

# Cardiac Rehabilitation

## Home Exercise Programme

## How much physical activity should you do?

These are the government guidelines which all adults should aim for. It is important to progress slowly and gradually from your current activity levels. The Cardiac Rehab Team will give you individualised advice on how to safely and effectively work towards meeting your personal goals.

# Physical activity for adults and older adults

- Benefits health
- Improves sleep
- Maintains healthy weight
- Manages stress
- Improves quality of life

Reduces your chance of

- Type II Diabetes** -40%
- Cardiovascular disease** -35%
- Falls, depression etc.** -30%
- Joint and back pain** -25%
- Cancers (colon and breast)** -20%

Some is good, more is better

Make a start today: it's never too late

Every minute counts

### Be active

at least

# 150

minutes moderate intensity per week

increased breathing able to talk

OR

or a combination of both

at least

# 75

minutes vigorous intensity per week

breathing fast difficulty talking

to keep muscles, bones and joints strong

## Build strength

on at least **2** days a week

### Minimise sedentary time

Break up periods of inactivity

For older adults, to reduce the chance of frailty and falls

### Improve balance

2 days a week

UK Chief Medical Officers' Physical Activity Guidelines 2019

Before you start your exercise routine, check that you have completed the following:

**DO**

- Take medication at least one hour before exercising
- Have your GTN spray/tablets to hand if you're prescribed them
- Wear loose, comfortable clothing and flat soled shoes such as trainers
- Drink plenty of fluids before, during and after exercise
- Try to exercise in a well ventilated room where possible
- When performing the exercises, make sure you have sufficient space to do them.

**DO NOT**

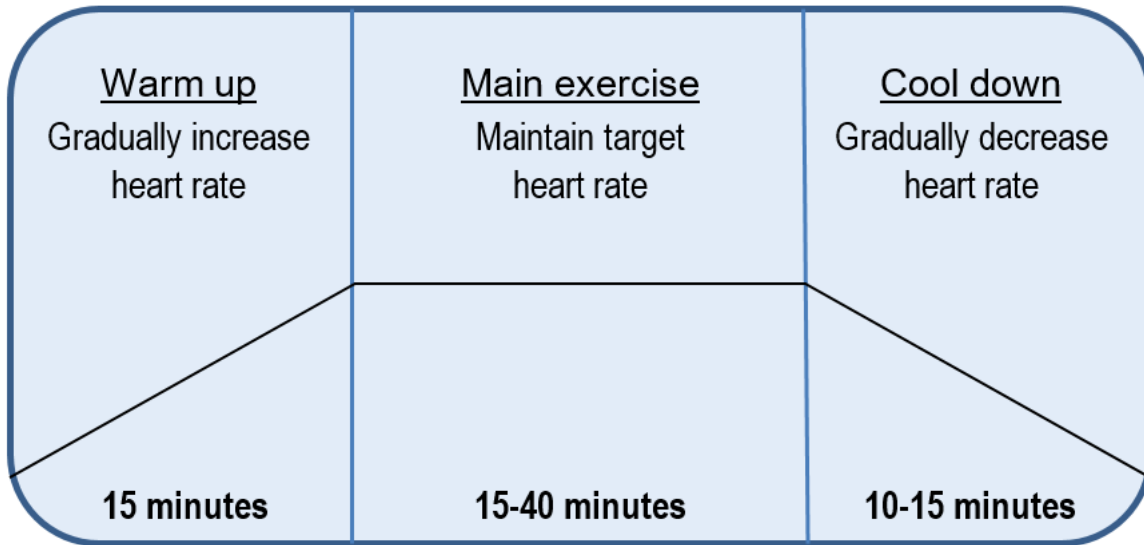
- Exercise if you feel unwell
- Exercise if you are on antibiotics
- Exercise through any chest pain or discomfort
- Exercise straight after eating a large meal (wait for 1-2 hours following eating)

**STOP EXERCISING: if you have**

- Pains or tightness in the chest
- Excessive shortness of breath (you are finding it difficult to talk)
- Dizziness or feeling faint
- Sickness or nausea
- Palpitations
- Feel cold and clammy
- Pain, swelling, stiffness in joints
- Or feel unwell

### Exercise components

You should always think of any activity you are doing as part of a three-part process – warming up and cooling down is just as important as the main exercise itself.



During your exercise routine, you will need to use the BORG Scale (Rating of Perceived Exertion) to rate how you feel.

