

Pulmonary Rehabilitation

Home Exercise Programme

Cardio/Respiratory Physiotherapy Team

Contents Page

- Pulmonary rehab and why continue exercising afterwards? Page 3-4
- Benefits of Exercise Page 4-5
- Precautions to Exercise Page 5
- BORG scale – Modified Rate of Perceived Exertion Page 6
- Aerobic Exercises Page 7
- Walking Diary Page 8
- Additional Aerobic Exercises Page 9
- Strengthening Exercises Page 10-11
- Homemade Hand Weights Page 12
- References Page 13

Pulmonary Rehabilitation

A Pulmonary Rehabilitation programme is designed to help people with long term breathing problems to help cope with their breathlessness and feel stronger and fitter at the same time. It helps enable you to stay as active as possible, improve your quality of life and live as independently as possible. With the help of trained professionals this course will teach you how to increase your activity carefully, be able to manage your breathlessness and cope with periods of panic better.

A typical Pulmonary Rehabilitation programme includes:

- A physical exercise component – carefully designed for each individual
- Advice on lung health and coping with breathlessness (various talks by different professionals – e.g. physiotherapist, nurse, dietician, occupational therapist)
- Provide a friendly and supportive atmosphere

The National Institute for Health and Clinical Excellence (NICE) guidelines recommends that Pulmonary Rehabilitation should be offered to all patients with Chronic Obstructive Pulmonary Disease (COPD) who feel they are functionally disabled by their condition (i.e. affects day to day activities).

Research shows us that by completing a Pulmonary Rehabilitation programme people have a better fitness and they are able to walk further. As a result of this people find they are able to do more things before becoming short of breath (e.g. complete the shopping, climb the stairs, etc).

Pulmonary Rehabilitation also helps you to control your symptoms and manage your condition in the long term.

Why Continue?

If you have just completed the Pulmonary Rehabilitation programme, it is extremely important that you carry on exercising. As COPD is a long term condition and not curable it is essential you maintain the progress you have made in Pulmonary Rehabilitation because the following may happen if you do not:

- Your exercise tolerance and fitness will decrease, leading to an inability to complete activities and an increase in your breathlessness.
- You will become breathless doing simple activities.
- You may have more exacerbations (worsening of your symptoms) and hospital admissions.

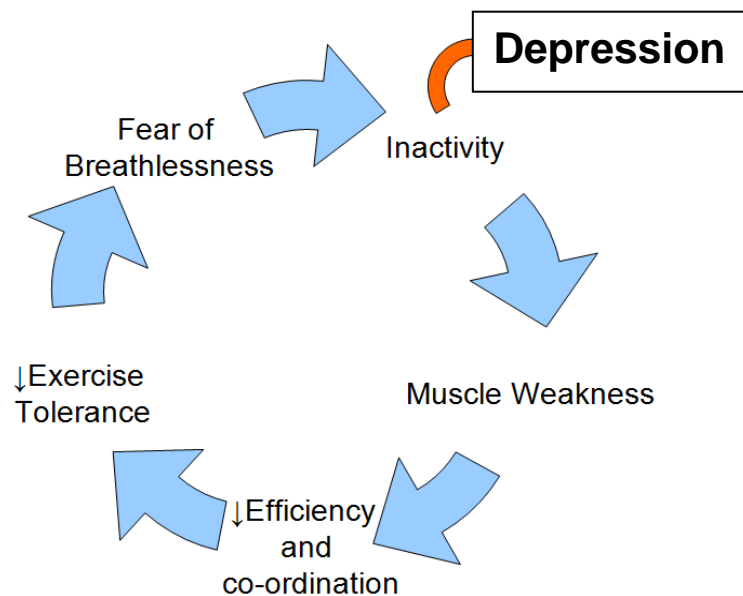
- Your quality of life may deteriorate if you are unable to complete your daily activities/leave the house.

Benefits of Exercise

Two difficult messages to understand and convey:

1. “Breathlessness whilst exercising is NORMAL.”
2. “It is not harmful or dangerous to feel short of breath whilst exercising.”

Unfortunately and commonly people with chronic lung conditions (like COPD) do feel breathless and this can be very frightening. They may feel that becoming short of breath is harmful. In trying to avoid this, people may try and stay away from activities in which they become breathless. However, by reducing your activities you become unfit, tired and even more short of breath when completing tasks. By gradually building on your exercise ability it can make you breathe and feel better.



