

## Recording Your Workout

We'll provide you with log sheets in class, and there are some at the end of this booklet for exercise outside of class. The first thing to know is that there's only two sessions shown on each side of the paper, rather than four as previously.

Name: \_\_\_\_\_ ILD no: ILD \_\_\_\_\_ THR: \_\_\_\_\_ Start Date: \_\_\_\_\_ C O A D E Sheet no: \_\_\_\_\_

DATE of class	Time Start/Finish	Values: Reps/Wght/laps/resist/speed/slope	PR	SpO2	BRE	RPE	DATE of class	Time Start/Finish	Values: Reps/Wght/laps/resist/speed/slope	PR	SpO2	BRE	RPE
First values							First values						
Treadmill							Treadmill						
Brisk walk							Brisk walk						
Bike							Bike						
Trampet/Knee raise							Trampet/Knee raise						
Step ups							Step ups						
Punch ups							Punch ups						
Hip ext							Hip ext						
STS/Knee ext / wall squats							STS/Knee ext / wall squats						
Bicep curls							Bicep curls						
Arms to side							Arms to side						
Wall P.ups							Wall p.ups						
Half-Way Values							Half-Way Values						
End Values							End Values						

V3.4 7/APR/15

The date of each session is recorded here and here.

Don't worry too much about the information above the table, other than to make sure you have the correct sheet! The other thing is THR (Target Heart Rate), you should try to be working close to this if you have a finger probe on/heart rate monitor.

The next thing to notice is that there's a new column – this is for the time of day at which the exercise occurred. There's no need to be overly precise about this, just look at a nearby clock (there are two in the gym).

There's rows for the initial readings, half way readings and final readings, as well as for exercise on each piece of equipment. These have been juggled around a bit as some work similar muscles.

Let's zoom in a bit.

DATE of class	Time Start/Finish	Values: Reps/ <u>Wght</u> / laps/resist/ speed/slope	PR	SpO2	BRE	RPE
First values						
Treadmill						
Brisk walk						

So, say you went on the treadmill for ten minutes, starting at 4:15, and had the slope at 1% uphill and the speed at 3kph. You'd record that as follows:

DATE of class	Time Start/Finish	Values: Reps/ <u>Wght</u> / laps/resist/ speed/slope	PR	SpO2	BRE	RPE
7/4/15						
First values						
Treadmill	4:15/4:25	1%, 3kph 10 mins				
Brisk walk						

Followed by the four scores. If you've used the old sheets, the order of these has changed to match up better with the new finger probes.

PR = Heart Rate (the top number on the finger probe)

SPO2 = oxygen level (bottom number on the finger probe)

BRE = how breathless you feel according to the Borg Scale (on your clipboard on the left)

RPE = How hard you feel you're working (on your clip board on the right)

If you're filling in the sheets at home – don't worry about the first two values, we don't expect you to buy a finger probe.

***Please just ask if there are any questions, or if you need a new log sheet.***

## Make Up of the Session

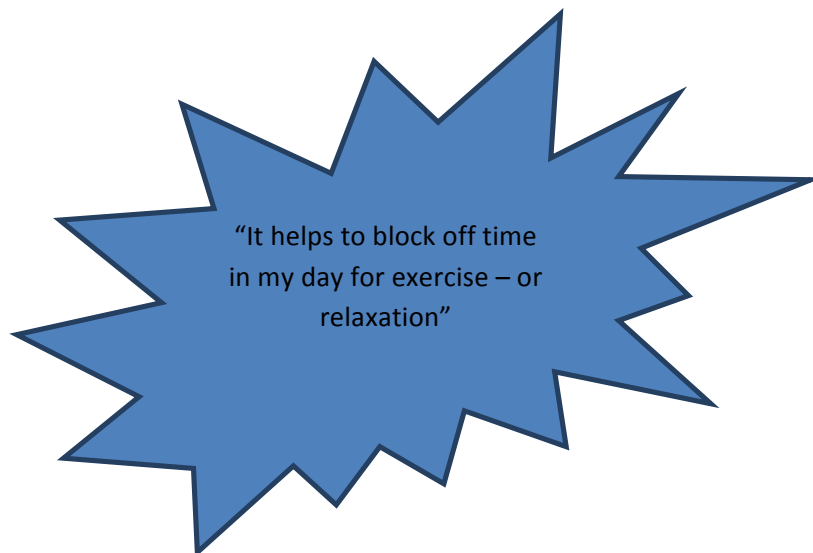
We'll now go on to look at individual pieces of equipment, but before we do that, note that we split exercises into two categories. Ones that we call cardio – short for cardiovascular – get you breathing harder and your heart pumping faster. The others are strengthening – making muscles stronger. Realistically Cardio exercises will do some strengthening and strengthening exercises may get you breathing faster, but we still use the categories.

