

Welcome to the Active Lives session about how to build muscle strength and improve balance.

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### Strength and Balance Quiz - Questions

1. You have to go to the gym or lift heavy weights to improve your strength – True or false?
2. Strength and balance training can help to make your walking and balance skills more like those of a younger adult – True or false?
3. Strength and balance training activities can be good for brain health – True or false?
4. Activities to build muscle strength are good for your heart – True or false?
5. Doing activities to help with your strength and balance makes you less likely to fall and get injured – True or false?

## Getting Active Quiz – Answers

### 1. FALSE

You can help to build muscle strength with simple activities and movements. These can be done at home and built into your daily routines.

You can start just by using your own bodyweight. This means using your muscles to practise movements of different parts of your body. This helps to build up strength over time.

You can find out more about how to do activities like this later in this session.

### 2. TRUE

Balance and walking can get harder as we get older, but strength and balance training helps.

For older adults, doing strength and balance training has been shown to:

- Increase balance ability
- Improve how quickly and easily they can walk
- Help with confidence in moving around

All of these can make older adults' walking and balance skills more like a younger adult's!

Being able to move around easily and feeling confident on your feet makes day-to-day jobs easier.

Having stronger muscles and better balance can make everyday tasks easier.

Lots of movements need you to use your muscles and be steady on your feet without thinking about it.

For example:

- Getting out of the chair or bed (pushing up using your leg and tummy muscles)
- Carrying shopping (using arm, shoulder and back muscles to hold the weight of the items)
- Undoing bottles/jars, holding a handrail (using hand and arm muscles to grip objects)
- Walking on stairs or on stony paths (transferring weight and balancing on uneven surfaces)

By building strength in your muscles and improving your balance, it can be easier for you to make these types of movements. This also means you are more likely to be able to keep doing the activities you enjoy doing.

#### **Research shows...**

Older adults who took part in ten week programmes of strength training increased their walking speed by up to 15%.

### 3. TRUE

As well as working your muscles, strength and balance training uses the brain too!

The movements you make involve messages being passed backwards and forwards between your brain and your muscles.

Because of this, the parts of the brain that coordinate the movements get a work-out too!

**Research shows...**

Older adults who completed a strength training programme once or twice a week for a year showed improvements in attention and problem-solving skills.

4. TRUE

Doing strength training exercises is good for the heart in several ways:

- It is linked to having lower blood pressure
- It can help with managing blood sugar levels and Type 2 diabetes
- It can help with reducing body fat

All of these give the heart a better chance of staying healthier for longer.

5. TRUE

Lots of research has shown that helping people to improve their balance and muscle strength is a great way to reduce their risk of falling.

Simple exercises that include practising balancing, and strengthening muscles (especially around the ankles, hips and knees) are a safe and helpful way to make people steadier on their feet.

**Research shows...**

Older adults taking part in home-based programmes of strength and balance exercises reduced their risk of falling by between 20 and 30%.

## Why is Strength and Balance Important?

Having strong muscles and good balance as you get older helps you to:

- carry on doing the activities you need to do to look after yourself
- keep doing the activities you enjoy doing
- be safer getting around, and less likely to fall and get hurt

Keeping active is a great way to do this but it can be very easy to be less active than we could be in everyday life. For example, by driving everywhere, doing shopping online, using remote controls.

That's why it is so important to make sure you are **keeping your muscles working and strong**. The great thing is, there are lots of **simple ways** that you can help to build up your muscle strength and improve your balance. Practising strength and balance activities like these can also **give the brain a workout too**.

## Concerns

It's normal to have some concerns about trying new activities.

Below are some of the most common concerns people raise.

### 1. I'm concerned the activities will be too difficult

You might feel like you're not strong or fit enough, or that your balance isn't good enough to do the activities.

It **doesn't matter if you're not very strong to start with**. There are simple movements that you can **start very gently**, sitting down if you need to.

As you build strength and your balance gets better you might find that you can **try more challenging movements**.