There are benefits from doing even a small amount of exercise:

Aerobic (cardio-respiratory) Benefits of Exercise	Strengthening Benefits of Exercise	Psychological (mental health) Benefits of Exercise
Lowers heart rate	Increases the size of muscles and strength of them	Improves your mood
Lowers blood pressure	Increasing the strength of thigh muscles (quadriceps) makes walking easier	Makes you feel relaxed
Lowers cholesterol (fat)	Stronger bones and joints	Reduces stress, anxiety, tension and depression
Improves blood circulation	Improves coordination and balance	Improves self-esteem and confidence
Decreases breathlessness	Decreases body fat % by increasing lean muscle	Reduces feelings of social isolation.

Precautions to Exercise

We would advise you not to exercise or to stop your exercise if you experience any of the following symptoms:

- Nausea/feeling sick
- Dizziness
- Weakness
- Rapid or irregular heart beat
- **Severe** shortness of breath
- Tightness in chest
- Increase in sputum production/change in colour (i.e. if you have developed a chest infection)
- Pain

If you do experience any of the above then please contact your GP.

ALWAYS CARRY YOUR INHALER!!

BORG Modified Rate of Perceived Exertion (RPE)

The Borg scale is commonly used to rate the amount of effort someone has to put in to complete their exercise. The Borg scale will have been explained during your assessment/pulmonary rehab sessions. By varying the level of intensity during exercise it allows you to incorporate a warm up and cool down during your exercise session. By practicing this and doing a little more each time you exercise, you will continue to progress your fitness.

- Use this scale below to help achieve the right exercise intensity.
- Whilst completing your warm up/cool down try to aim to exercise at level 1-2.
- When completing your main exercise programme try to aim to exercise at level 3-4 and sustain this level for as long as you can.
- Once you reach above level 4 or feel too breathless to continue with your exercise rest or reduce the pace/intensity.

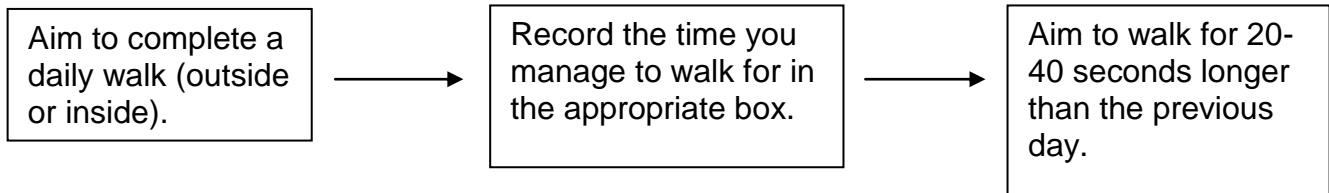
It is really important to try and work at a level 3-4 in order to improve your cardio-vascular fitness.

If you continue to work at level 2, your fitness will not improve.

0	Nothing at all.
1	Easy, effortless. Your breathing feels quite comfortable.
2	Very light – mild effort.
3	Moderate – you are feeling warm and breathing a bit more deeply.
4	Somewhat strong – your breathing is heavier, becoming a little sweaty, can feel your heart beating and muscles are working. But you can still hold a conversation.
5	Strong – your breathing is becoming too heavy, getting breathless and talking is difficult.
6-7	Very strong.
10	Very, very strong; almost maximal effort.

Aerobic Exercise

The best thing you can do is WALKING!!!!



Try to incorporate a warm up and cool down within your walking (using the BORG scale).

For example, if you are going out for a twenty minute walk, spend five minutes warming up and walking at a level 1-2 on the BORG scale; then increase the intensity and spend ten minutes working at a level 3-4; and then cool down by walking for five minutes at a level 1-2. This is just an example, if you cannot manage twenty minutes of walking then just adapt this to your own pace and time.

Try to complete the walking diary on the next page to identify what progress you are making.

