





RECOVERY AFTER COVID-19

Exercise Handbook



Reproduced with thanks from Solent NHS trust and the British Lung foundation for agreeing to allow parts of their exercise handbook to be used in this leaflet. Find out more at www. blf.org.uk.







How will being active affect my breathing?

It's normal to get breathless when you are active. If you live with a lung condition (illness), you may feel worried or scared when this happens. If you panic, it can make you feel even more breathless. The key is to stay calm and learn ways to manage your breathlessness (being short of breath).

Many people are surprised by it, but getting breathless when you are active is good for you!

If you avoid tasks that make you out of breath, your muscles become weaker. Weaker muscles need more oxygen to work. Over time you may feel more and more breathless. This is called the vicious (bad) cycle of inactivity.





The good news is you can break this bad cycle! By being more active you can make your muscles stronger. This can also help your body use oxygen better. This positive (good) cycle will help you feel less out of breath when you do everyday tasks.





How active should I try to be?

This might seem hard to do - think how you could do a little every day. Even 10 minutes can help you. Over time, you'll get fitter and be able to do more.

Sit less

This is one of the biggest changes you can make. Try not to sit down for too long and increase the number of steps you take every day.

Aerobic activity (also known as "cardio" or improving your fitness).

Each week, try to do at least 150 minutes of activities like brisk walking, dancing, gardening, housework or the aerobic exercises. Aerobic activities work your heart and lungs. Your body warms up, your heart beats faster and your breathing is quicker and deeper than normal. Aim to get moderately (medium levels) out of breath – use the talk test to check you're working at the right level.

Strength activity

Aim to do the strength exercises to improve your muscle strength at least twice a week. You could also do yoga. You can do this more often if you work on different muscles each time. But give each muscle group a rest day after working them.

Activity to improve balance and coordination (using parts of the body together well)

If you're older or at risk of falling, aim to include activity that improves your coordination and balance at least one day a week. This will help reduce your risk of falling. If you have poor balance, we've marked exercises that will help you with a star.







Ways of breathing to help me exercise

To help you feel in control of your breathing when you exercise, try these methods. You can watch them being shown at **blf.org.uk/exercise**

Relaxed slow deep breathing is very useful when you're active. Use it from the start of an activity that makes you out of breath. For example, walking or making the bed.

How do I do it?

As you start to exert yourself, slow down your breathing and breathe in more deeply. Breathe in through your nose if you can. Use it with pursed-lips breathing or blow-as-you-go or with both other techniques.

Pursed-lips breathing can be used at any time to help you control your breathing. You can also use it while you are doing something that makes you breathless to help you feel less short of breath.

How do I do it?

Breathe in gently through your nose, then purse your lips as though you were going to blow out a candle. Blow out with your lips in this pursed position. Imagine blowing out a candle when you breathe out. Blow out for as long as is comfortable – don't force your lungs to empty.

Blow-as-you-go helps make tasks and activities easier. Use it while you're doing something that makes you breathless. You can use it with pursed-lips breathing.

How do I do it?

Breathe in before you make the effort. Then breathe out while you're making the effort. For example, when lifting a heavy bag, breathe in before you lift the bag, then breathe out as you lift it. Try pursing your lips as you blow out.

Paced breathing is useful when you are active, for example, walking or climbing stairs. You pace your steps to your breathing. You can use it at the same time as pursedlips breathing and blow as you go.

How do I do it?

Count to yourself as you walk or move. For example, breathe in for one step and then take either one or two steps as you breathe out. Take more steps as you breathe in or as you breathe out, if that feels better for you. Try different combinations to find what works best for you - for example, one step in, two steps out.



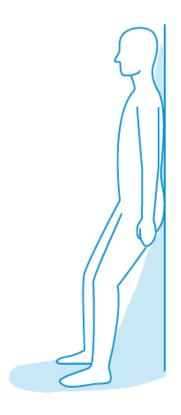




Positions to help you recover when you get out of breath

When you are out of breath, you can use some positions (how you are standing or sitting) to help you to be more relaxed when breathing. This can help you recover more quickly.

Try one of these positions when you need to. Make sure that your hands are loose and relaxed. If these positions are not comfortable, then sit upright but stay relaxed, with your arms supported.













