

Chapter 9

Yoga for Seniors: Mechanisms of Response to Yoga Therapy in Older Adults

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ABSTRACT

Increasing life expectancies have resulted in global aging of the population. Because of physiological changes associated with aging, older adults are more vulnerable to developing chronic diseases and disability. Multimorbidity with two or more aging and stress-related conditions occurs in more than half of older adults. The use of polypharmacy for multiple disorders increases risks of adverse reactions. Mind-body medicine uses ancient Eastern practices like yoga and meditation to achieve balance between mind, body and spirit. The US National Health Interview Survey (NHIS) showed the growing popularity of yoga practice in people aged 65 and over. The use of mind-body therapies like yoga could supplement conventional medicine in management of mild-moderate mental and physical symptoms. Yoga therapy empowers individuals to take responsibility for own health and is ideal for preventing chronic stress-related disorders of aging because of low-cost and improved safety profile.

INTRODUCTION

Increasing life expectancies and falling fertility rates have resulted in global aging of the population. (World Health Organization, 2015). From 2015 to 2030, the world's population over the age of 60 years will increase almost two-fold, from 901 million to more than 1.4 billion. reaching rates of 1 in 6 people (United Nations, 2015). Because of physiological changes associated with aging and cumulative lifespan stress exposure, older adults are more vulnerable to developing chronic diseases and disability. WHO

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reported the leading chronic diseases with most years of healthy life lost due to disability include hearing and vision impairment, osteoarthritis, ischemic heart disease, dementia, chronic obstructive pulmonary disease, cerebrovascular disease, and depression (World Health Organization, 2015). Furthermore, multimorbidity is common, with more than half of older adults in North America, Europe and Australia having co-occurrence of two or more of aging and stress-related health conditions (Violan et al., 2014). The use of polypharmacy for multiple disorders increases risks of drug interactions and adverse reactions to as high as 35-60% and 13-82%, respectively (Shah & Hajjar, 2012; World Health Organization, 2015). Growing morbidity from chronic diseases of aging calls for the search of novel preventive strategies that can reduce disease burden and cost. The use of inexpensive mind-body interventions, such as yoga, can help achieve this goal via non-pharmacological stress-reduction and lifestyle changes.

THE ROLE OF MIND-BODY MEDICINE

The worldwide use of complementary and integrative medicine (CIM) including mind-body approaches is rising. Mind-body medicine uses ancient Eastern practices like yoga, Qi-gong, Tai Chi, and meditation to achieve balance between mind, body and spirit. The US National Health Interview Survey (NHIS) reported the linear growth of mind-body interventions such as yoga, Tai Chi, and Qi Gong among people aged 18 and over. The data from 2002, 2007 and 2012 found yoga as the most popular approach, accounting for 80% of these three methods. The same survey also showed the growing popularity of yoga practice in people aged 65 and over, with the prevalence constantly increasing from 1.3% to 2.2% and 3.3%, respectively (Tainya, Lindsey, Barbara, Patricia, & Richard, 2015).

Although CIM was initially recognized in promoting health and well-being, growing scientific evidence supports clinical use and efficacy of some interventions with increased understanding of the underlying neurobiological mechanisms (Barnes, Powell-Griner, McFann, & Nahin, 2004). CIM use can satisfyingly meet medical needs by relieving symptoms associated with chronic diseases and chronic pain condition, and by reducing side effects of conventional drugs (Eyre, Baune, & Lavretsky, 2015). CIM could supplement conventional medicine in management of mild-moderate mental and physical symptoms (e.g., pain, depression, anxiety, insomnia, etc.) (Lavretsky, 2009; McCaffrey, Pugh, & O'Connor, 2007; Meeks, Wetherell, Irwin, Redwine, & Jeste, 2007; Russinova, Cash, & Wewiorski, 2009; Su & Li, 2011). It is ideal for preventing chronic stress-related disorders of aging because of low-cost and improved safety profile.

YOGA USE FOR AGING-RELATED PHYSICAL AND MENTAL DISORDERS

Yoga practices have been spreading throughout the world since the late 19th century, and many techniques have developed over time. Most modern yoga styles contain three key components of the original 'eight limbs' of yoga, which are described in the classical text, the *Yoga Sutras of Patanjali*. The first component, 'Asana,' consists of specific physical poses (called *asana*) performed in a slow, sequential manner that are synchronized with the practitioner's own breathing. *Asana* is meant to condition and prepare the body for deep and extended periods of meditation (Schmalzl, Powers, & Henje Blom, 2015).

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