis of mild to moderate dementia. Approved countries for the exploration were New Zealand (NZ), United States (US) and United Kingdom (UK).

Due to the impact of COVID-19 lockdowns and the changes to the delivery of CST for people with dementia, I adapted my Fellowship to a hybrid exploration. India was approved as an additional country as they commenced studies using yoga in CST in 2021. The virtual exploration of US, NZ and India was held in May 2022 and in-person exploration of UK occurred in June 2022.

Through my Fellowship, I was seeking to learn more about CST and discover whether incorporating yoga within CST programs could enhance the outcomes for participants. The approach to my investigation was observation, listening and questioning at individual and group meetings, training, and conferences. The objective for my Fellowship was to increase the

engagement of Australians with CST and yoga, so people living with dementia in all areas of Australia can benefit from these programs, leading to improved outcomes.

I achieved my Fellowship aims through a thorough investigation of the structure of CST, research undertaken by world leads in this area, training, conferences, field experiences and a unique opportunity to speak with the founder of CST, Professor Aimee Spector.

I learned that yoga is being used successfully within CST. More research is required to learn the extent to which yoga contributes to the gains achieved through CST programs. Other movement and mindfulness-based modalities (such as tai-chi) can also be successfully incorporated into the 'physical activity' session of CST. Recommendations, dissemination and implementation activities for my Fellowship exploration are detailed in my Fellowship [report](#).

Yoga is also successfully used as a tool for cognitive stimulation for people living with dementia outside of CST programs. Yoga programs in dementia settings have the potential for physical, emotional, mental, social, and spiritual benefits through the regular practice of techniques, including postures and movement, breath awareness and breathing exercises, relaxation and concentration, self-inquiry, and meditation.

In [Australia in 2019-20](#), over 50% of people in permanent residential aged care had dementia, so it is beneficial to introduce techniques for cognitive stimulation for all practices in aged care settings.

CST structure

[CST](#) is an evidence-based, non-pharmacological, psycho-social treatment for people with mild to moderate dementia.

Group CST is conducted in-person or online by a [trained](#) facilitator with a small group of participants who meet the program criteria (a diagnosis of mild to moderate dementia; can hear well enough to take part in a small group discussion; can see well enough to engage with the visual materials; is likely to remain in a group for each session of at least 45 minutes). There are 14 sessions of [themed](#) activities, which are designed to run twice weekly over seven weeks.

All CST programs are presented in [manuals](#) that are followed by facilitators to ensure consistency and fidelity of the programs. Programs follow [18 key principals](#) that guide the delivery of sessions. Monitoring of participant attendance, interest, communication, enjoyment and mood occurs at every CST session.

Following the initial block of group CST, a longer-term program of Maintenance CST (MCST) is available and is designed to be conducted weekly for 24 sessions. For people who are unable to attend a group CST program, Individual Cognitive Stimulation Therapy (iCST) has been developed. iCST is designed to be delivered for 30 minutes, 3 times per week over 25 weeks.

CST sessions follow a consistent structure of place, day and time. Each session follows a similar routine of welcome, introductory activities, session activities and a refreshment break. The session themes vary and closely follow guidance in the manuals.

There may be a group name and song for identity, fun and engagement. A reality orientation board provides information about the group name, date, place and time. Sessions often start with a warm-up activity, which may be a ball toss or discussion about current affairs.

Facilitators initiate and maintain conversations to help group members share ideas and views. Groups aim to offer a range of multi-sensory experiences to keep participants active and engaged. Regardless of the theme, CST aims to be fun and enjoyable for participants and social interaction is as important as the activities.

CST programs can be conducted in residential aged care, day centre, respite, memory clinic, community or hospital settings where people with mild to moderate dementia live, meet or receive therapies and support.



Photo: Community CST, Moments Café, Plymouth, UK

Physical activity for older adults and people with Mild Cognitive Impairment and Dementia

The World Health Organization guidelines [Risk Reduction of Cognitive Decline and Dementia](#) provides the following recommendations in relation to physical activity:

- Physical activity should be recommended to adults with normal cognition to reduce the risk of cognitive decline.
- Physical activity may be recommended to adults with Mild Cognitive Impairment (MCI) to reduce the risk of cognitive decline. Dementia Australia recommends physical activity at all stages of life to reduce the risk of cognitive decline and dementia.

