

Staying Fit at Home

Hello and welcome to this guide from the REtirement in ACTion (REACT) study team <https://www.thereactstudy.com/>. Our research is all about older people and physical activity, and we are using this guide to provide practical tips to help older adults keep active at home.

If you haven't done much physical activity for a while, you should begin at a low intensity to make sure you don't injure or overly tire yourself.

If you don't feel confident with your balance while standing, there are many exercises you can do standing where you can hold something for support (for example a kitchen worktop, or the back of a sofa or heavy chair). When you use a kitchen or dining chair to exercise place it against the wall so it cannot tip.



If you would rather become more active starting in a seated position, this is also OK as there are many exercises you can perform while sitting. Make sure you have a safe area to exercise in with no rugs or mats that could move causing you to slip.

The most important outcome is that you move, and the more regularly you can move the better this will be for your health. This is something positive we can do that will have genuine benefits that we can see and feel.

Creating daily habits

In this unusual time, it will be useful to create new daily physical activity habits. As your previous habitual activities have been temporarily suspended, due to social distancing measures, there is space and time for new habits. Building exercise into your day can help you develop a routine and a purpose. There is a lot about our lives that we cannot control at the moment, but we can control our own levels of physical activity.

Warming up

It is important to prepare your body for exercise, especially balance and muscle strengthening movements. To warm up you could march on the spot in your home (perhaps to music which you enjoy), you could walk up and down the garden, or go for a walk outside. (Keeping social distance of course!)

Wherever you chose to walk, do it for at least ten minutes, until your body feels a little warmer, your heart is beating a bit faster and your breathing rate is higher than when you rest. If you are worried about your balance walk on the spot while holding on to a counter top, the back of a sturdy sofa or chest of drawers.

Keeping-up balance

You do not need us to tell you that balance is important. However, when we are inactive, the balance muscles quickly become weak. To avoid stumbles around your house and garden, make sure to keep up the following exercises:



Tight Rope

Walking forwards placing one foot directly in front of the other. Have access to furniture (i.e. kitchen worktop) to aid balance when necessary.

Single Leg balance with knee lift

Position yourself near a stable surface (like the back of a chair or table top) to assist with balance should you need it. Stand on one leg and slowly lift the other knee upwards and in front of you towards hip height. Try holding this position for a short period of time (5 to 20 seconds) and then swap legs.



Sideways Cross Step

Stand facing a work surface (kitchen worktop or dining room table) and slowly step one foot across the front of the other so you begin moving in a sideways direction. The aim is to move as smoothly as possible.

Leg strength

The strength in our legs is what gives us independence. Think about it. It is likely that most of the things you enjoy doing or the things you have to do in daily life will require leg strength, for example walking to the shops, gardening and stepping on to a bus.

Like balance, the strength in our legs will quickly fade if we do not use them. The term ‘use it or lose it’ is a little crude, but very true in this regard.

To keep your legs strong and able to help you enjoy life, make sure to practice the following exercises:

Step up

Using either the stairs in your house or a step, ensure you have access furniture to hold onto to aid balance. Try to push your weight towards the back of the foot when stepping up.



Stand to sit

When standing up, start by using your hands to push against the arms of a chair. Over time rely less on your arms and more on your leg muscle to stand.

Try performing 3 in a row, followed by 3 minutes rest before repeating another 3 repetitions as a starting point.



Calf Raises

Using a chair or table for support, bring your body weight towards the front of your feet and raise your heels off the floor.



Arm strength

Keeping your upper body strong is also important. Pushing yourself up from a lying position takes strength in your arms and shoulders. Therefore, try a few of the following exercises with any light weights you have around your house. Cans of food can be useful for this!

Shoulder Press

In a standing or seated position, start with your hands out to the side and level with your ears then raise your arms directly above your head. At all times try to maintain an upright posture. Use tinned food or water bottles as weights.



Bicep curl

Using tinned food, water bottles or any other easy to grip objects start with your hands down by your side with the palms facing forward. Bend your elbow to bring your hands to chest height. Whilst performing this exercise maintain a strong grip to improve forearm strength as well as biceps.



