





Knowsley Respiratory Service Pulmonary Rehabilitation

Useful information for breathing problems



Pulmonary Rehabilitation

Tel: 0151 6001844

Knowsley Community Respiratory Service

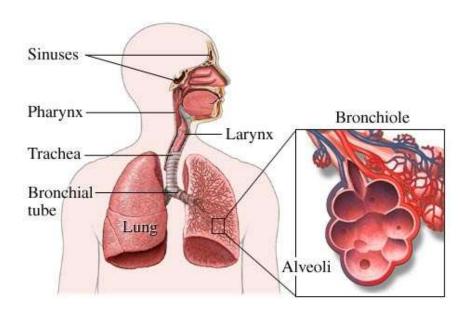
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How do my Lungs Work?



The picture above shows the airways and lungs and includes all the different parts and their official names. When you breathe the air enters through your nose or mouth and moves down the trachea (windpipe) in your throat. This tube then divides into two branches called bronchial tubes. One bronchial tube goes into your right lung and one into the left lung.

Once inside the lungs, the tubes get smaller and smaller, just like the branches on a tree. These smaller tubes are called bronchioles. At the end of these smaller branches are little air sacs called Alveoli.

The air you breathe in moves all the way down the tubes in your lungs (airways) to these air sacs. The oxygen from the air then travels through the walls of the sacs into the blood vessels which are wrapped around them; it is then carried in the blood around the body to all the cells. The Oxygen is converted into energy for the body. The waste product from this process is called carbon dioxide.

Carbon dioxide is picked up by the blood and carried back to the lungs, it moves from the blood vessels into the air sacs. It is then breathed out all the way from the smaller airways up the trachea (windpipe) and out through the nose or mouth.

For details of how your lungs are affected by your breathing problem e.g. COPD, Pulmonary Fibrosis, Bronchiectasis or Asthma, please refer to the BLF booklets on these topics. Our team can provide these for you.

Managing Flare Up's

How do I know when I'm getting a flare up?

It is really important to know what your symptoms are like when you are well and feeling at your most stable. Be aware of how much you can do each day, how your breathing is at rest and during activity, what makes your breathing worse, what your appetite is like, how well you usually sleep and the usual colour of your phlegm.

If you know how you are normally, it becomes easier for you to spot when things are getting worse.

If you have worsening symptoms such as those below, you may have a flare up of your breathing problem:

- You are more breathless or wheezy than usual
- There is a change in the colour of your phlegm
- There is a change in the amount of phlegm
- You have reduced energy, loss of appetite, or increased tiredness

Do not wait for the flare up to get worse, it is best to call the rapid response team or your GP for advice.

How do I know whether to ring rapid response or my GP?

The current rapid response service is for people with COPD or Bronchiectasis who need advice about their breathing. People with other lung conditions need to follow their personal self-management plans or contact their GP.

If you ring the rapid response service, sometimes the nurses will advise you over the phone. At other times they will arrange for you to see a member of our team at a local clinic or (if you are unable to get to a clinic) in your own home.

Rapid Response Service

Tel: 0800 0730236 (7 days a week service)

08:00am- 10:00pm Advice/ clinic appointments/ home visits **10:00pm- 08:00am** Advice only

Managing Breathlessness

What is breathlessness?

Breathlessness is a feeling of being unable to catch your breath, or a feeling that you are unable to get enough air into your lungs. It can be a very frightening experience.

It frequently happens after exercising more than your body is used to, but it can also occur while you are resting or after being frightened or startled.

Many people have symptoms of breathlessness, and these symptoms vary greatly from person-to-person.

What makes you breathless may be very different to what makes another person breathless.

What causes breathlessness?

Breathlessness can be caused by lots of different things. It can be caused by a specific disease, most commonly affecting either the heart or the lungs.

These two organs work together to carry oxygen around the body, the lungs bring in oxygen to the bloodstream and the heart pumps the blood around the body to your muscles and other major organs.