While strengthening exercises are useful, you should aim to do more cardio. Ideally you want to do about 30 minutes of cardio and ten minutes of strengthening.

## Cardio Exercises

The basic ones we use are:

- Cone walk
- Step-ups
- Trampet/Knee lift
- Treadmill
- Exercise Bike
- Ball Raises



- 1) Cone Walk – this involves walking up and down the gym between two cones spaced 9.5 metres apart. That's a little over 9.5 yards.



The idea is that with the extra for the turn, each “length” is 10 metres, and each lap is 20m. It’s a good idea to change direction about half way through. 20 laps is 400m, or roughly a quarter of a mile.

Progression: You can make this harder by going faster, or by putting on ankle weights.

- 2) Step-Ups – you do these on the grey and black benches/steps near the cupboard doors. There’s a rail on the wall if you feel the need to hold onto something for stability – the steps are normally turned sideways to make this easy. The main teaching points are:

- Try to step up with a different leg each time so that both sides get an equal work out. So if you do three minutes starting with the left leg, do three minutes starting with the right
- Make sure your feet clear the step
- Place your feet fully onto the step at the top
- Keep good technique throughout



Progression: You can go faster (but keep good technique) or add ankle weights. There is an option to make the step higher too but ask one of the physios to do this please as it’s a bit tricky.

- 3) Trampet/Knee Lifts – these can either be done on the trampet or on a mat. In either case holding onto a rail is good for stability. The idea is to lift your knees to about ninety degrees using alternate legs.

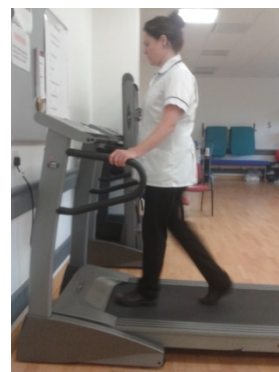
- Remember to maintain good posture – don’t lean forward onto the supporting rail
- The soft surface will help with ankle strength – if it’s too much for you then do the knee lifts on a mat



Progression: Use ankle weights and/or step faster!

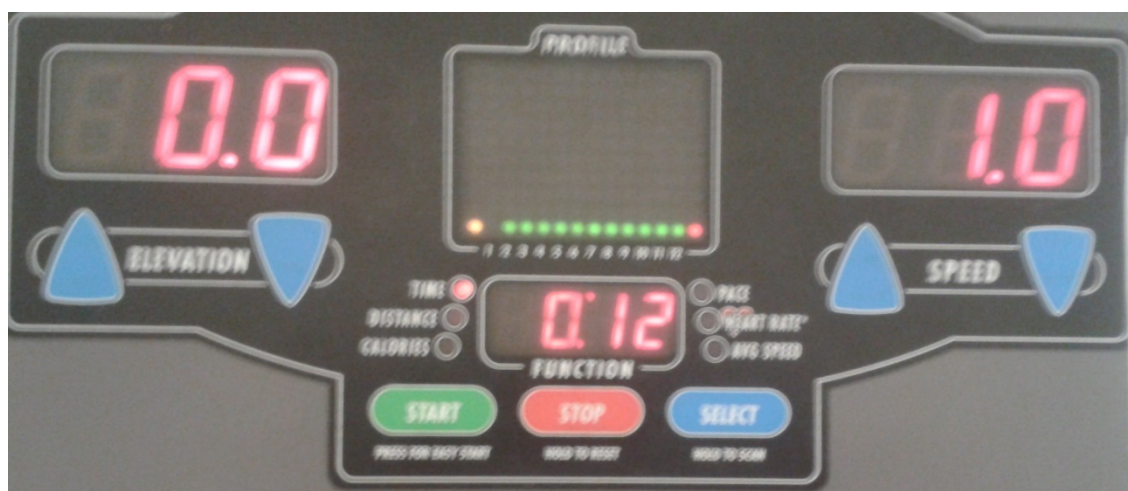
4) Treadmill – this allows you to simulate walking outside. You can change the speed and the slope to make it like walking uphill. One of the physios can set this up for you but we'll have a quick look at the controls.