How can I stay safe when I exercise?

It's important to look after yourself while you are active

Make sure you:

- Start slowly and gradually build up.
- Warm up before and cool down after exercising.
- If you use an inhaler, carry it with you. Use it when you need to. Take your inhaler 5-20 minutes before your exercise session if you know exercise makes your chest tight or wheezy.
- Wear loose, comfortable clothing and supportive non-slip shoes, like trainers.
- Drink plenty of water.
- Wait for at least an hour after eating before you exercise.
- If you have a glyceryl trinitrate (GTN) spray, have it with you.

STOP if you get any sudden symptoms including:

- Chest pain or tightness.
- Feeling dizzy, sick, clammy or cold.
- Feeling more wheezy than normal.
- Sore joints or muscle weakness.

Get advice from your GP or health care professional if you feel any of the above or call 999 in an emergency.

Remember, it's not bad for you to get out of breath when you do things that need some effort. Be active at a level that's right for you – use the 'talk test'.

The talk test

During an activity or exercise, a quick way to check if you're working at the right level for you is to say out loud:

'This activity is doing me good!'

- If you can say this with two or three stops for breath, you're working at a moderate level. This is your aim.
- If you can say it without stopping, increase the effort.
- If you can't speak, or can't say more than one word at a time, **slow down**.







How hard should I work?

For **aerobic activity** you want to feel **moderately** to **somewhat severely breathless**. You may feel slightly sweaty and your heart will beat faster too. This is normal. Use this scale to help you to see how hard you need to work – the words describe how short of breath you feel:

0	Nothing at all
0.5	Very, very slight (just noticeable)
1	Very slight
2	Slight
3	Moderate
4	Somewhat severe
5	Severe
6	
7	Very severe
8	
9	Very, very severe
10	Maximal

During **strength exercises**, your muscles work hard for a short time. The muscles you are working should feel they're working somewhat hard.





What equipment do I need to exercise?

You can do all these exercises at home. You'll need:

- a stable, high-backed chair, such as a dining room chair
- some arm weights (see below for how to make weights at home)
- a clear section of wall or a closed door
- a clock or watch
- a clear area to exercise in for example, remove rugs to make sure you don't trip

Make your own weights by filling plastic milk or juice bottles with water. A 1-litre bottle filled with water will weigh 1 kilogram, a 2-litre bottle will weigh 2kg, and so on. Use bottles with a built-in handle, such as a milk bottle.

If you need heavier weights, you can fill them with sand or gravel. Weigh them on your kitchen or bathroom scales to get the right weight.

Or you could use exercise bands (known as resistance bands), or hand and ankle weights, if you have them.

Before you start to exercise

Below there is a list of exercises for you to choose from. At first, choose what works best for you and what you find easiest. Then try other exercises too and aim to do a bit more each week. Choose what you enjoy doing.

You can watch the exercises online at blf.org.uk/exercise



Always remember to warm up before you exercise, and to cool down and stretch afterwards. If you've already been to pulmonary rehabilitation, you may know which exercises are best for you. We hope you will get better each week.

To start with, for each session, we recommend you spend:

- 10 minutes warming up
- 20 minutes exercising
- 10 minutes cooling down







My exercise programme

Your exercise session has three parts:

- 1. Warming up
- 2. Main exercises aerobic, strengthening and to help your balance and coordination
- 3. Cooling down and stretching

Think about your posture: sit or stand up tall during each movement. Hold on to a secure surface if you need to steady yourself during any of them.

Exercise levels

The important thing is to exercise at the right level for you. All the exercises are shown at level 1. If you feel happy doing them, we've also suggested ways you could do more in levels 2 and 3.

Warm Up

Try to warm up for 5-10 minutes. The aim is to gently move your joints and slow raise your heart rate. This will increase the blood flow to your heart, lungs and muscles. This gets your body ready for exercise. This also lowers the risk of hurting yourself. By the end of the warm-up you should feel slightly short of breath and a bit warmer.

You can do the warm-up either sitting or standing, whichever is right for you.

Shoulder shrugs

3 times up and down

Slowly lift your shoulders towards your ears then lower them down again.



