THE INTERNATIONAL ASSOCIATION OF YOGA THERAPISTS

August 16, 2024

To Whom it May Concern,

I am writing on behalf of the International Association of Yoga Therapists and our global community of professional members to advocate for the inclusion of yoga therapy as a supported service within the framework of the Australian Government's National Disability Insurance Agency of the National Disability Insurance Scheme. We are concerned by the exclusion of yoga from the draft NDIS support list and wanted to take the opportunity to provide information about the person-centered, evidence-informed modality of yoga therapy, which stands to offer substantive benefit to citizens living with disabilities.

Despite the fact that holistic interventions are inherently methodologically challenging to study and funding for research on non-surgical, non-pharmacological methods is scarce, growing evidence supports the individually directed, therapeutic use of yoga to address a number of conditions that result in long-term disability. These conditions—which are positively affected by the conscious application of so-called "bottom-up" neurological activity—include chronic pain, cancer and its effects, mental health concerns, cardiovascular issues, addiction, and diabetes and metabolic issues. Furthermore, yoga services can often be provided at lower cost than alternative therapies with similar impacts (e.g., physical therapy and cognitive behavioral therapy), or they can be provided as an appealing complement, preferred by some patients and therefore increasing long-term engagement with self-care.

IAYT-certified practitioners of yoga therapy are integrative health professionals with a minimum of 1,000 hours of training, delivered according to clearly defined educational standards, and they agree to abide by a Scope of Practice as well as a Code of Ethics and Professional Responsibilities. Yoga therapy is the professional application of the principles and practices of yoga to promote health and well-being within a therapeutic relationship that includes personalized assessment, goal setting, lifestyle management, and yoga practices for individuals and small groups.

Additionally, yoga therapy, which is by definition tailored to an individual's needs, is now acknowledged as a beneficial core element of person-centered models such as the Whole Health Initiative of the U.S. Veterans Health Administration, the Swedish hospital system, and the U.K.'s National Health Service. Rather than duplicating other therapeutic services, yoga therapy is a cost-effective service that extends other interventions, aligning with the "Therapeutic Supports" category that focuses on evidence-based therapies that assist participants in applying functional skills (e.g., mobility and movement, interpersonal interactions) that improve independence and fuller participation in daily activities.

The omission of yoga from the draft NDIS support list overlooks the significant benefits that yoga therapy can provide, cost-effectively, for individuals with physical, emotional, cognitive, and neurodiverse disabilities, as consistently suggested by the sample references listed below and many other studies. Integrating yoga therapy into the NDIS support list aligns with efforts to maintain or even improve quality of life for citizens with disabilities, reducing the likelihood of decline that often leads to higher costs associated with more intensive service utilization or accommodations.

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We strongly urge you to consider taking the important and inclusive step of incorporating yoga therapy into the NDIS list of supported disability services.

Respectfully submitted,

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Executive Director

About IAYT

IAYT is the largest international membership, certifying, and accrediting body for yoga therapists and educational programs. This not-for-profit organization publishes the peer-reviewed, PubMed-indexed *International Journal of Yoga Therapy* and a clinical practices magazine and provides additional continuing education opportunities for its members and allied professionals. IAYT was founded in 1989 and represents more than 5,200 members from 50+ countries; more than 150 member schools and 71 accredited yoga therapy training programs are also part of the organization. IAYT's mission is to advance yoga therapy as a recognized health profession. We invite you to learn more about our global work to support yoga therapy at iayt.org.

Recent Studies on the Cost-Effectiveness of Therapeutic Yoga for Addressing Disability

Aboagye, E., Karlsson, M. L., Hagberg, J., & Jensen, I. (2015). Cost-effectiveness of early interventions for non-specific low back pain: A randomized controlled study investigating medical yoga, exercise therapy and self-care advice. ***Journal of Rehabilitation Medicine*****,** ***47*****(2), 167–173. https://doi.org/10.2340/16501977-1910**

> "Six weeks of uninterrupted medical yoga therapy is a cost-effective early intervention for non-specific low back pain, when treatment recommendations are adhered to."