**How should I feel during exercise?**  
 During exercise you should feel warm and slightly out of breath.

As shown by your Cardiac Rehab Team you should use the BORG scale opposite to grade your exercise. You should use this during your exercise at home.

Number 0 on the scale would be equivalent of no exercise, whereas Number 10 would be the hardest you could imagine working. Working between Number 3 moderate and Number 4 Sort of Hard. You can progress to Number 5/6 if comfortable.

How are you feeling when exercising?	
<b>0</b>	<b>NOTHING AT ALL</b>
<b>1</b>	<b>REALLY EASY</b>
<b>2</b>	<b>EASY</b>
<b>3</b>	<b>MODERATE</b>
<b>4</b>	<b>SORT OF HARD</b>
<b>5</b>	<b>HARD</b>
<b>6</b>	
<b>7</b>	<b>REALLY HARD</b>
<b>8</b>	
<b>9</b>	<b>REALLY, REALLY HARD</b>
<b>10</b>	<b>ABSOLUTE MAXIMUM</b>

## Warm up exercises

A warm up should always be completed before carrying out an exercise session and should take you 10-15 minutes to complete.

The aim of a warm up is to prepare your body for the activity it is about to do. It does this by directing more blood to where it is needed during exercise, such as the heart and muscles. It also warms and loosens the muscles and joints.

Start off slow with easy movements and build up to an effort close to what you plan to work at. The level of effort you feel during a warm up should never be described as any more than light 1-2 BORG Scale. You can adjust the speed of the exercise or the range of the movements to find the right effort level for you.

You should carry out each exercise in the warm up for one minute, moving continuously from one exercise to the next. In between each exercise march for 20-30 seconds.

Try to maintain a good posture throughout the exercise programme.

To have good posture means holding yourself in a more upright position, shoulder back but relaxed, tummy tucked in but not holding your breath. This will put less strain on your back and muscles.

Remember you can adjust the speed of the exercise or the range of movements to find the right effort level for you.

The entire warm up exercises must be performed at the beginning of each exercise session. The exercises can be performed standing or seated, with your arms relaxed by your side, unless otherwise stated.

Repeat all exercises.

### **Cardiovascular Exercises - Total Warm Up time 15 minutes**


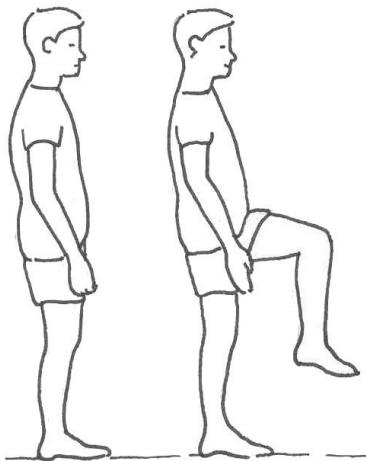
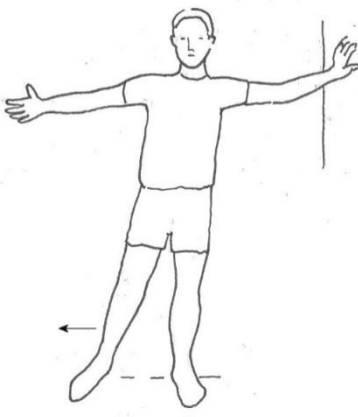

Pulse Raiser 1 – 5 minutes

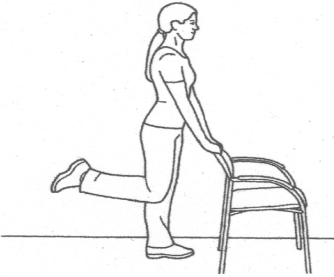
Mobility – 5 minutes

Pulse Raiser 2 – 5 minutes


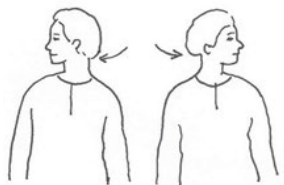
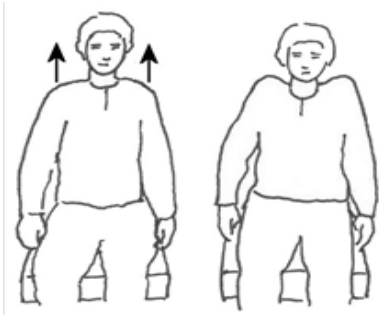
Complete all the pulse raiser exercises for one minute each then complete the mobility exercises for one minute each, then repeat the pulse raiser exercises for a further minute each.