- Use the bulldog clip and attach it to your clothing. This means the treadmill will stop if you fall
- Hold onto the rail at the front or sides
- Remember to keep a good posture throughout – the person in the picture is nice and upright rather than leaning forward onto the rail



Progression: Turn up the speed and/or add some more uphill slope!

Let's have a look at the control panel:



The Start and Stop buttons do what their names suggest. When you press Start the treadmill will slowly start to move backwards, so you need to step forward.

Your current speed in kilometres per hour is shown on the right. You can increase the speed using the up arrow on the right. The down arrow will decrease speed.

Elevation is the slope. It defaults to zero (flat) but you can increase or decrease this as you wish using the up and down arrows on the left.

The display just above the stop button cycles through six things – the two most important ones are time and distance. It currently shows time. You can tell because the light alongside the word Time is lit up.

Remember to record all three elements on your log sheet – Speed, slope and either time or distance, so you can see your progress from session to session.

5) Exercise Bike – we have two types of bikes – the white ones and the grey ones, and both are good – but the grey ones are easier to set a consistence resistance on. This is useful to maintain a constant level of work each session.

- Position the seat so that when your foot is at the front-most point, your leg still has a slight bend in it. Ask for help if you need it
- You can use the handles at the side for stability
- You are aiming to pedal at about 50rpm
- We'll talk more about the control panel in a moment



Progression: Turn up the resistance (see below)

Press the enter key to get started. Each of the three red numbers can show more than one value.

- The left hand one shows time as e.g. 3:15 and also watts. Ignore watts! It will alternate between them
- The middle one shows the distance you have travelled in kilometres and also RPM. Aim to keep the RPM around 50. This is the number of times you turn the pedals each minute
- Ignore the right hand one
- The little green lights at the top give an indication of how hard you are working. It is only rough though.
- If you press either of the arrows then it will display a number on the middle red display. This is your resistance – how hard you are working. You can





increase and decrease it with the arrows. After a few seconds the display will revert to normal

- Remember to record the resistance you worked at as well as the time/distance. A useful shorthand is R=5 or whatever number you set.
- The heart rate display will not read from the finger probe – you would need the right type of chest strap.

#### 6) Ball Lifts – these involved repeatedly lifting a ball above your head

- Keep your arms straight and go from the ball touching your legs to about the position shown in the picture
- You can use different balls including a medicine ball
- Remember to record which ball you used as well as how many repetitions you did
- Keep good posture throughout – don't lean back – do the work with your arms
- Don't do if you have shoulder issues or have recently had a chest operation



Progression: Use a heavier ball and/or do your repetitions faster as long as you can maintain good technique.

### Progression

Part of exercising is getting fitter! The idea is that if you could walk at 2 kph on the treadmill in session one for 3 minutes before your oxygen levels dropped and you needed a rest, a few sessions later you'll be able to go for 4 minutes at the same speed, or perhaps walk for the same time at 2.5kph, or 2kph with an uphill of 1%. This should happen naturally, don't try to force it, especially if your oxygen level drops.

Do be on the look-out for an improvement though – if an exercise now seems relatively easy then increase speed, slope, resistance etc to make it a bit of a challenge again. Ask one of the physios if you need help.

## Strengthening

First of all, some basic reminders!