Shoulder circles

3 times each direction

Keep your arms down by your side, if standing, or on your lap if you're sitting. Slowly move your shoulders round in a circle backwards two to four times, then forwards two to four times.



Head turns

3 times each side

Slowly turn your head to the right. Bring your head back to the centre, then slowly turn to the left.









Head side bends

3 times each side

Slowly move your head down to the right, bringing your ear towards your right shoulder. Don't lift your shoulder up to meet your ear. Bring your head up to the middle. Repeat to the left.



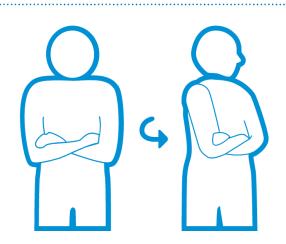
Trunk twists

3 times each side

Sit in a chair or stand with your feet apart and your arms folded in front of you.

Keep your hips still and facing forwards throughout this exercise.

Turn your shoulders, arms and head around to the right. Come back to the centre and then turn to the left. Make sure you twist from the waist – don't just move your arms side to side.

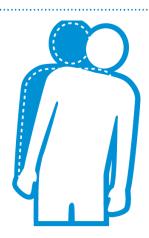


Side bends

3 times each side

Either standing or sitting, keep your body straight with your arms by your sides.

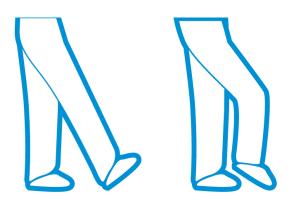
Slide one arm a short way towards the floor, bending sideways. Don't lean forwards or backwards at all. Return to your starting position, and repeat to the other side.



Ankle bends

3 times each leg

Either standing or sitting and using one foot at a time, alternately tap your toes and then your heel on the ground in front of you. Repeat with the other foot.









Warm up your heart and your muscles

This part of the warm-up should make you slightly out of breath. Stand to do these exercises if you can. You may need to hold on to a chair or use a wall for support and balance.

Knee lifts

Up to 1 minute

Slowly lift one knee up, no higher than to your hip, then slowly lower again. Repeat with the other leg.



Heel digs forwards

Up to 1 minute

Tap one heel on the floor in front of you. Place your feet back together again and repeat with the other leg.



Toe taps behind

Up to 1 minute

Keep your body upright, take one foot out behind you, and tap your toes on the floor. Bring your foot back to the middle and repeat with the other leg.



Finish your warm-up with gentle marching on the spot for one minute or until your breathing has returned to normal.







Main Exercise

You can do all the exercises in one session or try a different type of exercise on different days. Or you could just do the ones that you like best. Each time, aim for at least



ten minutes and remember to warm up and cool down!

Aerobic Exercises

Walking is a great way to do exercise. You should try walk a little every day, if you can.

If you have been advised to shield yourself, try to walk around your garden or your hallway, instead of going outside. On the next page are some different exercises if you do not want to walk.

- Have your reliever inhaler with you, if you have one
- If you use a mobility aid, such as a walking frame, use it when you walk.
- Indoors, use a corridor or walk between two places in your home to build up your confidence with walking.

Warm up by starting slow and then gently build up your speed.

To get the most benefit, walk at a speed that makes you out of breath at a medium level. Use the talk test. Walk at this speed for as long as you can.

When you are near the end of your walk, slow your speed to cool down.

Start your aerobic exercise gently and build up as you feel more able. Start with 10 minutes. When you can do this, increase the time by a few minutes, until you can do 30 minutes. If 30 minutes is too long for you, stick to 10 minutes and try to exercise three times a day.

Aim to walk at a medium speed for 10 minutes at first. When you can do this easily, walk for a bit longer, or walk faster, or do both.







Other Aerobic Exercises

You can do these aerobic exercises as well as walking – or instead of walking. Time all these exercises with a clock or stopwatch. The aim is to increase how long you can do them for.

Do exercises 2, 3, and 4 in turn for one to two minutes each and repeat. Build up from a few minutes to 20-30 minutes as you progress.

