

Yoga for Older Adults -Hypothesis and Tools for Yoga Teachers



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Introduction

As adults age, changes in their lives and bodies may impair their ability to move effectively and safely [1]. The effects of chronic health conditions and geriatric syndromes may limit mobility and increase their dependence on others to assist them in activities of daily living (ADL's) [1]. Although strong evidence indicates that physical activity can prevent impairment and maintain function and health related quality of life [2,3], only 10 percent of Americans between 65-74 years report engaging in activities that promote strength and endurance two or more days/week [3,4].

Decreased physical inactivity and its effects among older adults

Decreased physical capacity (e.g., muscular strength and endurance, flexibility, agility, and balance) leads to impairment in functional tasks (e.g., standing up from a seated position) that may lead to difficulties in maintaining personal and social roles [5,6]. Because quality of life in later years depends largely on the ability to independently engage in self-selected activities [3], physicians must encourage older patients to actively participate in physical activities.

Many older adults refrain from participating in evidence-based programs for physical activity (e.g., "Active Start", "Enhance Fitness") [4]. Some elders report that exercise programs are designed for more functionally able persons. Another potential barrier is that many exercise programs are based on "one size fits all" approach [7]. Resnick suggests interventions for older adults could improve regular exercise by establishing goals tailored to function and physical level [8].

Positive effects of exercise

The National Institute on Aging recommends four different types of exercises for older adults: endurance, balance, strengthening, and flexibility [9,10]. Because yoga involves each of these recommended components of exercise it may improve functional and physiological outcomes. In our recent systematic review and meta-analysis of randomized trials of yoga in older

adults [11] we found yoga's benefits varied due to many small trials of mixed quality and limited exploration of physiological mechanisms. Thus, researchers must determine the extent to which yoga is effective across a range of outcomes for older adults. Understanding yoga's benefits and mechanisms, how they differ in older adults, and how they can be tailored to individual needs are important next steps in developing effective yoga interventions [11,12].

Proposed logic model to explain how yoga benefits older adults

We propose the following logic model as the hypothesis for explaining the different mechanisms by which yoga is thought to benefit older adults Figure 1.

Adapting yoga for older adults to positively address the different types of health

Yoga teachers should remember two principles of functional health as they adapt their instruction for older adults:

- A. Functional health and independence - aging in place - is the main goal for all seniors.
- B. Functional health depends on five categories of health: physical, mental/psychosocial, economic, and medical and spiritual.

The Table 1 below lists the different types of health and indicates the changes older adults may be undergoing.

Physical changes and suggestions to address them during yoga instruction

As adults age, they may experience specific physical changes that limit their ability to practice yoga. Thinking of how different parts of an older student's body may change can help yoga teachers adapt their instruction in particular ways that allow the student to continue in their yoga classes. For each part of the body and its possible physical change, Table 2 suggests specific ways to address the change.

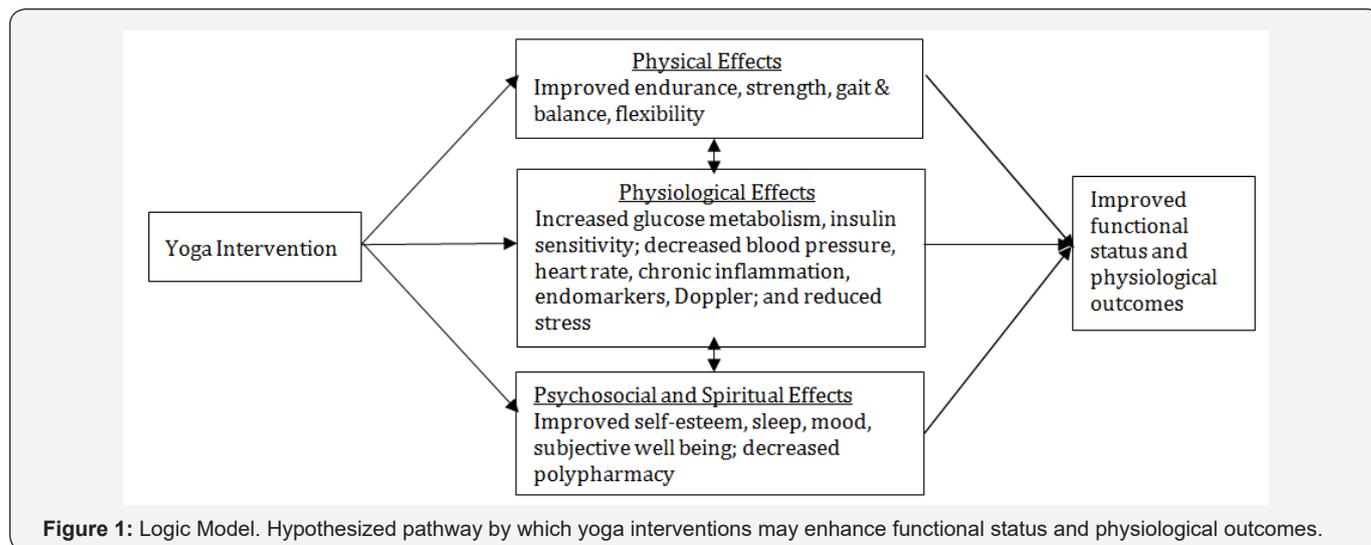


Figure 1: Logic Model. Hypothesized pathway by which yoga interventions may enhance functional status and physiological outcomes.