[Dementia Australia](#) recommends that people living with dementia should continue physical activity to prevent muscle weakness, mobility problems and other health complications associated with inactivity. Activity can promote a normal day-night routine, improve mood, increase social participation, and help to reduce stress and depression. Elements that should be included are aerobic exercise, resistance training, flexibility, and balance exercises.

[A systematic review](#) of the evidence from randomized controlled trials of the effects of physical exercise on cognition in older subjects with MCI or dementia reported some positive effects of physical exercise on cognition, mainly on global cognition, executive function, attention and delayed recall on older subjects with MCI.

[A systematic review](#) with meta-analysis of randomized trials showed that people with various levels of cognitive impairment can benefit from supervised exercise programs to improve physical function.

Yoga for older adults and people with Dementia

A one year [randomized control trial](#) suggests that mind-body exercise improves cognitive functioning and assists in improving and maintaining functional status.

[A scoping review](#) on the effects of yoga on patients with mild cognitive impairment and dementia indicates that yoga may have beneficial effects on cognitive functioning, particularly on attention and verbal memory. Yoga may also affect cognitive functioning through improved sleep, mood, and neural connectivity.

Yoga can be adapted for people in chairs and beds and can be practiced by anyone regardless of their ability. According to a [study](#), yoga for older adults has the potential to:

- Increase the ability to maintain activities of daily living;
- Increase self-efficacy for maintaining activities of daily living;
- Reduce levels of stress, anxiety, anger, and depression;
- Increase self-control over thoughts and emotions;
- Improve sleep quality;
- Reduce levels of pain; and
- Provide an opportunity for self-reflection and inquiry.

For people with limited physical movement, the yoga practice may focus less on physical aspects and more on the breath, mindfulness, meditation and relaxation. Visualizing body movements can be suggested or isometric (without movement) muscular contractions may be used.

The introduction of functional movement patterns in practice stimulates familiar memories/reminiscence (such as picking fruit, cycling, chopping wood, stirring a pot) creates

interest, discussion and enjoyment for participants as well as providing an opportunity for balance (through reach and recover techniques) that also strengthen the core.



Photo: Community Home Australia – Club Kalina Canberra

Using Yoga within CST

Yoga is not specifically included in CST, but physical movement is a key component of CST and is now included as guiding principle 6 in the CST program. Due to the interest and studies relating to yoga in CST by countries included in my Fellowship (US, NZ and India), an exploration of the evidence-base in research literature is needed to determine the effectiveness of inclusion of yoga within CST.

The CST program includes a session with the main activity focusing on physical games, using team activities such as skittles, indoor bowls, floor basketball, balloon toss or any other game that involves physical activity that the group may enjoy. Other program suggestions for this session are walking and using the senses, exercises or stretches, dancing or gardening. There is potential for yoga to be used during session 1 of the program (physical games).

In other sessions, an introductory activity uses a soft ball tossed between facilitators and participants for a few minutes. While tossing the ball, participants are given a naming task, such as their own name or the name of another participant, favourite foods, colours, sports, towns,

countries, film stars or singers. A range of yoga techniques could be used as an alternative to the introductory soft ball toss to create interest and variety.

There is potential for yoga to be used during CST programs to unite, centre and settle the group. This could be achieved through an awareness of the breath, the senses, or through gentle movement. Using these techniques can unite and orient a group to the tasks to be undertaken in the session. During the session, if energy is rising (e.g., people speaking over each other) or low (e.g., people disengaged or sleepy), short yoga techniques can be used to return the group to an optimal state of focus and attention. The key to the techniques during the CST session is to maintain awareness (mindfulness) of the tasks being presented and discussed.

Yoga techniques such as breath control, mindfulness, meditation and relaxation can also be used to settle, calm and relax participants at the end of the CST session, so participants are again united as a group and are able to return home happy and satisfied with the session.