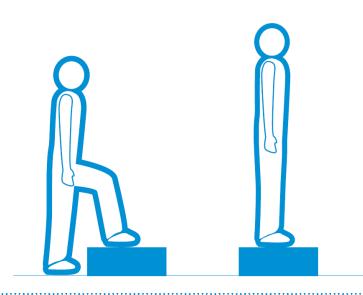
2. Step-ups

Stand in front of a step about six inches high, such as the bottom stair. Step up onto the step with one foot, then bring your other foot up to join it. Step back down again with your first foot and then the other one.

Repeat rhythmically, maintaining a steady pace. The rhythm should be like marching – right, left, right, left. After every 10, swap over to start the step-ups with your other leg.

Level 2 – increase the length of time or the speed of stepping up and down.

Level 3 – try carrying weights as you step up and down as if you were holding shopping.

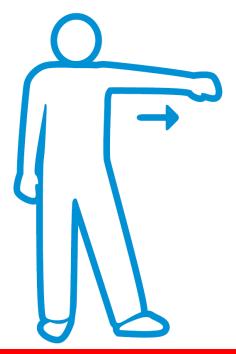


3. Star jacks

Stand tall. Tap your right leg out to the side. Bring your leg back to the middle. Repeat with your left leg. Try to keep a steady rhythm. If you get breathless, you can lean on the back of a chair.

Level 2 – raise your right arm out to the side as you tap your right foot, and bring your arm back to your side as you bring your leg back to the middle. Then use your left leg and arm together in the same way.

Level 3 – increase the length of time or the speed of the exercise. Add a wrist or ankle weight.







4. Marching on the spot

March on the spot indoors.

Level 2 – add arm swings.

Level 3 – increase the time you spend marching or how quickly you march.

Exercise levels

The important thing is to exercise at the right level for you. All the exercises are shown at level 1. If you feel happy doing them, we've also suggested ways you could do more in levels 2 and 3.

Strength exercises

Strong muscles help you be able to do things for yourself. This could be doing things such as holding shopping, gardening, doing DIY or going up stairs.

Always sit or stand tall and keep your back straight during these exercises. Be careful not to bend backwards. Do all the exercises slowly and as shown to get the most out of them.

Your muscles should feel they have worked somewhat hard after the first set of 10, but quite hard after the last set. When you can do three sets easily, use a heavier weight.

You may not feel short of breath when you do these exercises. They should make your muscles feel like they have worked hard, rather than making you short of breath.

Each exercise is done in sets of 10. We recommend you build up to a maximum of three sets for each exercise, resting for up to a minute between sets. So the most you ever need to do of any strengthening exercise is 30 – or three times ten. Rest for a day between doing strength exercises.

It is important to work hard enough to get your muscles stronger.

- Reduce the weight if you feel it's too hard and the weights are too heavy
- Increase the weight if you find the weights are light

tip

Remember to do each exercise in sets of 10. Aim for a maximum of 3 sets.

tip

Remember your breathing techniques

Time your breaths in and out to reduce the effort.

Blow as you go: breathe out on the hardest part of the exercise, for example, when you lift up a weight.







5. Sit to stand *

Use a high chair or stool. Sit forwards. Lean forward slightly, with your nose over your toes, and stand up slowly.

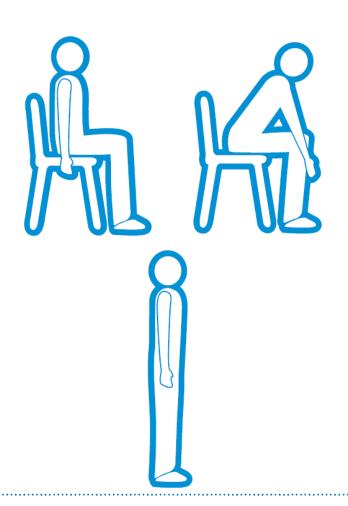
Sit back down slowly, aiming for perfect control.

The slower you can do this exercise the better. Make sure you keep your feet on the floor at all times.

If you can't stand up from the chair without using your arms, see if you can find a higher chair or surface. You can push with your arms to help at first if it's still too hard.

Level 2 – do the exercise from a lower chair and make it even slower – like slow motion.

Level 3 – hold weights in your hands by your sides or a heavy book close to your chest.



6. Wall push-offs

Stand facing a wall with your feet slightly apart about 1 foot away from the wall.