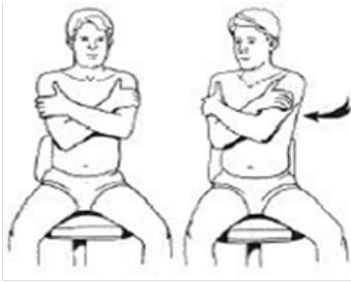


**Pulse raiser exercises**

<p><b>Heel digs – 1 minute</b></p> <p>Tap your right heel out in front of you and back, keeping your toes off the floor. Alternate between right and left leg. In seated or standing tap one heel on the floor in front of you. Place your feet back together and repeat with the other leg. During pulse raiser 2 repeat the movement, increase the pace and add in arm curls.</p>	
<p><b>Knee raises – 1 minute</b></p> <p>Start with feet shoulder width apart. With a marching movement, begin to raise your knee higher and slightly across your body. Alternate between your right and left leg. During pulse raiser 2 repeat the movement. Increase the pace. Tap the knee you are raising with the opposite hand. Alternate hands as you do with your legs.</p>	
<p><b>Toe taps to the side – 1 minute</b></p> <p>Tap toes of your right foot out to the side and back, keeping the heel off the floor. Alternate between right and left leg. During pulse raiser 2 repeat the movement. Increase the pace and raise your arm to the side up to shoulder height. Alternate arms as you do with your legs.</p>	
<p><b>Backward toe taps – 1 minute</b></p> <p>Tap your toes of your right foot behind you and back again. Keeping the heel of the floor. Alternate between right and left leg. During Pulse Raiser 2 repeat the movement. Increase the pace and raise your arms up and down up to chest height.</p>	

<p><b>Kickbacks – 1 minute</b></p> <p>Start with feet shoulder width apart. Bend your right knee and kick your heel up towards your bottom. Alternate legs, keeping feet well apart to help with balance.</p> <p>During pulse raiser 2 repeat the movement and increase the pace as you kickback, adding in a punch forward at chest height with the opposite arm. Alternate legs and arms together.</p>	 <p>© PhysioTools Ltd</p>
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**Mobility exercises**

<p><b>Shoulder elevation – 1 minute</b></p> <p>Start by walking gently on the spot. Raise your shoulders slowly up towards your ears, and down again. Breathe in as you raise your shoulders and breathe out as you let your shoulders down.</p>	
<p><b>Head rotations – 1 minute</b></p> <p>Slowly turn your head to look over one shoulder, While breathing in. Slowly bring your head back to centre, While breathing out. Repeat the exercise, turning your head to the opposite shoulder.</p>	
<p><b>Shoulder rolls – 1 minute</b></p> <p>With your arms at your side, slowly circle your shoulders backwards. Slowly circle your shoulders forward. Don't forget to breathe as you exercise.</p>	

<p><b>Trunk rotations – 1 minute</b></p> <p>Can be done in standing or sitting. Start with feet shoulder width apart. Chest and head upright and place your hands across your chest. Keep your hips and knees facing forwards. Breathe out while twisting your shoulders around as far as possible to your right, to look over your right shoulder. Breathe in as you return to the centre. Repeat, twisting around to look over your left shoulder.</p>	
<p><b>Side bends – 1 minute</b></p> <p>Stand with your feet shoulder width apart and your arms by your side. Slide your right hand down towards your knee until you feel a stretch on the opposite side. Slowly return to an upright position before repeating on the opposite side. Do not lean forwards or backwards. Return to standing and repeat on the opposite side. Concentrate on keeping your head and chest upright, not leaning forwards.</p>	
<p><b>Marching on the spot – 1 minute</b></p> <p>Stand up straight with feet hip width apart. Lift knees up and down at a gentle pace. Breathe rhythmically.</p>	