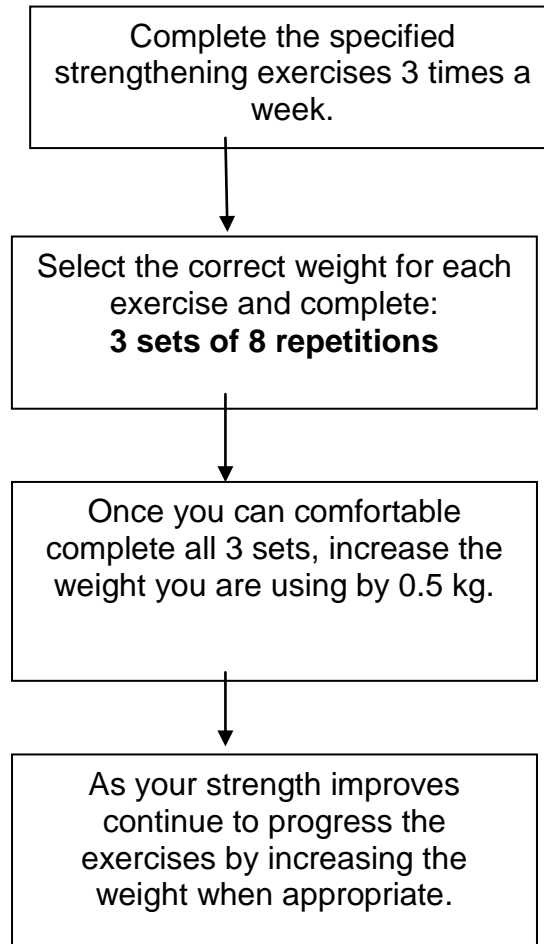
Walking Diary (Aerobic Exercise)

Week	Day	Date	Minutes of continuous walking
1	Walking target:		
	Mon		
	Tue		
	Wed		
	Thur		
	Fri		
	Sat		
	Sun		
2	Walking target:		
	Mon		
	Tue		
	Wed		
	Thur		
	Fri		
	Sat		
	Sun		
3	Walking target:		
	Mon		
	Tue		
	Wed		
	Thur		
	Fri		
	Sat		
	Sun		
4	Walking target:		
	Mon		
	Tue		
	Wed		
	Thur		
	Fri		
	Sat		
	Sun		
5	Walking target:		
	Mon		
	Tue		
	Wed		
	Thur		
	Fri		
	Sat		
	Sun		

Week	Day	Date	Minutes of continuous walking
6	Walking target:		
	Mon		
	Tue		
	Wed		
	Thur		
	Fri		
	Sat		
	Sun		
7	Walking target:		
	Mon		
	Tue		
	Wed		
	Thur		
	Fri		
	Sat		
	Sun		
8	Walking target:		
	Mon		
	Tue		
	Wed		
	Thur		
	Fri		
	Sat		
	Sun		
9	Walking target:		
	Mon		
	Tue		
	Wed		
	Thur		
	Fri		
	Sat		
	Sun		
10	Walking target:		
	Mon		
	Tue		
	Wed		
	Thur		
	Fri		
	Sat		
	Sun		

Strengthening Exercises

Please see the following sheet for specific exercises and complete the following:



Please document your weight and progress in the table provided.

Please see advice on homemade hand weights!!

Homemade Hand Weights

Recycle two used plastic milk containers and fill with the desired amount of water to create suitable, inexpensive hand weights. These hand weights will be easy to use and adapt to the various weights required when completing your strengthening exercises.

Water Amount	Kilograms	Pounds and Ounces
1 pint	0.6 kg	1lb 5oz
2 pints	1.2 kg	2lb 10oz
3 pints	1.8 kg	3lb 13oz
4 pints	2.4 kg	5lb 4oz
5 pints	3 kg	6lb 9oz
6 pints	3.6 kg	7lb 14oz



References

Chronic Obstructive Pulmonary Disease: Management of Chronic Obstructive Pulmonary Disease in Adults in Primary and Secondary Care. NICE Clinical Guideline 101 (2010).

Discharge

You will be followed up six weeks after being prescribed with the Home Exercise Programme via a telephone call. If you are happy with the exercises we will discharge you from our team. If any concerns we can address these either via telephone or face-to-face contact prior to discharge. If you have any concerns following discharge from our team you will need to contact your Primary Care Team (e.g. GP). If you have any feedback please contact us on 0191 445 3186.

Data Protection

Any personal information is kept confidential. There may be occasions where your information needs to be shared with other care professionals to ensure you receive the best care possible. In order to assist us improve the services available your information may be used for clinical audit, research, teaching and anonymised for National NHS Reviews. Further information is available in the leaflet Disclosure of Confidential Information IL137, via Gateshead Health NHS Foundation Trust website or the PALS Service.

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