You will get information about exactly how to do each movement, and ideas about how you can fit each one into your daily life.

#### Lynda's Story

" At first, I was worried that I wouldn't really be able to do any exercises because I'm not very fit and I get tired easily. But it was great because there were really easy leg exercises that you could do sitting in the chair to start with. I started with these whilst I was watching TV in the evening. Now I can do some of the standing ones, holding on to the back of the chair!"

### 2. I'm concerned the activities will be painful

You might be put off doing the activities because of pain or stiffness in your muscles and joints.

Strength and balance training can actually help with pain in the long term. This is because it helps to build strength in muscles to make it easier and less tiring to move around.

You might get some muscle aches to begin with, but as you get stronger they will get better. The important thing to remember is to start gently and build up to more challenging movements slowly.

If you are finding an activity painful, try doing it more gently or slowly. There are different levels available to suit you. If you still have serious concerns about pain, you should check with your doctor before continuing.

### 3. I think I'm too unsteady on my feet

Some people feel like they are too unsteady on their feet to do strength and balance training.

It doesn't matter if your balance isn't very good right now – practicing these activities can help you to be more steady. You can start with gentle activities and build up.

If you don't feel steady on your feet, there are movements that you can try sitting down to start with. These help with building strength in your legs to help you to be steadier on your feet.

When you feel ready to try something a bit more challenging, you can also hold on to objects for support. For example, you might hold on to your kitchen worktop or the back of your sofa whilst doing some standing-based activities.

### 4. I don't know how I will fit the activities in

Fitting new activities into a busy life is often difficult. The best thing about this programme is that it has been designed so that it fits in to your daily activities.

You might need to find out how to do some of the movements to start, but there are step-by-step instructions to help.

Once you know the movements, there are lots of ideas about how you can fit them in to your normal daily activities. This means that you won't have to set aside lots of time just to do exercises.

For example, you might spend five minutes doing some heel and toe raises whilst you read the paper. You could also do some heel-walking whenever you move between rooms in your house.

#### **Jim's Story**

“For me I was concerned about having time to do the exercises. I still work three mornings a week and we look after our grandchildren on some days too. So once you fit in all the other day to day jobs and visiting friends and family and things, I didn't see how I had time for doing exercises!

Once I found out more about strength and balance exercises though I realised they weren't something that has to take up big parts of your day. When you have a spare five or ten minutes you can just do a few exercises. You don't even have to stop what you're doing! Now, when I brush my teeth in the morning and at night, I do it standing on one leg to practice balancing!”

## About Strength and Balance Training

This programme will give you ideas about simple exercises to improve your strength and balance, and will help you to include these in daily life activities. It is good for keeping muscles strong and for practicing balance skills even if you don't have any problems.

By including the strength and balance movements in your daily routine, your normal day-to-day activities will be helping to improve your strength and balance!

Once you are used to the types of movements you need to do, if you want to move on you will be able to set your own strength and balance exercise plan.

## Staying Safe

The activities that you can try are very safe and are recommended by lots of physiotherapists as part of strength and balance training programmes.

If you still have concerns about being safe whilst doing them, there are a few things you can do to help:

- Practise the movements at home before trying them in a new place
- Always do the activities somewhere you feel safe and comfortable
- Wear comfortable and practical clothes and shoes so you can move easily
- Only make the movements more challenging in SMALL STEPS
- If you have serious concerns about whether you should carry on with an activity, check with your doctor.

The key to building strength and improving balance is making your muscles work a bit harder and practicing your balance.

## How will the activities work my muscles harder?

**By helping you to use your muscles more:** e.g. repeating the same movement several times.

**By encouraging you to move slowly:** e.g. sitting down slowly rather than 'falling' into a chair.

**By helping you to use fewer muscles to move the same weight:** e.g. standing up without using your arms to push up.

## How will the activities improve my balance?

The activities will carefully get you to move outside of your 'balance comfort zone' a tiny bit at a time. Your 'balance comfort zone' includes any movements and positions where you feel completely stable and steady.

