

Lifestyle-integrated Functional Exercise (LiFE) program to prevent falls

Participant's manual

Lindy Clemson, Jo Munro & Maria Fiatarone Singh



Published by SYDNEY UNIVERSITY PRESS

- © Sydney University Press 2014
- © Lindy Clemson, Jo Munro and Maria Fiatarone Singh 2014

Faculty of Health Sciences, The University of Sydney

Reproduction and Communication for other purposes

Except as permitted under the Act, no part of this edition may be reproduced, stored in a retrieval system, or communicated in any form or by any means without prior written permission. All requests for reproduction or communication should be made to Sydney University Press at the address below: Sydney University Press

Fisher Library F03

University of Sydney NSW 2006

AUSTRALIA

Email: sup.info@sydney.edu.au

National Library of Australia Cataloguing-in-Publication Data

Author: Clemson, Lindy, author.

Title: Lifestyle-integrated Functional Exercise (LiFE) program

to prevent falls: participant's manual / Lindy Clemson,

Jo Munro & Maria Fiatarone Singh.

ISBN: 9781743324004 (pbk)

Notes: Includes index.

Subjects: Lifestyle-integrated Functional Exercise (Program)

Falls (Accidents)--Prevention--Popular works.

Exercise--Popular works.

Physical fitness--Popular works.

Other Authors/Contributors:

Munro, Joanne, author. Singh, Maria, author.

Dewey Number:

613.0438

Cover design by Miguel Yamin

The Lifestyle-integrated Functional Exercise (LiFE) program has been proven effective in reducing the risk of falls and in improving capacity for functional everyday activity. Balance and strength, particularly ankle strength, can be markedly improved and maintained if the LiFE program becomes part of daily routines.

The LiFE activities have all been designed to help you keep active and reduce your chance of falling.

The program was developed and piloted as part of a University of Sydney Bridging Grant and the program was tested in a randomised trial funded by a National Health & Medical Research project grant ID 402682. The results of this trial were published in the British Medical Journal, 2012. See section on 'References' on page 107 for full bibliographic details.

We acknowledge the contribution to manual development by Anita Bundy and Trish O'Loughlin and the other therapists of the LiFE research project.

Contents

1. Introduction	1
Walking with confidence	5
2. Balance training	11
LiFE principles of balance training	13
LiFE balance activities	15
3. Balance activities	21
4. More ways to challenge your balance	39
5. Strength training	47
LiFE principles of strength training	51
LiFE strength activities	52
6. Strength activities	57
7. Changing your life with LiFE	83
Help yourself to remember to do the activities	86
Recording your activities	87
Increasing your physical activity	88
8. Stories and quotes	91
9. Notes	97
10. References	105
11 Index	109



Introduction

Welcome to the Lifestyle-integrated Functional Exercise (LiFE) program. The activities in this program have been designed to improve and maintain your balance and the muscle strength in your hips, knees and ankles.

The LiFE program is a new approach. In this program you will learn how to incorporate balance and strength activities into your everyday tasks and routines.

We know that balance and strength training by people in their 70s, 80s and 90s help prevent falls.

As well as preventing falls, there are other benefits of improving your balance and strength:

- Your walking will improve.
- You will feel better.
- You will have more energy.
- You will find it easier to do the household chores such as picking up the groceries.
- You will stay independent.

Our society today encourages us to find ways of doing less. We use remote controls; we get our groceries delivered; we drive everywhere. Because of this we need to work harder to keep up our strength and balance. The old saying still applies: 'If you don't use it, you lose it'. The more you use it, the less chance there is that you will lose it. You can increase your muscle strength and improve your balance, but you have to work on these regularly to make these improvements.

This program is a lifestyle approach to help you modify everyday activities – even the way you stand up or pick something up – into ways of improving your strength and balance.

Habits can be changed gradually by thinking about what you do and how you do it. There are many opportunities in our everyday life to incorporate balance practice and strength training.

You will learn the principles behind improving your balance and strength and apply these principles to daily activities.