Table 1: Types of health and changes older adults may experience.

Physical health	Head to toe changes discussed in next section
Mental health	Loneliness, depression, grief, cognitive impairment and problems with memory that affect functional health and caring for themselves
Social health	Lose spouse, family, friends; have change in social status or role (may further affect mental and psychological health); change homes; and move to independent living communities
Economic health	Live on a fixed income and social security or savings, cost of living keeps increasing
Medical health	Have multiple chronic conditions and take many medications with results and side effects that lower balance and increase risk for falls.
Spiritual health	Ultimate goal for all

Table 2: Physical changes in older adults and suggestions on how to address them in yoga instruction.

Part of Body: Possible Change	Suggestion to Address the Change
Brain: Cognitive impairment or problems with memory (especially short term)	Speak in short sentences, say one thing at a time and give them time to understand, and write instructions in simple steps.
Eyes: Cataracts or macular degeneration	Stand 3 feet or closer to them so they can see what you are showing them to do.
Ears: Decreased hearing and increased sensitive to high frequency sounds	Speak in a lower tone (i.e., not louder) and stand in front of them so they can read your lips.
Joints in General: Osteoarthritis--unable to firmly grip objects because of the arthritic changes	Be wary of twists (e.g. do gentle chair twists) and tell them to avoid being too aggressive.
Lungs: Decreased expansion	Use the belt to open the chest and improve breathing.
Heart: Those with decreased cardiac output	Require them to get a clearance from a physician.
Gastrointestinal/Stomach: Eat smaller meals more frequently; constipation	Tell them not to eat 1 and a half hours before class instead of two and half hours. and half hours. Suggest poses that may help with constipation.
Kidneys/Urinary System: Urination slows down.	Ask them to empty their bladder before starting class.
Nerves: Neuropathy or unable to feel sensations well, especially in feet	Use alternate standing poses with chair yoga.
Musculoskeletal System in General: Frailty due to decreased bone and muscle mass	Start low and go slow.

Table 3: Sample sequence of poses with tips for adaptations to various individual abilities.

Pavanamuktasana (warming up) using belt on either chair or standing- Bharadwaj (twists) Asana either standing or sitting on chair and using block between feet 25 minutes
Tadaasana (Mountain pose) using block for both standing and those who cannot stand sitting in chair 5 minutes
Urdvahastasana (upward salute) either sitting or standing will be using belt in both situations 5 minutes
Chair Uthanasana (Half forward bend) 1 and 2 using one chair for those who stand, two chairs one in which they sit and other to stretch for support is a variation for those who cannot stand 7 minutes
Trikonasana (Triangle pose) using a chair for those who can stand, for those sitting will use support of wall and belt. 5 minutes
Janushirshasana (head to knee pose) on chair or floor & Paschimothanasana (forward bend) using belt 13 minutes
Shavasana, (Corpse pose) feet in chair, relaxing sitting on chair and head on bolster. 15 minutes

Types of yoga and asana adaptation for older adults

There are various types of yoga that are practiced, for the changes in our bodies that occur as we age here are some ways by which yoga asana’s can be adapted.

- A. Teach Iyengar yoga to older adults because it uses props and can be tailored to an individual’s body.
- B. Employ as many props (e.g., belts, blocks, chairs, bolsters) as needed for the position.
- C. Use alternate standing poses with sitting and lying down on the floor only for those who can. Use low benches for those who cannot lie down.
- D. Have beginners hold each pose for about 30 to 45 seconds. For more advanced students, increase the time to a minute or longer.
- E. Give breaks between poses.
- F. Use asanas adapted standing poses with the chair for support -uthanasana, adhomukhosvanasa, trikonasa.
- G. Use pavanmukhtasana series either sitting in chair or lying down
- H. Use gentle twists.
- I. Avoid inversions and back bends.
- J. Be cautious while using forward bending. Use lot of support and props.
- K. Focus more on breathing and guided shavasana.

Sample adapted yoga session sequence for older adults

Yoga for older adults needs to be tailored to the individual and in a class you may have individuals with varying needs and abilities. The Table 3 above is a sample sequence of poses with tips for adaptations to various individual abilities.

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