- Remember to keep good posture throughout
- Only move the joint you are trying to exercise – not other joints as well, otherwise you won't get the benefit you're after as you'll "cheat" by using other muscles
- Remember to keep breathing – in through the nose, out through the mouth
- Keep movements slow and controlled
- You should feel tired or ache towards the end of your set – if not then put the weight up!
- Blow out as you lift the weight – exhale on exertion
- It's better to do three sets of 12 and be achy at the end than do one set of 36. Rest and do another set after the first 12. If you're losing technique by 10 in the second set then stop. Ideally you'll do 12 (reps), rest, 12 (reps), rest, 12(reps)

***We'll only show some of the exercises below, others are possible***

- 1) Bicep curl – this exercises the muscles on the front of your upper arm.

- Notice how the elbows stayed tucked into the side
- Remember to exhale on exertion
- Keep the elbows where they are – if you bring the elbows forward then you are using other muscles
- Keep your wrists straight – in line with your forearm



By the end you should be in the position shown on the right. Don't expect to get all the way to the top – the flesh in the lower and upper arm will meet and stop you getting any further



Progression: Use a heavier weight, or do a more repetitions per set. If you can easily do 15 then add more weight!



## 2) Shoulders (or deltoids) – these muscles are used for all sorts of things

- Start with your arms by your sides
- Slowly and in control lift your arms to the position shown
- Remember to keep breathing
- Do not hunch your shoulders as you lift
- Lower the weights under control rather than “drop back” to arms by your sides



Progression: As above

## 3) Triceps – the muscles on the front of your upper arms – try to keep bicep and tricep muscle exercise roughly equal

- Lean slightly forward as shown in the picture
- Keeping that position, straighten your elbow
- The more you lean forward, the harder this will get for the same weight
- You can get out a mat and do this on all fours but with one arm lifted if you are stable enough



Progression: as above, or if you're doing it without ankle weights then try them. Make sure they're firmly attached.

## 4) Chest – wall press ups. Position your hands onto a spare piece of wall about level with your shoulders, and shoulder width apart

- Make sure your feet aren't slipping on the floor
- Lower yourself towards the wall, then push back up again to the starting point

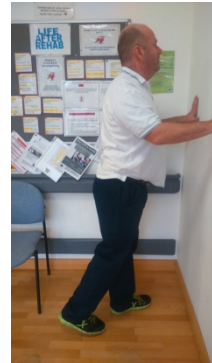


Progression: Move your feet further away from the wall, without risking slipping. There are other ways to progress this exercise on the mat. It is not advisable if you have shoulder issues



5) Hips – this works your hamstrings and also your glutes (bottom muscles)

- Stand upright with a rail or chair in front of you
- Without tilting your trunk forward, bring your leg back behind you. You will only be able to move maybe 30 degrees maximum
- You should feel your bottom tighten as you do this
- You can use ankle weights or a resistance band



Progression: Use more weight/resistance e.g. ankle weight or theraband.

6) Quadriceps – the muscle on the front of your thigh. These get a good work out from step-ups, but you can also repeatedly stand from a chair or do squats on a spare piece of wall with a gym ball as shown right

- Squat down, rolling down on the ball as you go
- Don't go down so far you find it hard to get back up, 45 degrees is plenty to get you working, if not less
- Your knees should not come forward too far – so not beyond your knees – stick your bottom out as if you are sitting on an invisible chair
- If your shoes are not slippery then it may help to start slightly leaning back



Progression: Go down so you have a bigger bend in your knees – not more than 90 degrees though.

## Adapting Exercise to in or Around Home

Unless you have an exercise bike at home, this means making use of everyday items and bits of your home to simulate the equipment in the gym.

### Step Ups

These can be done using the bottom stair of a staircase if your stairs are wide enough, or alternatively any step e.g. outside in the garden.

- Make sure the step is not icy if outside or that there is no loose carpet if inside
- When you step up, make sure you can get your foot squarely onto the step without turning it sideways
- Bring the other foot alongside it
- Step down one foot at a time
- Alternate after every batch to make sure that each leg gets the same workout

### Treadmill/Cone Walking

You can make use of your garden if you have one or otherwise the pavement. It's good if it's a relatively quiet road as then you don't have to bother about other people, cars and so on.