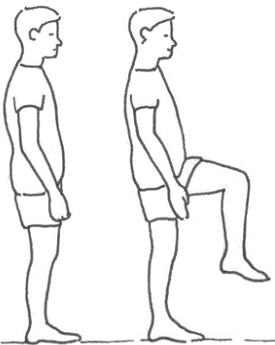





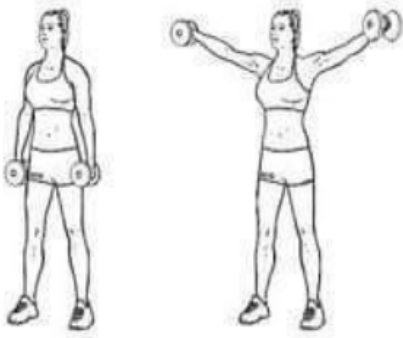
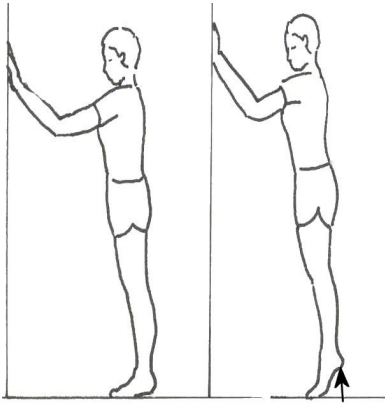
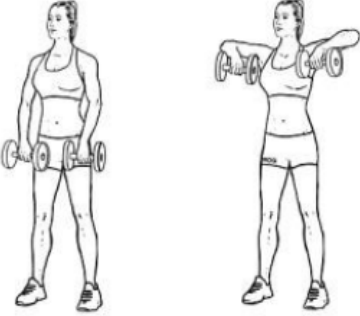
## Main exercises


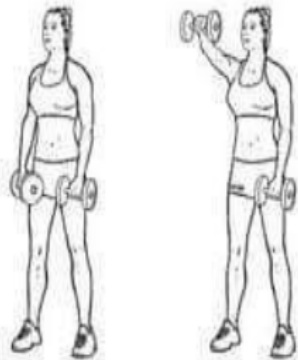
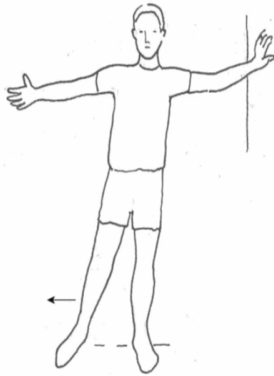

Following your warm up you should feel ready to do the main exercises.

The main section of your workout should last approximately 20-30 minutes. This should consist of the cardiovascular and active recovery exercises shown in this section. Try to keep a steady pace throughout as the speed at which you perform the exercises will affect how difficult you find them.

If you have completed the exercise programme continue at the level, you were working in the exercise class. If you have exercise equipment at home, please ask advice from the team prior to use.

<p><b>Knee raises – 1 minute</b></p> <p>Start – Stepping from left to right keeping your feet shoulder width apart. Raise one leg and tap this knee with the opposite hand (left hand to right knee and right hand to left knee). Repeat this with alternate legs keeping the feet well apart to help you with balance. Breathe rhythmically.</p> <p>Progression 1 – Lift knees higher and take the right arm out to the side While tapping left arm to right knee.</p> <p>Progression 2 – Increase the speed.</p>	
<p><b>Arm press-ups – 1 minute</b></p> <p>Stand facing a wall, approximately 15-20cm away. Place your hands flat on the wall at chest level. Breathe in. Breathe out and slowly lower your face and chest towards the wall, by bending your elbows. Breathe in. Breathe out and push back to the standing position.</p>	
<p><b>Sit to stand or squats – 1 minute</b></p> <p>Sit slightly forward on a firm chair. Make sure your feet are under your knees. Fold your arms. Breathe in. While breathing out, lean forwards and stand up. Stand up straight and breathe in. Slowly sit down again While breathing out.</p>	

<p>Progression 1 – Squats – Stand with your feet shoulder width apart, bend your knees, keep your back straight, bottom tucked in and heels on the ground.</p> <p>Progression 2 – Side Step Squats – Stand with your feet shoulder width apart, take a side step, bend your knees, keep your back straight, bottom tucked in and heels on the ground.</p>	 <p>PhysioTools Ltd</p>
<p><b>Lateral arm raises – 1 minute</b></p> <p>Keeping a slight bend at the elbows, take the arms out from each side of the body to shoulder height and return, repeat this action.</p> <p>Add hand weights as advised.</p>	
<p><b>Heel lifts – 1 minute</b></p> <p>Stand up straight, with your feet hip-width apart and your weight balanced evenly. Rest your hands on a firm surface for support. Lift up onto the balls of your feet. Hold for a count of 1. Gently lower down until your feet are flat on the floor once more. Don't forget to breathe.</p> <p>Progression 1 - Repeat, gradually working up to hold for a count of 4.</p> <p>Progression 2 – Add in hand weights.</p>	
<p><b>Upright row – 1 minute</b></p> <p>Start with hands together at level of thighs.</p> <p>Raise the elbow high and wide to shoulder height and hands to chest.</p> <p>Add hands weights as advised.</p>	