Therefore, if there is a problem with either the heart or the lungs, the muscles and other organs may need more oxygen than your body can provide. This may cause you to feel breathless.

Examples of conditions that may cause breathlessness are: COPD, pulmonary fibrosis, bronchiectasis, fibrosing alveolitis, asthma, coronary heart disease and heart failure.

However, it is often the case that people can get breathless without having a heart or a lung condition. It can be caused by not being used to exercise, or fear and anxiety.

Regardless of why you become breathless, there are some simple techniques you can do to help improve and control your breathing.

Being short of breath can be very frightening and it can be difficult to know what to do. **Most importantly DO NOT PANIC.** Try to remember that your breathlessness will settle. Here are a few techniques and ideas to help you control your breathing:

Breathing Techniques:

There are various techniques for coping with breathlessness. Practise these every day when sitting down. As you become familiar with them you can use them to help you when you are feeling breathless.

- All of these should be gentle and not forced.
- Never hold your breath.
- Use them in the positions described in the next section.

1. Breathing Control

This is helpful if you are generally short of breath. Breathing control means breathing gently, using the least amount of effort, with your shoulders supported and relaxed.

In a comfortable position, relax your shoulders, arms and hands. Breathe in gently through your nose and breathe out through your nose or mouth. Try to feel more relaxed and calmer each time you breathe out. Gradually try and make the breaths slower and deeper as you are able.

2. Pursed lip breathing

Breathe out with your lips pursed, as if you are whistling. This slows your breathing down and helps you to make your breathing more efficient.

3. Relaxed slow deep breathing

As you start to exert yourself, try and slow down your breathing and breathe more deeply. Breathe in through your nose and breathe out through your mouth, if possible. It is very useful to try when you are doing something you know will make you out of breath. This combines well with technique 2 and 4.

4. Blow as you go!

Breathe out when you are making a big effort, for example:

- Lifting your arms above your head
- Reaching for something on a shelf
- Bending down
- Going up a step
- Standing up
- During the hardest part of any action

5. Paced breathing

This is useful when climbing stairs (or walking). Breathe in, in time with the steps you take. Do this in a rhythm that suits you and how breathless you feel. For example:

 Breathe in when you are on the stair, and breathe out as you go up the stair (blow as you go).

OR

Breathe in for one stair and out for one stair.

OR

Breathe in for one stair and out for two.

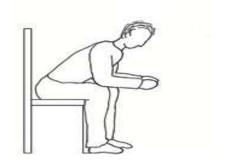
Positions to ease breathlessness

The best positions to use are the ones that need the least energy or effort. If you tense your shoulders and grip onto things when you are breathless, you are wasting energy and oxygen.

Sitting

Sitting uses less energy than standing up. Try these positions and see which feels better for you, as not every position suits everybody.

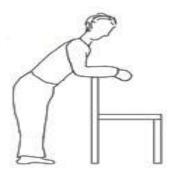
• Lean forward, resting your forearms on your knees, or on the arms of the chair or a table. Try to let go of any tension in your arms and shoulders.



 Sit bolt upright resting back in your chair. Support your arms with pillows under your armpits. Try and let go of any tension in your arms and shoulders.

Standing

Lean forwards from the hips, with your arms resting on something at the right height (window sills, garden wall, kitchen work tops, back of a chair).



When you are really short of breath:

Rest your head and arms on pillows on a table front of you, or lie on your side in bed propped up with lots of pillows.



Standing or walking

Put your hands on your hips, in your pockets, or stick your thumbs in your belt loops to support your arms without gripping. If you carry a shoulder bag, rest your arms on it.

Using a walking aid (a walking stick, or a frame with wheels) can help you find one of these comfortable postures when you are out and about.

Most people find pushing a supermarket trolley helpful – it works in the same way.

Try all these positions and decide which ones are best for you. Different ones will suit different people and situations.

Handheld fan

The use of a fan has been shown to give relief from breathlessness. Handheld/ travel Fans are useful for this as you can keep them with you in your bag or pocket. When you are feeling breathless simply switch the fan on and hold it about 6 inches away from your nose/ mouth. Let it blow against your face.