Andronis, L., Kinghorn, P., Qiao, S., Whitehurst, D. G., Durrell, S., & McLeod, H. (2017). Cost-effectiveness of non-invasive and non-pharmacological interventions for low back pain: A systematic literature review. ***Applied Health Economics and Health Policy*****,** ***15*****(2), 173–201. https://doi.org/10.1007/s40258-016-0268-8**

> "The identified evidence suggests that combined physical and psychological treatments, medical yoga, information and education programmes, spinal manipulation and acupuncture are likely to be cost-effective options for [low-back pain]."

Groessl, E. J., Liu, L., Richard, E. L., & Tally, S. R. (2020). Cost-effectiveness of yoga for chronic low back pain in veterans. ***Medical Care*****,** ***58 Suppl 2 9S*****, S142–S148. https://doi.org/10.1097/MLR.0000000000001356**

> "Yoga is a cost-effective treatment for reducing pain and disability among military veterans with [chronic low back pain]."

Hartfiel, N., Clarke, G., Havenhand, J., Phillips, C., & Edwards, R. T. (2017). Cost-effectiveness of yoga for managing musculoskeletal conditions in the workplace. ***Occupational Medicine*****,** ***67*****(9), 687–695. https://doi.org/10.1093/occmed/kqx161**

> "Yoga. . . may enhance HRQL, reduce disability associated with back pain, lower sickness absence due to musculoskeletal conditions and is likely to be cost-effective."

Vollbehr, N. K., Stant, A. D., Hoenders, H. J. R., . . . Ostafin, B. D. (2024). Cost-effectiveness of a mindful yoga intervention added to treatment as usual for young women with major depressive disorder versus treatment as usual only: Cost-effectiveness of yoga for young women with depression. ***Psychiatry Research*****,** ***333*****, 115692. https://doi.org/10.1016/j.psychres.2023.115692**

> Combined with treatment as usual, mindful yoga "is likely to be cost-effective compared to [treatment as usual], which was confirmed by sensitivity analyses. Although there were limitations in the cost-effectiveness analysis, findings from this study suggest that [mindful yoga + treatment as usual] warrants future attention for the potential to be cost-effective compared to [treatment as usual] for young women with [major depressive disorder]."

Sample Research on Yoga's Effects on Disability-Related Conditions: Selected Systematic Reviews, Meta-Analyses, and Randomized Controlled Trials

Cherkin, D. C., Sherman, K. J., Balderson, B. H., . . . Turner, J. A. (2016). Effect of mindfulness-based stress reduction vs cognitive behavioral therapy or usual care on back pain and functional limitations in adults with chronic low back pain: A randomized clinical trial. ***JAMA*****,** ***315*****(12), 1240–1249. https://doi.org/10.1001/jama.2016.2323**

> When compared with usual care, adults with chronic low-back pain experienced greater improvements in back pain and functional limitations at 26 weeks when treated with mindfulness-based stress reduction (a type of meditative practice related to and including yoga; MBSR) or cognitive behavioral therapy (CBT). This randomized controlled trial showed no significant differences in outcomes between MBSR and CBT, suggesting that MBSR may be an effective option for patients with chronic low-back pain.

Rasmussen-Barr, E., Halvorsen, M., Bohman, T., . . . Grooten, W. J. A. (2023). Summarizing the effects of different exercise types in chronic neck pain—A systematic review and meta-analysis of systematic reviews. ***BMC Musculoskeletal Disorders*****,** ***24*****(1), 806. https://doi.org/10.1186/s12891-023-06930-9**

> Compared to non-exercise interventions, this systematic review and meta-analysis showed low- to high-certainty evidence of positive short-term effects on pain and disability with various exercise types, including yoga, for chronic neck pain.

Brinsley, J., Schuch, F., Lederman, O., . . .Rosenbaum, S. (2021). Effects of yoga on depressive symptoms in people with mental disorders: a systematic review and meta-analysis. *British Journal of Sports Medicine*, *55*(17), 992–1000. https://doi.org/10.1136/bjsports-2019-101242

This systematic review and meta-analysis suggests that active yoga practices may ease depressive symptoms for those with a range of mental health issues.