- Make sure it's not slippery, and that you're wearing appropriate footwear
- Be aware that the road may have a slight slope without you being aware of it – this can be down as well as up (our treadmills can't do downhill)
- Remember the Borg score you're aiming for!
- If it's a steep hill, remember you can stop and get your breath back if you get too out of puff.

### Cycling

If you have a bike then you can give that a try too! Remember to make use of appropriate safety equipment – lights, reflective clothing etc.

- By adjusting the gear you can increase or decrease the resistance
- Remember that roads will have a slope anyway – see which ones get you working at your target Borg score
- Make sure you take notice of the Highway Code and keep safe

### Trampet/Knee Lifts

While you probably won't have a trampet at home, you can still march on the spot lifting your knees up. It isn't quite so good for improving balance but will still get your

heart rate up. You can use a chair or kitchen worktop if you need something to hold onto to help stabilise yourself. Make sure there are no loose mats underfoot.

## Stair Climbing

This one isn't available in our gym. The aim is that rather than do step-ups, you climb a number of stairs. It'll require a bit of trial and error but you can climb the stairs several times to get your heart rate up.

- If you feel you're walking too hard half way up the stairs then rest
- You get some rest slowly coming back down the stairs, but feel free to stop altogether if you need to
- All the advice about getting your foot squarely on each step applies
- If you find it too easy, you can put your right leg up one step, your left up two, your right up two and so on (alternate stairs) rather than leading with one foot and bringing the other foot level each time.

### Left up, Right catches up

L	R
L	R
L	R
L	R
L	R
L	R
L	R
L	R
L	R
L	R

### Alternate Pattern

R
L
R
L
R
L
R
L
R
L

## Exercises with Weights

There is the option to buy your own set of weights – these are available in various high street shops relatively cheaply, including ankle weights. Alternatively the following may be an option:

- Use a tin of food – for example a tin of beans. This will weigh approximately half a kilogram
- Use a bottle of water – these are rather good as you can add water to make them heavier. One litre (1l) of water weighs a kilogram (about 2.2 pounds). Be careful no water leaks out or you could slip.
- Some washing liquid/fabric softener bottles are larger and have handles that make them easier to grip. The same rules applies – 1 litre = 1 kg.
- Sand could be used as an alternative – you'd need to weigh these individually though
- If you have a resistance band (again available at shops, or you may have one from a physiotherapy programme) then this can be used. There's a section below on some common theraband exercises.
- Can you use your own body weight? For example, wall press-ups make use of your weight to provide resistance

## Progression

Remember that exercise should not be too easy. If the exercise that you've been doing for a while has started to feel easier (i.e. has a lower Borg score if it's cardio or you can do the set easily if it's weights) than before, then it's time to make it tougher. Ways you can do this include:

- Walking faster if it's a walk outside
- Finding a route with a bit more of a slope in it
- Using heavier weights
- If you're on an exercise bike then turn up the resistance!



## Your Home Exercise Programme

While weights are great to do as part of your programme, remember the 30 minutes of cardio to 10 minutes of weights we suggested.


Aim to do this exercise 3 days a week. Try to avoid doing consecutive days as you may feel tired, at least at first.

You may be able to get cheap membership of a local gym and even take part in sessions specifically for lung disease. You may have to be referred by your GP. We'll be letting your GP know that you've been on our programme so this shouldn't be any problem.

It's good to do some exercise every day – perhaps you could try swimming on one of them? You shouldn't do the full on hard workouts like we do in the gym more than every other day, but something gentler for half an hour is fine.

## How Hard Should I Exercise?

You'll hopefully have got the hang of this during the class. Although we've used finger probes to get oxygen levels and heart rates, you've also used the two Borg scales – so think about the scores that you got on these when you were working at the sort of level we asked you to. We'll be coming out to visit you at home, so can discuss things like individual heart rates with you then.



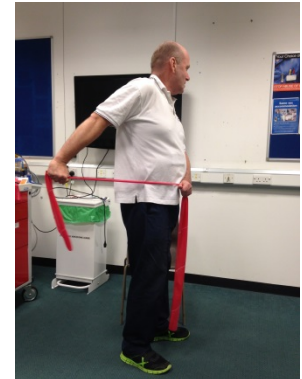
"It's great to look back and think how far I've come – what was tough once is now relatively easy!"