.....

The 3 F's

A combination of the some of the above techniques is often helpful. One combination that is often helpful is the 3 F's. Try these three steps when you are feeling breathless and see if it helps you to recover more quickly:

- 1) Forward Lean Position either in sitting or standing.
- 2) Fan hold it about 6" away from nose/ mouth and let it blow against your face.
- **3) Focus on breathing out** by breathing the stale air out of your lungs you create more space for new air to come in.

Other useful tips:

- Make sure you take all your medicines and inhaler DAILY as prescribed.
- If you feel wheezy or tight chested, try taking your blue inhaler.
- If possible, avoid things that make you wheezy or worsens your breathing e.g. smoke, strong smells, animals, sprays.
- Take your blue inhaler before you go anywhere that you know will make you wheezy.
- If you get very breathless when eating, try softer foods that do not take a lot of chewing. Use sauces and gravies. Eat little and often rather than having large meals. Ask to be referred to a dietician.
- Try and do little and often with regards to activity.
- If you have lots of phlegm on your chest make sure you can clear it effectively.
 Please discuss this with your physiotherapist if you are having difficulty in clearing your chest.

If your shortness of breath increases significantly, is more difficult to control than normal or is associated with a change in your sputum; please contact the rapid response team or your GP (see p. 4). You can monitor the level of your breathlessness using the Borg scale on p. 38.

Chest Clearance

Why do I have sputum on my chest?

It is normal for the airways to produce sputum, as it is part of the body's defence system. Sputum is produced by cells called 'goblet cells' in the lining of the airways. The stickiness of the sputum helps to trap dirt and pollution when it is breathed into the lungs. The sputum is then 'wafted' up to the top of the airways by tiny little hairs called 'cilia', these cilia could be described as being an 'escalator' for the sputum, just as we would use an escalator to go up to the next floor of a building. Once the sputum is high enough up in the airways it can be coughed up and got rid of.

Why do I have more sputum than other people?

The lungs of most people with COPD have been exposed to some sort of pollution. For the majority of people, their airways have been (or still are for current smokers) exposed to cigarette smoke. For others they have been exposed to a pollutant at work such as cotton dust or diesel fumes. The body tries to deal with this by producing more sputum to trap the tiny particles of pollution that are being breathed in. It makes, what could be described as, a sputum 'factory' by creating more and more goblet cells to produce the sputum that is required. So the increased sputum on your lungs is your body trying to help you deal with the pollution that has been breathed in.

For other conditions such as bronchiectasis, there is often no history of smoking or exposure to any pollutant. A common part of this condition is that the airways produce more sputum than usual and that it can be challenging to get rid of it due to changes in the shape of the airways.

Why do I cough more now I have given up smoking?

Smoking stops the tiny hairs called cilia working properly, as the tar in the smoke sticks them down to the walls of the airway. This means that the 'escalator' for the sputum does not work properly and sputum gets stuck in the lungs. When you stop smoking these cilia (hairs) start to work again and they start to bring up sputum that was previously trapped in the lungs. Getting rid of this old sputum is a good thing for your lungs, it can unblock the airway tubes and make it less likely that you will get chest infections.

Why is it best to keep my chest clear?

It can help to prevent chest infections. Bacteria like to live in damp, dark, warm conditions. The lungs are warm and dark and if you have sputum in the airways they

will also be damp. If you keep your chest as clear as possible it will make it less appealing for the bacteria to 'set up camp'.

How can I clear my chest?