The more you do these activities, the more you will find that your 'balance comfort zone' gets bigger to include more movements and positions. This means that when you find yourself in a situation that needs you to make those movements, you will already be used to it.

### Finding activities that are right for you

On the website, you were asked about your strength and balance now.

- When you think about your **STRENGTH**, think about how you would find activities like standing up out of a chair without using your hands or arms to push you up.
- When you think about your **BALANCE**, think about how you would find activities like standing on one leg.

### When you used the website, you said

"I have quite a few problems with strength and balance"

This booklet has activities that are specially designed to be safe for people like you.

If you are doing your activities at the most difficult level and are still finding them easy, you might like to try some more challenging movements. To see more challenging activities, visit the Active Brains Website and click on '**Exercise Instructions**' from the '**Strength and Balance Main Menu**'.

You can see videos of all these movements on the Active Brains website.



## I have quite a few problems with strength and balance

These activities are suitable if you don't feel very steady on your feet. They can be done sitting down and will help you to build up some strength in your legs and ankles.

### 1. Toe and heel lifts

These are gentle movements to do when sitting down that will help to strengthen muscles in your ankle. Strong muscles in your ankle are important for keeping you stable and to avoid falling.

How do I make this movement?	How can I fit this in to my daily activities?
<p><b>Toe Lifts</b></p> <ul style="list-style-type: none"> <li>✓ Sit on a chair/bed with your feet flat on the floor and slightly apart.</li> <li>✓ With both feet, slowly lift your toes upwards (as high as you can) keeping your heels on the floor</li> <li>✓ Hold for 3-5 seconds, then slowly move your toes back to the floor</li> <li>✓ Repeat this as many times as you can (up to 12 times)</li> </ul>	<p>This exercise can be done anytime you are sitting down.</p> <p>You might like to try it:</p> <ul style="list-style-type: none"> <li>- When you wake up, whilst sitting on the edge of your bed</li> <li>- When you sit down to watch TV or read a book</li> <li>- When waiting in the doctor's surgery or at the hairdressers</li> <li>- When you are a passenger in a car or waiting for a bus or taxi.</li> <li>- On a train or aeroplane</li> </ul>
<p><b>Heel Lifts</b></p> <ul style="list-style-type: none"> <li>✓ Sit on a chair/bed with your feet flat on the floor and slightly apart.</li> <li>✓ With both feet, slowly lift your heels upwards (as high as you can) keeping your toes on the floor</li> <li>✓ Hold for 3-5 seconds, then slowly move your heels back to the floor</li> <li>✓ Repeat this as many times as you can (up to 12 times)</li> </ul>	

## 2. Seated Knee Bend

This movement can be done whilst sitting down and will help to strengthen the muscles around your knee.

<b>How do I make this movement?</b>	<b>How can I fit this in to my daily activities?</b>
<ul style="list-style-type: none"> <li>✓ Sit on a chair/bed with your feet flat on the floor and slightly apart</li> <li>✓ With one leg, slowly slide your foot forwards along the floor and then gently lift it off the ground</li> <li>✓ Raise your leg until it is straight in front of you (or as high as you can) pointing your toes to the ceiling</li> <li>✓ Hold for 3-5 seconds, then slowly move your foot back to the floor</li> <li>✓ Repeat this movement as many times as you can manage (up to 12 times)</li> <li>✓ Remember to swap and do the same on the other leg!</li> </ul>	<p>This exercise can be done when you are sitting down.</p> <p>You might like to try it:</p> <ul style="list-style-type: none"> <li>- When you wake up in the morning, whilst sitting on the edge of your bed</li> <li>- When you sit down to watch TV or read a book</li> <li>- If you sit down to talk on the phone</li> </ul>

### 3. Tightening Muscles

This activity helps to strengthen lots of the muscles in the tops of your legs and around your hips.