Variety and Progressions

Repeating the same exercises at the same intensity can get a little boring and it will not help you to see continuous improvements with your strength and balance. There are many ways to increase the difficulty / intensity of an exercise without the need for additional equipment:

- **Increasing the number of repetitions:** for example, stand-up and sit down 10 times in a row instead of 5.
- **Increase the time spent performing the activity:** for example, increase the amount of time spent not sitting in a chair or when balancing on one leg, with your arms holding onto a stable support, count to 20 seconds instead of 10 seconds.
- **Speed of movement:** for example, a stand-to-sit exercise may take up to 10 seconds to perform. Once you have become familiar and confident performing this movement regularly, you may wish to speed up the time it takes you to stand up from a seated position from 5 seconds down to 3 seconds and then to 2 seconds (do not worry about the length of time it takes to sit down from a standing position).

Cool down

After your home-based exercise session, which may last anything from 10 minutes to an hour (that is up to you and how much energy you have), it is good to spend a few minutes stretching and cooling down. Here are a few tips for a quick cool down routine:

- **Breathe:** Take a few deep breaths to calm your breathing if it is a bit faster than normal.
- **Gentle stretches:** Take a few gentle stretches for your arms and your legs. See below for some examples.
- **Keep moving:** Keep moving slowly, perhaps marching on the spot, until your heart rate and your breath have returned to your normal resting state.

Shoulder/Chest Stretch

Stand alongside a doorway with your shoulder and elbow bent at 90 degrees, with the inside portion of your forearm flat against the frame of the door. Place your foot nearest the door frame (same side of the body as the arm up against the door frame) slightly forward. Slowly rotate your torso inwards until you feel a stretch at the front of the shoulder.



Standing Calf Stretch

Whilst standing and facing a solid structure (for example a wall), adopt a split stance (place your front foot approximately 30cm away from the wall and your rear foot as far behind you whilst ensuring you can comfortably keep your heel flat on the floor). Push against the wall and gently force your rear heel into the floor. You should feel a stretch along the back of your rear calf.



Breaking up sitting time

In this situation where we are staying at home as much as possible, it is likely that you will be sitting down much more than usual. However, sitting down for extended periods of time will diminish your physical fitness, balance and whole-body muscle strength. That is why making extra efforts to break up your sitting time is especially important now.

Try to take the following steps:

- Stand up/walk around for at least two minutes after every hour of sitting. (Perhaps set a timer to stay aware of the time).
- When you are talking on the phone, try to stand up or walk around the house/garden.
- When you have been sitting for several hours, make a point of taking a short walking break, or doing some chores that involve standing or walking around.
- This is not a complete list, so think of a few more actions that will work for you!



Thank you for taking the time to read this booklet.

We hope it will be useful to you.

Keep safe!
Keep active!
Stay well!

With the very best wishes from
the whole REACT team

Chief Investigator

Dr Afroditi Stathi (a.stathi@bham.ac.uk)

Office: +44 (0)121 415 8489

Principal Investigator in Birmingham

Professor Janice L. Thompson (j.thompson.1@bham.ac.uk)

Office: +44 (0)121 414 3084 / +44 (0)121 414 4451

Principal Investigator in Exeter

Associate Professor Colin Greaves (c.j.greaves@bham.ac.uk)

Office: +44 (0)121 414 8061

Trial Manager

Dr Janet Withall (j.withall@bath.ac.uk)

Office: +44 (0)1225 385 781

Research Fellows

Dr Jolanthe de Koning, University of Bath (J.de.Koning@bath.ac.uk)

Office: +44 (0)1225 383652

Sarah Moorlock, University of Birmingham (s.j.moorlock@bham.ac.uk)

Office: +44 (0)121 4148725

Jessica Bollen, University of Exeter, (j.bollen@exeter.ac.uk)

Office: +44 (0)1392 726049

Co-Applicants

Emeritus Professor Ken Fox, University of Bristol

Professor Selena Gray, University of the West of England

Professor Colin Green, University of Exeter

Professor Heidi Johansen-Berg, University of Oxford

Professor James Bilzon, University of Bath

Dr Antonieta Medina-Lara, University of Exeter

Gordon Taylor, University of Exeter

Strength and Conditioning Consultant

Dr Pete Ladlow, UK Defence Medical Rehabilitation Centre

Academic advisors

Professor Jack Guralnik, University of Maryland (USA)

Professor Jack Rejeski, Wake-Forest University (USA)

The REACT study is funded by the National Institute of Health Research (NIHR) Public Health Research (PHR) programme. The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health.