There are a few different things that can help with this:

- Smoking cessation helps the cilia to work again so that you can get rid of the sputum more easily.
- Drink enough water. Being dehydrated means that there will be less water in your sputum, this makes it thick and hard to cough up. Making sure you drink enough water can help with this.
- Move around regularly. Exercise helps you to take deeper breaths and this gets the sputum moving.
- Take your inhalers regularly as prescribed. They will help to open up your airways so that you can get rid of the sputum more easily. You may wish to use your Salbutamol (blue) inhaler before using any sputum clearance methods.
- If your sputum is thick, talk to a member of the Knowsley Respiratory Service about trying Mucodyne or Carbocisteine tablets. These medications can help to thin the sputum so that it is easier for you to cough up.
- Do breathing exercises such as the Active Cycle of Breathing Technique (ACBT), see below for details.
- If you have tried all the above and you are still struggling to clear your chest, request a 1:1 session with a physiotherapist from our team. We will provide you with further techniques/advice.

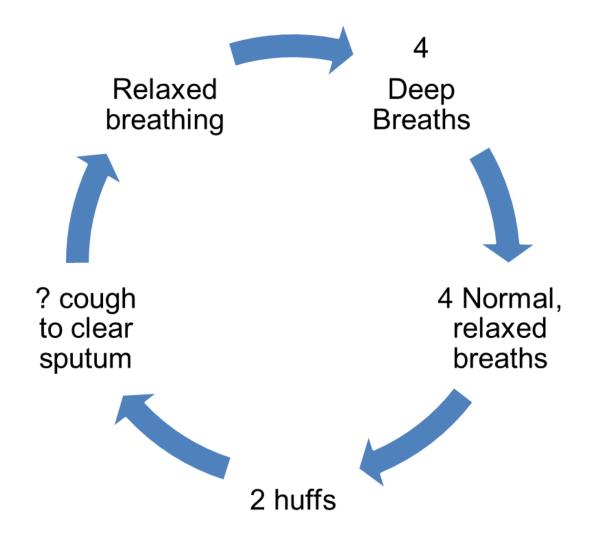
The Active Cycle of Breathing Technique (ACBT)

The aim of this technique is to minimise the coughing that you need to do, to keep your chest clear. Using the ACBT can help you to clear your chest with less effort.

- Get into a comfortable position, sitting upright in bed or in a chair. You can take sips of water during the exercise, as required.
- Start the cycle with 4 deep breaths, pushing your ribs out to the side.
- Take 4 relaxed, abdominal breaths.
- Practice 2 huffs with your mouth open, as if trying to steam up a mirror.

- If you think you are now ready to cough up the sputum, try a big cough to clear it. If you know that the sputum is still too far down in your lungs, avoid coughing at this point (if you can) and go through the cycle again.
- You can repeat this cycle several times. If after 4-5 cycles you have still not coughed up the sputum, stop anyway. Sometimes there is a delayed effect and you will cough up the sputum a little later.
- Use this technique as often as is required to prevent you having to cough during the day. This will vary according to how much sputum you have on your chest.
 As an example, you may wish to do it between 2-4 times daily.
- The diagram of the breathing cycle below should help you to follow it more easily.

Active Cycle of Breathing Technique (ACBT)



Exercise for Breathing Problems

Exercise training can make a big difference to people who are breathless because of a lung condition. It can help people to walk and exercise more easily and to have a better quality of life.

What happens when I exercise?

Exercise involves the continual movement of our muscles. For our muscles to work effectively they require a constant supply of oxygen and the longer this is provided the longer we can exercise for. Our lungs are essential in getting the oxygen into our body. As we exercise, the diaphragm and muscles between our rib cage contract and relax faster in order to increase the oxygen uptake. This is then taken to the muscles for movement.

For people with a lung condition, the damage done to the lungs means less oxygen is absorbed and delivered to the muscles. This results in fatigue, breathlessness and a reduction in exercise tolerance e.g. being able to walk up stairs.

Who should exercise?

It is recommended that everybody performs some form of exercise on a regular basis. Research has shown that people with a lung condition show significant benefit from exercising regularly. The best type of exercise varies from person-to-person depending

on exercise tolerance levels and Pulmonary Rehabilitation is a starting block for doing a long exercise programme, whether means exercising at home, in a part of the many community that are out there.

great term this gym or as projects

exercise?

abilities.