How do I make this movement?	How can I fit this in to my daily activities?
<ul style="list-style-type: none"> <li>✓ Whilst sitting or standing, squeeze all the muscles in the top of your legs and your buttocks as tightly as you can</li> <li>✓ Hold for 3-5 seconds and then relax the muscles again.</li> <li>✓ Repeat as many times as you can</li> </ul>	<p>This activity is really easy to do whilst sitting down or standing up so you can really try it anytime.</p> <p>It's also easy to do without anyone knowing because it doesn't need you to make any big movements.</p> <p>You might want to try it whilst sitting on the edge of the bed before you get up in the morning.</p>

## 4. Sit to Stand

This activity helps to strengthen your leg muscles, especially around your hips and knees.

It is fine to use your fingertips for support on a table or surface if you need to, but try not to use your hands and arms to push yourself up. This makes your legs work harder which will make them stronger!

<b>How do I make this movement?</b>	<b>How can I fit this in to my daily activities?</b>
<ul style="list-style-type: none"> <li>✓ Sit in a chair (e.g. at the dinner table)</li> <li>✓ Shuffle your bottom towards the front of the seat.</li> <li>✓ Make sure your feet are slightly apart and underneath you</li> <li>✓ Try not to rock back and forwards to stand up</li> <li>✓ Lean forwards slightly and push up through your legs.</li> <li>✓ Try to make the movement slow and controlled</li> </ul>	<p>Lots of daily activities will give you a chance to practise moving from sitting to standing:</p> <ul style="list-style-type: none"> <li>- Every time the adverts come on when you are watching TV</li> <li>- Each time you finish a chapter of your book</li> <li>- If you are waiting a while for a bus or train, stand up, move to another seat and sit down again.</li> <li>- If you notice yourself using your arms to push yourself up from sitting, or 'plonking down' into a chair, try it again more slowly.</li> </ul>

## Making the Exercises More Challenging

Over time you will probably find that the activities start to feel easier. This is good because it means your muscles are getting stronger and your balance is getting better. It also means you are ready to make the movements a bit harder!

This is so that the activities carry on making your muscles work hard and keep challenging your balance. It is important to do this in small steps and only when you are ready.

There are a few ways to make your activities more challenging:

### All activities

- Use less support to help you, e.g. if you have been holding on to a surface you could slowly decrease this:
- Change from using two hands to hold on to using one hand
- Then try only holding on some of the time
- Next try not holding on at all

### Strength activities

- Try the movement more slowly
- Hold the movements for longer
- Try the movements with extra weight (e.g. holding water bottles)

### Balance activities

- Try doing or thinking about something else at the same time (e.g. count backwards from 100 in 3s). This makes balancing harder because your brain is trying to do two things at once.
- Try the exercise with your eyes closed. This makes balancing harder because we use our sight to help us balance. Take care - make sure you have a clear space and a door frame or kitchen unit to grasp hold of.

### Setting Goals

The easiest way to build your strength and balance is to start with small, easy goals, and build up to doing a bit more each week. Just making your muscles work a bit harder and practicing your balance a bit more can make a big difference.

Doing a few heel and toe raises whilst waiting for a bus, or some balancing on one leg whilst waiting for the kettle to boil can start to make you stronger without changing your lifestyle too much.

**Which of the strength and balance movements do you want to try to build in to your daily activities this week?**

- Toe Lifts*
- Heel Lifts*
- Seated Knee Bend*
- Tightening Muscles*
- Sit to Stand*
- Bend Knees*
- Stand on Toes*
- Stand on Heels*
- Heel-to-toe Stand*
- One Leg Stand*
- Weight Shift*
- Walk on Toes*
- Walk on Heels*
- Walk up Stairs*
- Sideways Walking*
- Heel-to-Toe Walk*
- Stepping over Objects*
- Changing Direction*

It's easier to meet goals if you **plan how you are going to fit them into your daily life**. For each activity, write down when you are going to complete it.

Activity	When will you complete it?

It's a good idea to write down your goals and put them in a place you will see them, like on a noticeboard or fridge.

You can use the table on the next page to do this.



My Goals

	Activity...	When...
Goal 1		
Goal 2		
Goal 3		