## Theraband Exercises

### Triceps

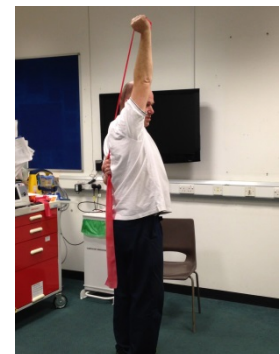
First up – exercises for the triceps – the muscles that straighten your elbow. The pictures below show two varieties. As with all resistance exercises, it's all about being slow and controlled. For each of these, swap hands and perform for the other side.

- Bend your right elbow so that your hand is just above waist level
- Bring across your left hand to just in front of it – have the theraband taut inbetween the hands
- Keeping the elbow still, straighten it to pull the band behind you
- The shoulder should not move at all



An alternative is shown below

- Bend your left hand across so that it is close to your right armpit
- Move your right elbow in front of you and grab the other end of the theraband
- Without moving your elbow from its position in front of you, straighten it overhead
- Remember to keep the movement slow and controlled



### Biceps

This works the muscles on the front of the arms

- Loop the band under your foot on the same side as the arm you are exercising
- Hold the elbow at your side and grab the band with your hand
- Without moving your elbow from your side, bend it so that your hand is near to your shoulder



## Shoulders (Deltoids)

This does the same as the “arms to the side” exercise

- Start with your hands by your sides, with the theraband taut between them
- Lift your arm to your side keeping the elbow pretty much straight
- Your torso should not move throughout
- Remember to keep the movement slow and controlled



## Hip Extension

- You can loop the theraband around the leg of a piece of heavy furniture or tie a knot in one end and put it through a door
- Squeeze your bottom and bring the leg behind you
- It is important to not tilt your upper body forward
- You do not have to take your leg back more than 15-20 degrees



## Knee Extension

This works the vastus quadriceps muscle group on the front of your thigh

- You can either use a loop of theraband around a chair leg and your ankle or tie each end
- Without leaning back in the chair or lifting your hip higher than is needed to get your foot off the floor, straighten the knee
- If the band slips up your leg, try tying it a different way



## General notes

- If the exercise is too easy, tighten the theraband at the start/grip closer together on it
- Stronger/weaker therabands are available – red is between yellow and green
- Aim for the same number of reps as you would with weights
- A doubled theraband (in a loop for instance) will give you twice as much resistance



## Filling In Your Exercise Diary

We've kept this as close as possible to the log sheet we use in class. If you do other sessions such as going for a walk with the family or swimming 20 lengths of a 25m pool, then you can write this in at the bottom of the sheet in the blank rows.

If you haven't got a heart rate monitor or finger probe then just leave these columns blank and fill in the two Borg Values. Remember to put your name on your sheets and look after them as we'll be collecting them in.

We're very happy to give you more of these sheets if you need them – so make sure you write in any sessions you do outside of the class, even when the eight week programme is in progress. As long as you write in the dates for each session then we'll be able to put these together with the sheets from in class.

Remember you can contact us on 0208 725 5647 for more sheets!

## Life after Pulmonary Rehabilitation Classes

Congratulations – you’ve completed the eight week programme! You should be feeling fitter, less out of breath, understand more about your condition and be better at managing breathlessness. Hopefully you’re now more familiar with your abilities and are able to push yourself to go further.

In order to maintain those benefits, you need to keep exercising on a regular basis. If you don’t then all the gains you’ve made will be wasted. We’ve included a list of local council run leisure centres in the segment above on useful contacts. We’ve also included some other organisations that run fitness classes. We will be in touch regularly and are more than happy to discuss how to exercise well away from St George’s.

One final reminder – our study assesses you at six months into exercising – but even when we’ve officially seen you for the last time, we hope you continue to exercise and maintain a healthy lifestyle.



By the way – we value your feedback on the programme, both good and bad. We’re putting together a Service User Group for discussing ways to improve our service, so if you’d like to get involved, please contact Carmen or Iain on **0208 725 5647**.



## Home Exercise Programme and Log Sheets