What happens if I donot

After the completion of the Pulmonary Rehabilitation programme your exercise tolerance and level of fitness are likely to have greatly improved. However, stopping or avoiding exercise after rehab can result in "Regression". This means that your symptoms of breathlessness, fatigue and anxiety that you experienced prior to rehab can return. This is best shown through the "Negative Activity Spiral"

Normal Activity Normal Activity Negative Activity Spiral Further Reduced Capacity Anxiety Further Avoidance

Performing regular exercise can prevent the cycle and continue to improve your current fitness, reduce your breathlessness, anxiety and overall fatigue. This is called the "Positive Activity Spiral"

How can exercise help me?

Research has shown that there are numerous benefits to gain from exercising. These include physiological (body) and psychological (mind) benefits. For patients with a lung condtion, some of the key benefits are listed below:

- → Reduced breathlessness
- → Increased endurance of the muscles you use to breathe
- → Increased amount of activity you can do at home
- → Reduced number of flare ups
- → Helps to maintain your independence
- → Reduces anxiety about breathlessness

What exercises should I do?

There are two forms of exercise that have been shown to benefit patients with lung conditions the most. These are:

Aerobic:

Aerobic (or cardiovascular) exercises are designed to get you out of breath. These include:

- → Gym based exercises (bike, treadmill, rower, Zumba etc.)
- → Community exercises (walks or bike rides)
- → Home exercises (stairs, walking, step-ups, sit to stand)

Resistance:

Resistance (or weight) exercises are designed to increase your muscular strength and endurance. These include:

- → Upper body (bicep curls, triceps extension)
- → Lower body (leg curls, leg extensions, squats)

Each of these exercises focus on a different muscle group.



How long and hard should exercise be?

It is best if your exercise routine varies between Aerobic and Resistance exercise. Research into exercise for people with lung conditions, suggests that they will benefit most if they exercise at least three times per week. Department of health guidance suggests exercising for a total of 150 mins each week, this could, for example, be done as 5 half hour sessions per week. If you find it difficult to do one long session you can choose to break it up over the course of the day.

Where can I do exercise?

There are a wide variety of projects and facilities close to you that can offer a range of exercises. Local community projects, clubs and local leisure centres offer a variety of activities suited to every individual of all ages and abilities. These can range from home exercise programmes for house bound people, to gym or exercise classes provided by local centres for those more able. Details of some local projects, leisure centres or home programmes are provided in the useful telephone number section at the back of the booklet. If you want any additional information please speak to a member of the Pulmonary Rehabilitation team.

When should I not exercise?

DO NOT Exercise:

- 1. If you feel unwell
- 2. If you feel dizzy
- 3. If you have any pain
- 4. If you have an exacerbation or increased shortness of breath
- 5. In extreme temperatures

REMEMBER, exercise will benefit you most when it is done regularly and it is important that it is enjoyable. Do not push yourself too hard. There is a lot on offer out there but if you ever need any advice, please call us at Pulmonary Rehabilitation.

Energy Conservation, Anxiety and Stress Management

How to conserve your energy

One of the most challenging things for people who have a lung condition is that daily tasks can become more difficult. Activities such as getting washed and dressed, doing the stairs, going shopping etc. can become limited by breathlessness and/or fatigue. Fatigue is an excessive feeling of tiredness that impacts on your daily life.

There are ways that you can adapt your lifestyle so that you can do what you need to do without becoming excessively tired or breathless. The main ways are:

- 1. Time management
- 2. Prioritising
- 3. Planning
- 4. Pacing



Time management: Means scheduling events or appointments for times that are best for you and allowing plenty of time to get there.

Prioritise: You can consider what tasks you have to do and choose which are the most important to be done in your day. There may be some that you can leave for the next or following day(s).

Planning: Once you have prioritised which tasks need to be done, you can think about how best to plan your day to achieve what you want to do, it is about being prepared.

