

Exercise and activity level in Alzheimer's disease: A potential treatment focus. Teri L., McCurry, S., Buchner, D., et al. J. Rehab. Research and Development. 1998: 35(4): 411-419

Exercise may benefit the Alzheimer's patient by improving both symptoms and quality of life. For the same level of brain deterioration, physically active people exhibit higher levels of cognitive functioning than sedentary people. It is thought that physically active people have a 'cognitive reserve' that is used when other areas of the brain are damaged.

An exercise routine may decrease the severity of symptoms of dementia as well as lead to increased mobility and independence. An exercise routine for the elderly should be composed of four components:

1. Aerobic exercise
2. Strength training
3. Balance training
4. Flexibility exercises

All training programs should be entered into gradually and only after checking with his/her physician.

An aerobic training program, improves cardiovascular health as well as brain health. It is associated with decreased risk of stroke and the related dementia. Physical activity may also decrease the beta-amyloid proteins leading to decreased amyloid plaque and decreased disruption between neurons. For maximum health benefit, 30-minutes of aerobic activity should be performed most days of the week. This need not be intense and the participant should be able to talk throughout. The 30-minutes can be split into smaller, 10-minutes segments if that is more desirable. When beginning a training program, you can start with intervals as short as 5-minutes and progress.

Strength training programs combat the loss of muscle mass associated with aging. It can improve independence, mobility, and balance. Daily tasks (e.g. getting out of bed, getting out of chairs, climbing stairs) become easier with increased strength. Ideally, 10-15 repetitions of 8-10 exercises should be performed 2 or 3 times per week. The resistance should be great enough that each set of repetitions is difficult to complete. Resistance may be applied with bands or

tubing, light weights, or even cans of food. If the sets are completed easily, the resistance should be increased.

Balance exercises can be performed almost anywhere. Balance is position specific so both standing balance and sitting balance should be targeted. With improved standing balance, there is decreased risk of falls and fractures. Standing on one-leg, with or without assistance, will help improve standing balance. Sitting balance can be improved by sitting on a chair, couch, or balance ball, with the lower back straight, and lifting an arm or a leg into a different position. Also, chair stands can be included. The more unstable the sitting surface is, the more difficult the exercise will be. More advanced exercises such as backwards walking and leaning can be gradually added into the program.

Flexibility exercises are best performed with the aid of a personal trainer, training partner, or care giver. Flexibility exercises can improve back pain and shoulder pain and increase range of motion.

There are certainly challenges in starting and keeping a patient in an exercise program. However, older adults are among the most willing to begin exercise programs as they are more aware of health issues. With dementia patients, there may be additional challenges as the disease progresses. However, there are many techniques that may help combat challenges that arise. The improvement in functioning and quality of life should make the challenges worthwhile.