<p><b>Step ups – 1 minute</b></p> <p>This can be performed on the bottom step of the stairs or any other appropriate step. Use stair rail for balance if required. Step up and down changing your leg every 30 seconds.</p> <p>Progression 1 – Step faster or increase the step height if able.</p> <p>Progression 2 – Add hand weights or raise arms in front of you as you step if you have no problems with your balance.</p> <p>If you have stairs at home, use the bottom step and the hand rail if needed to do your step ups.</p>	
<p><b>Frontal arm raise – 1 minute</b></p> <p>Sit or stand with your arms by your side. Holding a weight in each hand, bring the weights up to your chest and then straighten your arms out in front of you. Bring your hands back to your chest and finally bring your hands back to your sides. Repeat this action going a little higher each time. Breathe IN as you bend your arms up.</p> <p>Breathe OUT as you take your arms forward.</p>	
<p><b>Half stars – 1 minute</b></p> <p>Start – Side Step to the left lifting your left arm out to the side up to shoulder height and back again. Repeat on the right side and then alternate from left to right. Hold onto the wall for support if you need to.</p> <p>Progression 1 – Widen the step.</p> <p>Progression 2 – Take both arms out at the same time.</p>	
<p><b>Bicep curls – 1 minute</b></p> <p>Sitting or standing with your elbows by your side and keeping your back straight. Hold a weight in each hand. Bend elbows to bring the wrists towards your shoulder While breathing out. Return While breathing in, slowly lower your arms until the elbows are straight. Repeat this action.</p> <p>With all resistance exercises gently walk on the spot or move your feet if seated.</p>	

## **Cool down**

A cool down should be completed at the end of every session of safely and effectively recover after the exercises.

It helps prevent fatigue and muscle soreness and helps your heart rate and blood pressure return towards their resting levels.

Stretching as part of your cool down is beneficial as it improves flexibility and range of movement.

During each stretch march slowly. In between each stretch choose one of the following to do for 30 seconds

1) Forward toe taps 2) Backwards toe taps 3) Side taps

### **Remember:**

It is important NOT to hold your breath during stretches.

It is important to stretch within a comfortable range of movement.

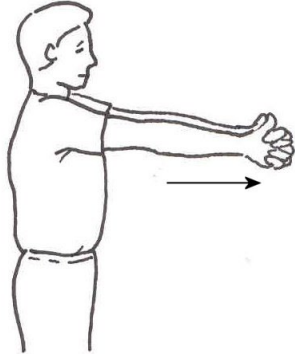

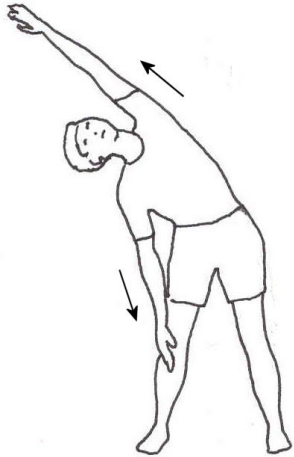
It is important NOT to bounce the stretches.

Hold each stretch for at least 10 – 15 seconds.

## Stretching exercises while standing/seating

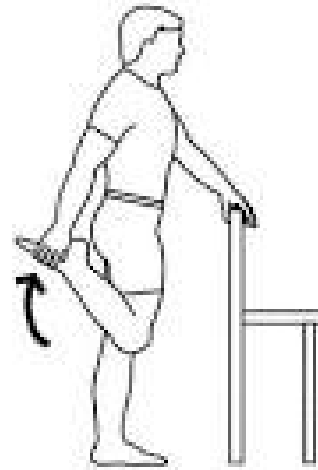
Don't forget to breathe rhythmically while performing these stretching exercises

– **do not** hold your breath.