Pacing: It is important to know your limitations and work within them. Take your time with your planned activities and stop before you feel tired. When you are feeling good it can be tempting to do as much as you possibly can but this can lead to you feeling very tired afterwards and it can take time to recover from this. If, however, you stop before you feel exhausted then you will recover more quickly and your level of activity will be more steady.

Some strategies for saving your energy

- Spread out the time you spend on a task, break it into parts. For example if hoovering is difficult for you, you could split the job up do the lounge one day, do the hallway a different day, do the task in small chunks to make it manageable.
- Think about whether you can sit down to do a task, jobs such as peeling vegetables could be done sitting at a table. Maybe you could get a perching stool for your kitchen sink to make washing up easier.
- Consider the storage of items within the home, e.g. heavy items that you use regularly are best stored at a height where you do not have to reach up high or bend down too low.
- Learn how to say no and delegate tasks to others that you do not need to do yourself. Learn how to be more assertive if that would be helpful for you.
- Regular exercise will improve your energy levels.
- Find out about equipment that is available to make things easier for you.
- Be aware of services that can support you in the community.

How can I manage Stress & Anxiety?

Feelings of stress and anxiety are a common problem in lung conditions for reasons such as:

- Worries about health and wellbeing
- Feeling of loss of control and independence
- Forced major lifestyle changes

In some cases, anxiety and stress may become so overwhelming in people's lives that they may fear carrying out basic everyday tasks. This information is designed to introduce you to some relaxation techniques.

What is stress?

Stress is a natural reaction of the body to any demand (pleasant or unpleasant) placed upon it. It is a state of mental or emotional strain and is a threat to your quality of life, physical and psychological well-being.

What is anxiety?

Anxiety is an unpleasant emotion that is experienced in anticipation of some (usually ill defined) misfortune. It is a multi-system response to a perceived threat or danger.

What causes stress and anxiety?

Some causes are external, for example bills, lack of resources and traffic. Some are internal, meaning they come from within us, e.g. responsibility and unrealistic demands and expectations of ourselves.

Effects of stress & anxiety

Some effects are emotional such as aggression and irritability. Some are physical such as fatigue and illness. Listed below are some common effects of stress and anxiety on the body:

Raised heart rate, raised breathing rate, fatigue, headaches, loss/gain of appetite, weight loss/gain, irritability, anger, anxiety and depression.

How do you deal with stress and anxiety?

There are lots of different ways to reduce everyday stress and anxieties:

- Do not make unrealistic deadlines- allow time for interruptions
- Pace yourself
- Take tea breaks and eat/drink slowly
- Maintain a balanced diet



- Learn to express how you feel without antagonism or hostility- assertiveness is about positivity not aggression
- Spend some time everyday doing some exercise in the open air, if possible
- Try something different from your usual activities e.g. tai chi, walking
- Find a hobby that is creative
- Really listen to music or the radio
- Seek help from the **respiratory counsellor** if you feel you need help to cope

Relaxation

Relaxation is an important part of stress management and can act as an effective coping strategy to reduce your levels of everyday stress and anxiety

Benefits of relaxation:

- Simple and effective way of reducing the stress response
- Increases self-awareness of effects of stress on the body and mind
- Reduces fatigue by increasing awareness of inappropriate muscle tension
- Increases confidence in ability to deal with feelings of stress, anxiety and panic
- Can improve overall performance in daily living activities
- Can improve personal relationships
- Help promote calmness and sense of well-being
- Helps promote sleep
- Helps promote more effective breathing pattern





Have a try with the following relaxation exercise!

Find a comfortable position in a chair or bed in a quiet room. Relax as much as you can and try to become aware of your breathing. Place your hands gently on your stomach and try the technique you learned in class, once more.

Close your eyes and visualise yourself in a place that you find comfortable and relaxing. This might be your garden on a sunny afternoon or by a lake in a nice park.

Starting at your head and moving down to your toes, try tightening your muscles one at a time, and then releasing the tension and relaxing each part of your body.

