

## **Introduction to Training Video: Supporting Daily Exercise for Independence**

***Clear evidence is available showing that balance and strength exercises are the essential components of exercise regimens to reduce falls in the elderly*** (Sherrington et al., 2011).

***Integrating strength and balance exercise programs into activities of daily living in the home environment.*** A systematic review and meta-analysis of 159 randomized controlled trials with 79,193 older people living in the community found that home-based exercise significantly reduced the rate of falls (Gillespie et al., 2012).

Using these proven methods, the Lifestyle-integrated Functional Exercise (LiFE) program to prevent falls was developed in which progressive and challenging balance and strength exercises were embedded within patients' daily routines. This program has demonstrated effectiveness in reducing falls in older people and resulted in better adherence than in segregated forms of activity.

Given this evidence and the importance of sustaining strength and balance exercises as part of ongoing physical activity programs in the elderly, two STRIDE Investigators , Pamela Duncan PhD, PT , Thomas Storer, PhD, collaborated with Tiffany Shubert PhD, PT of the University of North Carolina Center for Geriatrics to produce a training video titled Supporting Daily Exercise for Independence. This video was designed for exercise providers and demonstrate how falls prevention exercises emphasizing strength and balance may be incorporated into home based activities throughout the home environment. See below for important resources.

We encourage all providers, especially those engaged in Home Health Care to study this training video and use the many suggestions for integrating strengthening and balance exercises in daily routines at home.

## **A Few Details**

***Balance and strength exercises are the essential components of exercise regimes to reduce falls in the elderly.*** A recent meta-analysis found that exercise programs most effective at reducing falls in the older population were those which had a moderate to high challenge to balance, higher dose of exercise (>50 hours) and did not include walking training (RR = 0.62, 95% CI 0.54 to 0.73) (Sherrington et al., 2011).

***Integrating strength and balance exercise programs into activities of daily living in the home environment:*** The Cochrane review and meta-analysis of falls in those living in the community found that home-based exercise significantly reduced the rate of falls, RaR=0.68 CI 0.58 to 0.80 (Gillespie et al., 2012).

Clemson and colleagues developed the Lifestyle-integrated Functional Exercise (LiFE) program to prevent falls exercise program such that progressive and challenging balance and strength exercises were embedded within daily routines. They found that the LiFE program was effective in reducing falls in older people (IRR 0.69, 95% CI 0.48 to 0.99) (Clemson et al 2012). Embedding exercise into habitual daily routines produced significantly better habit formation than segregated exercise. At 6 months, 76% of the embedded group was exercising compared with 60% of the segregated exercise group (RR = 1.26) and this remained superior at 12 months with 64% compared to 53% (RR= 1.21). . Adherence to falls prevention exercises may be more successful if patients are encouraged to integrate exercise in their home environment and activities of daily living.

Additionally, Dr. Lindy Clemson PhD OT and colleagues have two LIFE training manuals available from amazon.com.

Lifestyle-integrated Functional Exercise (LiFE) program to prevent falls: participant's manual 2014 by Lindy Clemson, Jo Munro and Maria Fiatarone Singh  
<http://www.amazon.com/Lifestyle-integrated-Functional-Exercise-program-prevent/dp/1743324162>

Lifestyle-integrated Functional Exercise (LiFE) program to prevent falls: trainer's manual. July 12, 2014 by Lindy Clemson, Jo Munro and Maria Fiatarone Singh  
[http://www.amazon.com/Lifestyle-integrated-Functional-Exercise-program-prevent/dp/1743324154/ref=pd\\_bxgy\\_14\\_img\\_2?ie=UTF8&refRID=0A5V4Q35E24R52N950S1](http://www.amazon.com/Lifestyle-integrated-Functional-Exercise-program-prevent/dp/1743324154/ref=pd_bxgy_14_img_2?ie=UTF8&refRID=0A5V4Q35E24R52N950S1)

## References

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Clemson L, Fiatarone Singh M, Munro J. (2014) *Lifestyle-Integrated Functional Exercise (LiFE) Program to reduce falls. Participant & Trainer manuals*. Sydney: Sydney University Press

Gillespie LD, Robertson MC, Gillespie WJ, et al. (2012) Interventions for preventing falls in older people living in the community. *Cochrane Database of Systematic Reviews* 9: CD007

Sherrington C, Tiedemann A, et al. (2011) Exercise to prevent falls in older adults: an updated meta-analysis and best practice recommendations. *NSW Public Health Bull* 22: 78-83146