Place your hands on the wall at shoulder height.

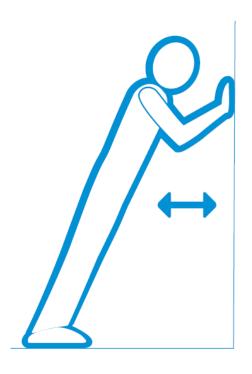
Keep your body straight at all times, from your head to your tail bone.

Slowly bend your elbows, taking your body closer to the wall.

Pause for a moment and then push back to your starting position.

Level 2 – stand further away from the wall.

Level 3 – do the exercise on tiptoes.







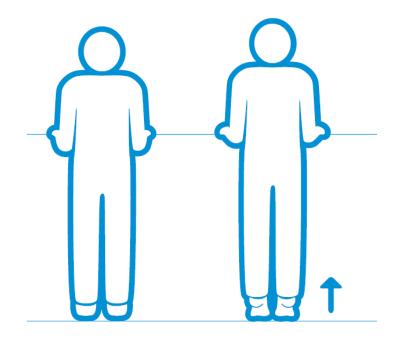


7. Heel raises *

Very gently rest your hands on a sturdy surface to help you balance, without putting any weight through your hands. Slowly rise up onto your tiptoes, then slowly lower down again.

Level 2 – Lower your heels in stages as you count slowly to four.

Level 3 – Stand on one leg at a time.



8. Arm punches

Sit or stand with your arms by your side. Bring your hands up to your chest. Now straighten your arms out in front of you (position A).

Bring your hands back to your chest.

Repeat this action, going a little higher each time (**positions B and C**) until you are reaching up high as if you were hanging up washing.

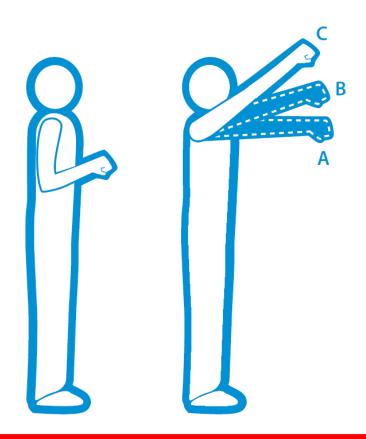
Then repeat exactly in reverse, coming lower each time. Bring your hands back to your chest each time.

Finally, bring your hands back down to your sides.

You may find once is enough to start with.

Level 2 – hold a small weight in your hand – start with 0.5kg.

Level 3 – increase the weight as you feel ready.









9. Squats *

Stand with your feet slightly apart with your hands resting on the back of a chair.

Keeping your back straight, slowly bend your knees as far as you feel comfortable. Do not let them stick out further than your toes.

Make sure your hips stay higher than your knees, and your whole back is upright and not bent.

Pause for a moment, then slowly straighten your knees, returning to your starting position.

Level 2 – don't use a chair and bend your knees a little deeper.

Level 3 – hold weights in your hands down by your sides or a heavy book close to your chest.





10. Bicep curls *

Sit and rest your elbows on a table. Hold weights in your hands with your palms facing upwards.

Gently bend one elbow, bringing the weight up towards your shoulder.

Slowly straighten your arm again and repeat with the other arm.

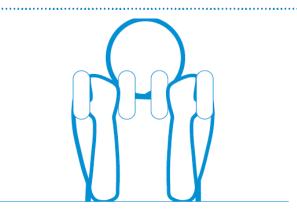
Breathe out as you lift the weight up and breathe in as you lower it.

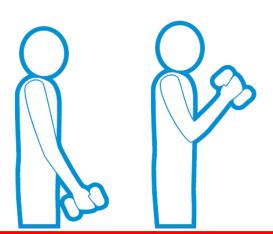
Level 2 – stand to do the exercise and start with arms down by your side.

Level 3 – use both arms at the same time or increase the weight.



Exercises marked with a star are also good for improving your coordination and balance.











11. Hip extensions *

These are tiny movements. You should feel them in the muscles of your bottom and the back of your thigh.

Stand with one leg slightly behind you, resting the ball of your foot on the ground. Keep your knee straight.