Danhauer, S. C., Addington, E. L., Sohl, S. J., Chaoul, A., & Cohen, L. (2017). Review of yoga therapy during cancer treatment. *Supportive Care in Cancer*, *25*(4), 1357–1372. https://doi.org/10.1007/s00520-016-3556-9

This review cites consistent improvements in psychological outcomes (depression, distress, anxiety) for those doing yoga therapy during cancer treatment. The practice also improved quality of life, quality of sleep, and immune biomarkers.

Danhauer, S. C., Addington, E. L., Cohen, L., . . . Culos-Reed, S. N. (2019). Yoga for symptom management in oncology: A review of the evidence base and future directions for research. *Cancer*, *125*(12), 1979–1989. https://doi.org/10.1002/cncr.31979

Yoga seems to be particularly helpful in reducing stress during treatment and post-treatment disturbances in sleep and cognition.

Dong, B., Xie, C., Jing, X., Lin, L., & Tian, L. (2019). Yoga has a solid effect on cancer-related fatigue in patients with breast cancer: A meta-analysis. *Breast Cancer Research and Treatment*, *177*(1), 5–16. https://doi.org/10.1007/s10549-019-05278-w

According to this meta-analysis that included 2,183 patients, yoga had a large effect on fatigue post-treatment in people with breast cancer. There was also a small effect on fatigue between cancer treatments.

Brooks, J., Lawlor, S., Turetzkin, S., Goodnight, C. W., & Galantino, M. L. (2021). Yoga for substance use disorder in women: A systematic review. *International Journal of Yoga Therapy*, *31*(1), Article_21. https://doi.org/10.17761/2021-D-20-00008

This systematic review of randomized controlled trials evaluated any type of yoga, including yoga as a component of mindfulness-based treatment, against any type of control in individuals with any type of addiction (i.e., alcohol, drug, and nicotine substance-use disorders). Most of the trials suggested that various types of yoga—primarily hatha yoga and its components—led to favorable or equivalent results as an adjunct to control or treatment-as-usual interventions.

Cramer, H., Lauche, R., Haller, H., Steckhan, N., Michalsen, A., & Dobos, G. (2014). Effects of yoga on cardiovascular disease risk factors: A systematic review and meta-analysis. *International Journal of Cardiology*, *173*(2), 170–183. https://doi.org/10.1016/j.ijcard.2014.02.017

This meta-analysis provides evidence for clinically important benefits of yoga on most biological cardiovascular disease risk factors, including blood pressure, respiratory rate, waist circumference, waist/hip ratio, cholesterol, triglycerides, and insulin resistance.

Cramer, H., Ward, L., Saper, R., Fishbein, D., Dobos, G., & Lauche, R. (2015). The safety of yoga: A systematic review and meta-analysis of randomized controlled trials. ***American Journal of Epidemiology*****, *182*(4), 281–293. https://doi.org/10.1093/aje/kwv071**

Although not all yoga practices include physical movement, research suggests that yoga is at least as safe as other commonly recommended exercise programs, particularly when individually tailored and delivered by qualified professionals.

Green, E., Huynh, A., Broussard, L., . . . Aranha, K. (2019). Systematic review of yoga and balance: Effect on adults with neuromuscular impairment. ***The American Journal of Occupational Therapy*****, *73*(1), 7301205150p1–7301205150p11. https://doi.org/10.5014/ajot.2019.028944**

A systematic review on yoga for balance shows moderate evidence of decreased fall risk in community-dwelling older adults and people with cerebrovascular accidents, Alzheimer's disease, and multiple sclerosis.

Gothe, N. P., Khan, I., Hayes, J., Erlenbach, E., & Damoiseaux, J. S. (2019). Yoga effects on brain health: A systematic review of the current literature. ***Brain Plasticity*****, *5*(1), 105–122. https://doi.org/10.3233/BPL-190084**

Yoga practice has documented positive effects on brain structure and function as assessed by MRI, fMRI, and SPECT. Collectively, the studies demonstrated a positive effect of yoga practice on the structure and/or function of the hippocampus, amygdala, prefrontal cortex, cingulate cortex, and brain networks, including the default mode network. Behavioral interventions like yoga may mitigate age-related and neurodegenerative decline and disability, as many of these brain regions demonstrate significant age-related atrophy.

