

Asanas for Older Adults

The truth is we are all getting older – individually and collectively. As the population of older adults expands, it's important to consider what poses are safe for the older, wiser generation. It's possible to measure the biomechanical effects of poses on the joints to determine the risks and rewards of poses. This also gives insight into what modifications are appropriate to take a traditional asana and change them to make them more accessible and effective for healthy older adults. This was the goal of the YESS, Yoga Empowers Seniors Study.

First, we did small sample study, aka a pilot study. In our pilot we looked at 5 poses that are regularly taught in senior yoga classes: chair, warrior 1, tree, cobra and bridge. Here's a summary of the initial findings from the pilot in plain English:

Chair pose had the most muscular activation in the hip extensors and hip stabilizers. No surprise here. There was some concern on the joint load for the knees and hips. This is important to consider for OA, osteoarthritis, in these weight-bearing joints. Chair can be modified by limiting how deeply you "sit" back in your "chair." Also, sitting back with the hips on the wall, lessens the load on the hips and knees. And it eliminates strain/load on the lower back.

Warrior 1 had high "moments" or muscle activation in the frontal plane of the ankle joint, which is important for ankle stabilization and the ever important balance for older adults. (In the full study, concerns were raised about hyper extending the front knee. See "Peaceful Knees in Warrior 1" for more on this.)

Tree had the greatest activation of plantar flexion in the standing leg, which is important in gait propulsion, where some of the power in your walk originates. But there was concern about knee abduction, ie, lateral pressure on the knee. In the full study, we examined several versions of the tree pose to determine how to do it safely. See "Wisdom of Trees" for more on this.

Cobra created some concerns in the shoulder girdle and wrists in this pilot. Although, considered one of the "baby backbends," cobra is a pretty complicated pose for older adults. We placed a blanket underneath the torso right at the hip crease and covering the lower ribs. This has two benefits: protect the lower ribs for those with osteoporosis and help protect against lumbar compression by creating a slight hip flexion. (Many older adults do not have even neutral hip extension.) And we modified the pose by taking hands wider than shoulder distance and closer to the head than in the traditional pose. This makes the pose more accessible for the shoulders. Cuing to only use the hands for spinal extension versus using the hands to lift the chest is also important to prevent wrist compression. A great way to teach the actions of cobra in a way that is more safe and accessible is teaching the actions of the shoulder girdle while standing. Teach the lumbar stability with a block between the inner thighs. Then take students right up to the wall, facing the wall, and use the wall like the floor. Students can find the right hand placement, feel how

to use the hands to lengthen the spine, and practice engaging the abs to support the lumbar spine while opening the chest. So when they get on the floor, they have an imprint for how to make the pose their own and will have much more success.

The following abstract doesn't mention the bridge pose. Nothing unexpected was learned about the bridge pose in this pilot.

All of these poses and many more were studied in YESS. For a complete list of all of the poses and modifications we used In the full YESS program with lots of details on the protocol, see: <http://www.geronet.ucla.edu/yess>

To see the abstract published in IAYT, International Association of Yoga Therapy, in a more complicated version of English, read: #42 Selecting Yoga Asanas for Older Adults: Biomechanical Considerations.