Gently lift your right foot one inch off the ground behind you. Keep your body upright and leg straight.

Pause for a moment, then slowly lower your leg back down.

Repeat with the other leg.

Level 2 – hold the position for longer.

Level 3 – add an ankle weight.



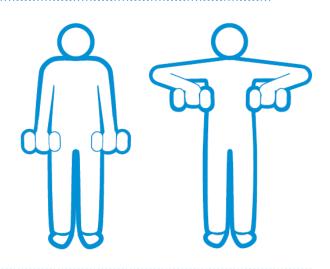
12. Upright rows

Sit or stand with your arms by your side. Hold weights in your hands, your palms downwards.

With your elbows out to the side, raise both your arms up to your shoulders and down again. Breathe in as you bring your arms up and breathe out as you lower them.

Level 2 – increase weight and stand.

Level 3 – increase weight again.



13. Knee extensions

Sit on a chair, feet side by side. Keeping your thighs on the chair, straighten one leg out in front of you, bending at your knee.

Lower your foot back to its starting position. Repeat up to 10 times with one leg.

Repeat with the other leg.

Level 2 – pause for three seconds when your leg is straight.

Level 3 – add an ankle weight - unless your skin is fragile or damaged.









Exercises for balance and coordination

These exercises will help your balance. They will also help with your coordination - This is your ability to use parts of your body together for a task. They are simple, but you'll need to focus to do them well. The movements should not feel easy.

They focus on muscles near your pelvis and spine – your core. These muscles are important. They support your back and help reduce the chances of back problems.

14. Leg slides to the side *

Face a stable surface, like a table or kitchen counter top, and stand with your feet together.

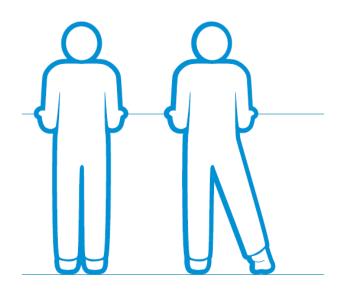
Press your hands firmly down on the surface, as if you were pushing yourself taller. Don't raise your shoulders. At the same time, slide one leg a few inches to the side. Keep your toes facing forwards.

Bring the leg back to the middle, then relax your arms.

Level 1– do this five times on each leg.

Level 2 – do this 10 times on each leg.

Level 3 – add an ankle weight.



15. Mini knee lifts *

This exercise works your inner tummy and back muscles without you knowing it.

Sit up straight with your bottom near the front of your chair and your feet flat on the floor. You should feel your weight on the two prominent bones in your bottom – your sitting bones. Place your hands on your knees.

Now lift one foot about half an inch off the floor, then slowly place on the floor again.

Repeat using the other foot.

Level 2 – hold your arms out to the side.

Level 3 – add a small weight to your ankle.









Cool down and stretch

To finish your exercises safely, cool down so your heart rate slowly gets back to normal. The cool-down involves moving your joints and gently stretching the muscles.

Walking or gentle marching on the spot

A good way to start cooling down is to walk slowly around the room. Do this as you come to the end of your exercise. Or you could march slowly on the spot for about two minutes. You can do this when standing up or sitting down.

Moving your joints

You can do this by doing the first few warm-up exercises of the neck and shoulders.

Stretches

Stretching helps to reduce any aches or soreness you may feel in your muscles in the day or two after exercise. Stretching also improves the amount that your joints can move (flexibility). **None of these stretches should be painful** – you should just feel a slight stretch.

If you can't do every stretch here, just do the ones you can. If you did pulmonary rehabilitation or another exercise class, do the stretches you were shown by your trainer.

Try to hold each stretch for 15-30 seconds. You can stand or sit to stretch.

Side stretch

Stand or sit with your feet apart. Reach your right arm up to the ceiling, then lean over slightly to the left. You should feel a slight stretch down the right-hand side of your body.

Return to the starting position and repeat with the left arm.









Try to hold each stretch for 15-30 seconds. You can stand or sit to stretch.

Tricep or shoulder stretch

Put your right arm out in front of you then, keeping your arm straight, bring it across your body at shoulder height.

Use your left hand to squeeze your right arm towards you until you feel a slight stretch around your right shoulder and the back of your upper arm.