You will look for ways that you can turn your daily tasks into opportunities for improving your strength and balance. Instead of looking for ways to avoid doing things, you will look for ways to add these activities into your daily routine.

As your balance and strength improve you will be able to do more walking and other physical activities. You should think about ways that you can increase the amount of physical activity that you do.

You can increase your physical activity in some simple ways:

- Use the stairs whenever possible.
- Change the channel at the TV instead of using the remote.
- Get off the bus one stop earlier.
- Walk all the way to the traffic lights to cross the road.
- Park slightly further from the shops.
- Walk to the shops instead of driving.

Walking with confidence

It is important to think about the way you walk. Many older people shuffle because it 'makes them feel steadier'. However, shuffling and not lifting your feet is more likely to make you trip and fall. When you walk you should try to put your heel down first and push off with your toes.

The program will help to improve your walking.

Shuffling felt 'safe'. But now I understand that shuffling won't necessarily prevent me from falling. It may even cause me to trip more easily because I'm not lifting my feet. (Dorothy)

When I saw what 'normal' walking was supposed to look like, I could see how my walking had really gone downhill. (Robert)

Key points – the LiFE program

- You will learn the balance and muscle strengthening principles.
 These form the basis of this program. You will learn these principles and how to apply them to your life and daily activities.
- To improve your balance you need to practise activities that challenge your balance.
 - You need to keep progressing to more challenging activities. You should 'let go but keep up the flow'.
- To improve your strength you need to make your muscles work harder.
 - You should 'load your muscles' whenever you can.
- You will change your habits.
 - You will include balance and strength activities in your everyday tasks. You will need to practise to make them part of your usual routine.
- You will learn to look for opportunities in your daily tasks where you can include the balance and strength activities.
 - As time goes on you will find more and more opportunities. Your ideas can be passed on to others.
- You will learn how to make the exercise program more effective.
- The program will make it easier for you to become more physically active.
 - You will enhance your physical fitness by being more active in your daily routines.
- You will need to think about safety.
 - Where you do your activities, how much support you need, what type of shoes you are wearing, how tired you are these are just some of the things you need to think about when doing your activities.

Precautions

The benefits of exercise are almost always positive. There are some sensations that are normal to experience when starting exercises. There are others that are not desirable. You should contact your therapist if you are concerned.

Soreness from training

You may experience some muscle soreness at first or if you do a lot of exercises. This is a natural part of muscle rebuilding and repair towards building larger, stronger muscles. It is a normal feeling of muscle soreness that peaks about one to two days after training. It will lessen and disappear as you train regularly.

If you experience any sharp pain in the muscles or joints you are training stop the activity and contact your therapist. You may have upgraded too quickly.

Knee bends (squatting)

If you have increased knee pain with squatting you should stop and contact your therapist. You may need to modify the way you do your squats or the activities that you do them with.

Stop exercising and contact your GP if you experience:

- chest pain
- dizziness
- severe shortness of breath
- significant change in musculoskeletal pain
- any other severe symptoms.

Making the program more effective

Make changes to your surroundings

We generally try to organise our home to make life easy. Objects that we use all the time we have in an easy-to-get-to spot. As part of this program we would like you to think of ways that you can 'unsimplify' things and turn everyday tasks into opportunities for improving your strength and balance.

Change where you keep things, or how you do things, to encourage you to do strength and balance activities. For example:

- Put the dishwashing liquid on a lower shelf then bend your knees to reach it.
- Put the washing powder on a lower shelf.
- Put the pegs on the ground and bend your knees to get them.
- Put your cup in a higher cupboard and stand on your toes to reach it.
- Make more trips to carry the shopping up the stairs.
- Keep the remote on top of the TV you won't lose it and you will have to stand and walk to the TV to get it.



I was trying to think of ways I could increase the number of times that I bend my knees. I bent them to get the dishwashing liquid out of the cupboard, so I thought, if I move the toothpaste to underneath the [bathroom] sink, then I will need to bend my knees to the reach the toothpaste. (Harry)