Guddeti, R. R., Dang, G., Williams, M. A., & Alla, V. M. (2019). Role of yoga in cardiac disease and rehabilitation. ***Journal of Cardiopulmonary Rehabilitation and Prevention*****, *39*(3), 146–152. https://doi.org/10.1097/HCR.0000000000000372**

"Yoga has been shown to have favorable effects on systemic inflammation, stress, the cardiac autonomic nervous system, and traditional and emerging cardiovascular risk factors."

Innes, K. E., & Selfe, T. K. (2016). Yoga for adults with type 2 diabetes: A systematic review of controlled trials. ***Journal of Diabetes Research*****, *2016*, 6979370. https://doi.org/10.1155/2016/6979370**

According to this review including a total of 2,170 participants, yoga may improve health outcomes for adults with type II diabetes mellitus (DM2): "Collectively, findings suggest that yogic practices may promote significant improvements in several indices of importance in DM2 management, including glycemic control, lipid levels, and body composition."

Kwok, J. Y. Y., Kwan, J. C. Y., Auyeung, M., . . . Chan, H. Y. L. (2019). Effects of mindfulness yoga vs stretching and resistance training exercises on anxiety and depression for people With Parkinson disease: A randomized clinical trial. ***JAMA Neurology*****, *76*(7), 755–763. https://doi.org/10.1001/jamaneurol.2019.0534**

In this randomized controlled trial in adults with Parkinson's disease, the yoga group demonstrated significantly better improvement in outcomes than the stretching and resistance training group, particularly for anxiety, depression, perceived hardship, perceived equanimity, and disease-specific quality of life.

Ramamoorthi, R., Gahreman, D., Skinner, T., & Moss, S. (2019). The effect of yoga practice on glycemic control and other health parameters in the prediabetic state: A systematic review and meta-analysis. *PloS One*, *14*(10), e0221067. https://doi.org/10.1371/journal.pone.0221067

In this systematic review of studies published between 2002 and 2018, the yoga interventions improved fasting blood glucose, low-density lipoprotein, triglycerides, total cholesterol, systolic blood pressure, and other type 2 diabetes parameters. The authors note that these results suggest that yoga may be considered a comprehensive and alternative approach to preventing type 2 diabetes.

Sivaramakrishnan, D., Fitzsimons, C., Kelly, P., Ludwig, K., Mutrie, N., Saunders, D. H., & Baker, G. (2019). The effects of yoga compared to active and inactive controls on physical function and health related quality of life in older adults—Systematic review and meta-analysis of randomised controlled trials. *The International Journal of Behavioral Nutrition and Physical Activity*, *16*(1), 33. https://doi.org/10.1186/s12966-019-0789-2

"This study provides robust evidence for promoting yoga in physical activity guidelines for older adults as a multimodal activity that improves aspects of fitness like strength, balance and flexibility, as well as mental wellbeing."

Silveira, K., & Smart, C. M. (2020). Cognitive, physical, and psychological benefits of yoga for acquired brain injuries: A systematic review of recent findings. *Neuropsychological Rehabilitation*, *30*(7), 1388–1407. https://doi.org/10.1080/09602011.2019.1583114

For people with acquired brain injury broadly, improvements were found after yoga for psychological and physical adjustment, quality of life, and respiratory functioning. For stroke specifically, physical and memory recovery were greater in the yoga groups compared to exercise controls.

Yadav, R., Yadav, R. K., Khadgawat, R., & Pandey, R. M. (2019). Comparative efficacy of a 12 week yoga-based lifestyle intervention and dietary intervention on adipokines, inflammation, and oxidative stress in adults with metabolic syndrome: A randomized controlled trial. *Translational Behavioral Medicine*, *9*(4), 594–604. https://doi.org/10.1093/tbm/iby060

This randomized controlled trial evaluated the efficacy of a 12-week yoga-based lifestyle intervention compared to dietary intervention alone on adipokines, inflammation, and oxidative stress in adults with metabolic syndrome. Those in the yoga group showed significant improvement in a number of markers, whereas no significant changes were noted in the dietary intervention group.