Using Yoga for Cognitive Stimulation (without CST)

When taught in an accessible and trauma informed way, yoga aligns to the 18 guiding principles of CST. For people of all ages and cognitive states, this approach is effective, empowering and enjoyable for all. Staff in aged care and dementia facilities and family members of residents also benefit from participation in yoga practices through the shared experiences, fun, stress reduction and relief from the intensity of work and caring responsibilities.

Staff in facilities and families are often surprised at the level of engagement, interaction, and enjoyment for participants of yoga in dementia settings. Staff report that participants enjoy the yoga practice and are calmer, more compliant, sleep and eat well after practice. Participants often laugh, smile and sing in the yoga practice. They encourage each other and always celebrate their participation at the end of practice by clapping and thanking each other.

Participants in aged care and dementia facilities are invited to participate in the weekly yoga practices but are never forced to do so. They may leave at any stage, or they may decide to rest

or sleep. Whether participating or not, participants appear to benefit from being in a group setting and being present while an engaging activity is in progress.



Photo: Burrangiri Aged Care Respite Centre - Canberra

My seated yoga practices in community settings, aged care and dementia environments begin with a welcome and orientation. There is usually an opportunity while people are arriving and settling for practice to chat informally with participants. Remembering participant names (or encouraging name tags) creates a strong connection and person-centred approach to yoga practice.

When leading yoga practices, it is useful to introduce yourself (as well as wearing a name tag), welcome participants to the yoga program and orient participants to the session with the day or date, month, season or weather. It is important to state what is happening in the yoga practice, for example, we are here to share breath, movement and then relaxation practices. Ensuring that participants understand (through a nod or a thumb up) that they are 'in charge' of their own bodies is also important, so they should choose the practices and techniques that are safe and suit them.

In dementia settings, yoga practices need to be interactive and the delivery must be flexible to meet the needs of participants. If an activity or technique is not engaging or is too difficult, it needs to be adjusted or be ready to move on to the next activity. If a participant suggests a relevant movement or technique, it can be empowering to acknowledge the contribution and if

appropriate, practice that technique. If it is difficult to engage participants, a breath practice with movement, or a favourite song with movement can be useful. Repetition and a predictable yoga practice structure provide success and a sense of security for all.

Once settled, yoga practice typically begins with a question or statement for cognitive stimulation, focus and group connection. Open-ended questions that illicit an opinion rather than a fact can create interest and input as well as an opportunity for connection between participants, staff and family members present. Acknowledging contributions to questions and discussions reinforces that yoga practice is a safe and successful activity.

Stimulating thoughts and discussion could begin with an open question about the season/weather, an aspect of nature, such as the current phase of the moon, a holiday or special event or a current affair of interest. For example, a full moon event can illicit great interest, ideas and memories. A discussion about the moon could then link to practice elements of mudra (hand gestures), breath, movements, imagery and meditation.

If using themes for yoga practices, applying the theme to initiate thinking and discussion can create cognitive stimulation and interest. For example, when using a theme such as the 'pause' (i.e., a space between or within techniques, in transitions, or the breath), open-ended questions might be "what is a pause" or "when do we take a pause or "what is the benefit of a pause"?

Once interest has been stimulated, participants are awake, alert and can continue to share and listen to ideas from others and be open to information about applying a pause and the benefits of doing so. The theme can then be a gentle 'thread' through the practice. In a 30-minute practice, the question and discussion should take no more than 2-3 minutes as participants may become restless and distracted.

The yoga practice then progresses to breath regulation, usually with arm movements, to unite the group and adjust the energy of the group (up or down) depending on what is required and felt. Using the 'pause' theme, we might raise the arms on inhale, then pause and lower the arms on exhale (without pause). A question might follow this practice about how it feels to pause the breath, designed to draw participants back to their own experience in the present moment.