<p><b>Shoulder / Back stretch</b></p> <ul style="list-style-type: none"> <li>• Stand upright.</li> <li>• Clasp your hands together in front of you with your knuckles outwards.</li> <li>• Stretch your arms out in front.</li> <li>• Feel the stretch around your shoulders and back.</li> <li>• Hold for 10-20 seconds.</li> </ul>	
<p><b>Chest stretch</b></p> <ul style="list-style-type: none"> <li>• Stand upright.</li> <li>• Place your hands on your lower back.</li> <li>• Squeeze your shoulder blades together, keeping your elbows bent.</li> <li>• Hold for 10-20 seconds.</li> </ul>	
<p><b>Side stretch</b></p> <ul style="list-style-type: none"> <li>• Stand with your feet hip-width apart and your arms by your sides.</li> <li>• Slide your right hand down towards your knee until you feel a stretch on the opposite side.</li> <li>• Do not lean forwards or backwards.</li> <li>• Hold for 10 seconds.</li> <li>• If possible, take your left hand up and over your head and stretch for another 10 seconds.</li> <li>• Return to standing and repeat on the opposite side.</li> </ul>	

### Quadriceps stretch

- Holding a chair / wall for support.
- Bend your right leg up behind you and hold onto either your ankle or back of your trousers.
- Try to take your foot towards your bottom and your knees together.
- You should feel a stretch at the front of the thigh.
- Return to normal position and relax.
- Repeat with the other leg.



### Back of arm/side stretch

- Sit upright with a straight back.
- Place one hand on the shoulder on the same side.
- Use your other hand to lift the elbow up towards your head.
- You should feel a stretch in the back of your arm.
- Then straighten the arm and stretch to the ceiling.
- You should feel the stretch down the side of your body.
- Hold for 10 seconds.
- Lower your arm gently and repeat on the other side.



### Calf stretch

- Sit forward in a chair with your back straight.
- Stretch one leg up straight in front of you (keeping foot on floor).
- Keep your other leg bent.
- Stretch the toes of your straightened leg towards you.
- Hold for 10 seconds.
- Return leg to floor and repeat with other leg.



### Hamstring stretch

- Sit forward in a chair with your back straight.
- Stretch one leg up straight in front of you with the foot on the floor and relaxed.
- Put both your hands on your other leg, which should be still bent.
- Lean forwards from the hip, supporting your weight on your hands.
- You should feel a stretch at the back of the thigh of the straightened leg.
- Hold for 10 seconds.
- Return to normal position and relax.
- Repeat with other leg.



## Well done!

You have completed your home exercise session.

Don't forget to do these exercises regularly to get the full benefit. Start with once or twice per week and increase the amount of times per week as you feel able.

Remember to build up the exercises again if you have a break from your usual exercise routine. For example, if you were unwell for 1-2 weeks you would need to build the exercises back up slowly. It is important to progress through exercises slowly and comfortably. When the exercises start to feel very light (1-2 on the BORG Scale) you should make them a little harder by progressing to the next level or increasing speed or resistance.

To get the most benefit from doing exercise, it needs to be done on a regular basis. It is recommended that adults should be exercising **5 times a week for a minimum of 20 minutes**. Don't forget to rest between exercises as needed.

Please use these tables to document how much exercise you have done and how breathless you felt after the exercise. Please feel free to review your exercises with the team and we can offer advice/feedback.

Scale	How are you feeling when exercising?
0	Rest
1	Really easy
2	Easy
3	Moderate
4	Sort of hard
5	Hard
6	
7	Really hard
8	
9	Really, really hard
10	Absolute maximum

### **DO NOT** exercise or **STOP** if:

- You feel unwell.
- You have chest pain.
- You cannot regain control of your breathing.

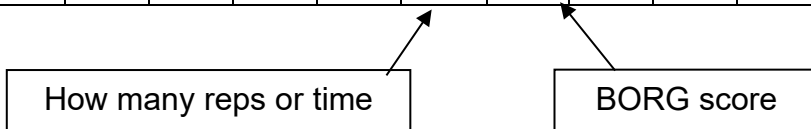


Aim to exercise to a BORG score of 3-4.

**DO NOT** exercise to a BORG score of 6 or above.

Week 1	Mon		Tues		Weds		Thurs		Fri		Sat		Sun	
Upright Row					12	3							15	4
Bicep Curls					12	3							15	4
Knee Raises					1m	5							2m	5

**Example**



	Mon	Tues	Weds	Thurs	Fri	Sat	Sun
<b>Warm-up</b>							
Knee raises (1 min)							
Arm press ups (1 min)							
Squats (1 min)							
Lateral arm raise (1 min)							
Heel lifts (1 min)							
Upright row (1 min)							
Step ups (1 min)							
Shoulder press (1 min)							
Half stars (1 min)							
Bicep curls (1 min)							
<b>Cool down</b>							

Compassionate

Aspirational

Resourceful

Excellent