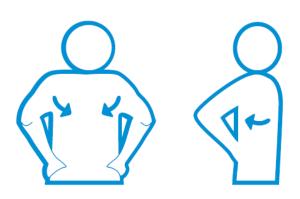
Repeat with the left arm.



Chest stretch

Sit or stand up tall. Place your hands on the lower part of your back or hips.

Pull your shoulders back and squeeze your elbows together behind you. You should feel a slight stretch in the muscles across the front of your chest.



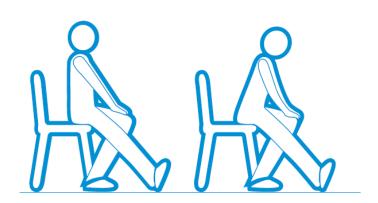
Hamstring stretch

Sit on the edge of a chair, with your back straight and feet flat on the floor. Place your right leg out in front of you, keeping it straight.

Place your hands on your left thigh for support. Sit up as tall as you can.

Bend forwards slightly from your hips, keeping your back straight, until you can feel a slight stretch down the back of the right leg.

Repeat with the left leg.





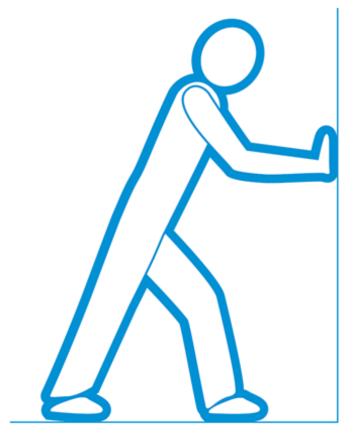




Calf Stretch

Stand with your feet apart, holding on to something sturdy, such as a wall.

Keep your body upright. Step one leg out behind you, keeping both feet pointing forwards. Bend your front knee, keeping the back knee straight and your heel on the floor. You should feel a slight stretch in the calf on your back leg. If you don't, move your back foot further away. Bring your feet together and repeat with the other leg



Quads or thigh stretch

If you have knee or balance problems, do the sitting option.

Level 1 Sitting option

Sit near the front of a sturdy chair that won't tip over, and sit up tall. Move your bottom carefully to the left side of the chair so that only your right bum cheek is on the chair. Slide your left foot behind you so that your knee is pointing down to the floor.

Aim for a straight line from your shoulder to your knee.









Level 2-3 Standing option

Stand behind a chair and turn to the right, holding on to the back of the chair with your left hand. You could also use a wall for support.

Bend your right leg up behind you and, with your right hand, hold on to either your ankle or the back of your trouser leg.

Take your foot towards your bottom, with your knees together and your back upright.

Aim to make a straight line from your right shoulder to your right knee.

You should feel a slight stretch down the front of your thigh. Turn to face the other way and repeat with the other leg.



Remember, it's not bad for you to get out of breath when you do things that need some effort. Be active at a level that's right for you – use the 'talk test'

The talk test

'This activity is doing me good!'

- If you can say the sentence with two or three stops for breath, you're working at a moderate intensity. This is your aim.
- If you can say it without stopping, increase the intensity.
- If you can't speak, or can't say more than one word at a time, slow down.







Exercise record

Use these tables to record your exercises each week. Use the spare rows at the bottom to add your own exercises or activities. You can download more pages at blf.org.uk/exercise.

Activity	Day: Monday	Day:	Day:	Day:	Day:
<u> </u>	Date: 1- May	Date:	Date:	Date:	Date:
Warm-up	5 mins				
1. Walking					
2. Step-ups	1 min				
3. Star jacks	1- Min				
4. Marching on the spot	I Min				
5. Sit to stand	1 x 5				
6. Wall push-offs	1 x 10				
7. Heel raises	1 x 10				
8. Arm punches	1 x 10				
9. Squats	1 x 10				
10. Bicep curls	5 each arm				
11. Hip extensions	5 each leg				
12. Upright rows	1 x 10				
13. Knee extensions	5 each leg				
14. Leg slide to side	5 each leg				
15. Mini knee lifts	5 each leg				
Cool-down	2 mins				
Stretches	I each				