Gentle sequential movement for joint mobility, muscle activation and heating create awareness of the sensations in the body and any movement modifications that may be required due to physical limitations or injury. It is important that participants feel empowered to move their body in a safe way, modify as needed and rest as required. Participants may strive to move their bodies beyond a comfortable range of motion. If discomfort is observed, through a grimace, unbalanced or uneven movements or by holding the breath, it is important to remind participants to move in a safe and comfortable way.

While all joints benefit from mobilization, particular attention is paid to the spine (axial extension, flexion, extension, lateral flexion and rotation) to reduce discomfort and stiffness resulting from lack of movement. Ankle and toe mobility is also an important area of focus to increase blood flow and reduce stiffness to ensure that participants have the range of motion, strength and awareness to walk safely. [A study](#) showed that foot and ankle problems can increase the risk of falls in older people.

During this phase of practice, self-massage, tapping/cupping, palming (palms to eyes), eye exercises and thumb opposition sequences, such as the [Kirtan Kriya](#) may be beneficial, stimulating or soothing and enjoyable for participants.



Photo: Blue Clay Creatives

To increase movement and focus the attention, energizing and heating flows such as salutes to the sun, or calming and cooling flows such as salutes to the moon can be practiced safely and successfully in a chair. As these flows involve a complete movement pattern with each phase of the breath, participant attention and interest are maintained. These practices can be modified and simplified to meet the needs of the group, so they serve to unify the group and provide enjoyment and success.

Depending on the needs of the group and the time available, postures and techniques for strength, flexibility, balance and coordination can be included in the yoga practice. Using repetition of movements in specific body parts, extended holds and by adding load by pushing or squeezing, participants can feel engagement of specific muscle groups. Discussion about the muscles being used and the benefits, can accompany movements or holds. This can be stimulating and participants have an opportunity to acquire new information that may be recalled later in the practice or on another day.

Balance in the chair can be practiced through 'reach and recover' movements, such as rowing, churning or chopping. These movements assist participants to explore their body in space (proprioception) and can be useful for awareness and reducing the [risk of falls](#). A [study](#) found that low-intensity mind-body exercise could be beneficial to the cognitive functioning of older adults. Coordination activities (such as raising an opposite arm and leg) can be practiced effectively in the chair and modified to meet the needs of participants.

The yoga practice transitions from physical to subtle practices with final movements including slow back bending, forward folding and rotations. Participants are then guided through a short, calming breath practice, before a meditation practice using a tool to focus the mind such as an image, a word or the breath. A [hospital-based longitudinal study](#) found that a long term meditation program (6 months) for people with MCI and mild dementia, resulted in increased cortical thickness, observed with brain imaging. This study suggests that long term meditation may slow the neurodegenerative process.

The yoga practice concludes with a short, guided relaxation in the chair, before returning the attention to the room, to stretch, wriggle and thank each other. Participants are invited to

observe and share thoughts about their experience and compare their energy or feelings before and after the practice. If appropriate, a simple 'home practice' can be suggested, such as a breath, movement or relaxation technique. This is effective if a staff or family member is present to remember and suggest the practice each day. This creates continuity of practice and improves the potential for physical maintenance and improvements in [relationships with self and others](#).

It is important to create continuity between yoga practices by stating when the next practice will be held and thanking participants for their attendance, participation and effort. Informal discussions with participants after yoga practice can be useful to hear about the experiences of individuals and to receive feedback.

Next steps

Recommendations in my Fellowship report identify the need for a yoga program for people with moderate to severe dementia, aligned to the principles of CST:

- funding is required to create and pilot a standardized yoga program for people with moderate to severe dementia, aligning to the principles of CST;
- once the program has been tested and results documented, the standardized yoga program and training/support materials be developed and implemented.

The development of a standardized yoga program has the potential to improve access to yoga for people living with dementia in all communities, with or without a yoga professional.

Contacts

For more information about Cognitive Stimulation Therapy for people with mild to moderate dementia, please refer to: [Cognitive Stimulation Therapy \(cstdementia.com\)](#).

For more information about CST in Australia or using yoga for cognitive stimulation in aged care or dementia settings, please contact: robyn@yogaenlightenment.com.au or +61 432 778 271.

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