Remember to keep your breathing steady and relaxed and continue to visualise yourself in your favourite place. This whole technique should take 5-10 minutes and can be done on a daily basis.

Medication for Breathing Problems

Taking your medication correctly is very important in managing your condition and giving you relief from your symptoms. In this section you will learn about the different types of medication used to manage breathing problems. Please note that not all breathing problems benefit from inhalers, you will only be prescribed this medication if it is appropriate for your condition.

Types of inhaler

Short acting inhalers

• Common names: Salbutamol, Terbutaline, Ventolin[®], Salamol[®], Bricanyl[®]









- Your blue inhaler works quickly to relax the muscles in your airways and open them up, its effects last for about 4-6 hours.
- It helps to relieve severe breathless episodes so you should always carry it with you and use it as and when needed. This includes when you are breathless, wheezy, or when you are about to do something that makes you breathless.
- Common side-effects: fine tremors (with Salbutamol and Terbutaline) and palpitations (faster heart beat)

Long acting Inhalers

These inhalers have a longer lasting effect so you do not need to take them as frequently. There are two main types of this medication LAMA and LABA and people who have severe breathlessness will normally be on one of each type. Each works in a slightly different way, both of them relax the muscles in the airways and help to reduce breathlessness.

1) 'Long Acting Muscuarinic Antagonist' LAMA inhalers



Tiotropium – commonly known as **Spiriva or Respimat** (taken once a day)



Aclidinium – commonly known as **Eklira** (taken twice a day)



Glycoporonium – commonly known as **Seebri** (taken once a day)



Umeclidinium – commonly known as **Incruse** (taken once a day)

These inhalers need to be used every day to help to keep you well. As well as reducing breathlessness they can also reduce the number of flare ups that you have.

It is important to only take one type of LAMA medication at a time. So if you are also prescribed any others such as Atrovent/Ipratropium Bromide, please check with the Knowsley Respiratory Service for advice regarding which is best for you to use.

2) 'Long Acting Beta Agonist' LABA inhalers

These forms of medication are longer lasting bronchodilators. They help to keep the airways open, therefore, reducing the need to use your blue reliever inhaler. They help to manage your breathlessness throughout the day. It is important to use these inhalers as prescribed every day, whether or not you have any symptoms. They can help to reduce how often you develop flare ups of your condition.

Salmeterol – commonly known as **Serevent Accuhaler or MDI** (taken twice a day)



Formoterol – commonly known as **Oxis Turbohaler** (taken twice a day)





Indacaterol- commonly known as **Onbrez Breezhaler** (taken once a day)



Oldaterol- commonly known as **Striverdi Respimat**

The following inhalers contain inhaled corticosteroids and a LABA medication. They are appropriate for a small number of patients who get frequent chest infections. Corticosteroids have potential side-effects so you will only be prescribed them if the benefits are likely to outweigh the possible disadvantages of taking it.

Formoterol and Budesonide – commonly known as **Symbicort** (taken twice a day)



Salmeterol and Fluticasone – commonly known as **Seretide** (taken twice a day)



Formoterol and Budesonide- commonly known as **DuoResp**



Fluticasone furoate and Vilanterol- commonly known as **Relvar** (taken once a day)



Beclometasone and Formoterol- commonly known as Fostair





3) Combined long acting inhalers (LABA and LAMA medications)

These inhalers need to be used every day to help to keep you well. As well as reducing breathlessness they can also reduce the number of flare ups that you have. Using a combination of a LABA and LAMA is more powerful than using just one of these medications and can have a greater effect on improving breathlessness.



Umeclidinium/ Vilanterol – commonly known as **Anoro Ellipa**



Tiotropium/ Olodaterol – commonly known as **Stiolto Respimat**

Indacaterol/ Glycopyronium – commonly known as **Ultibro Breezhaler**



Formoterol/aclidinium- commonly known as **Duaklir Genuair**



Spacers: Spacer devices can help you get more of the medication into your lungs by improving your inhaler technique. They need to be cleaned every week by washing in warm water with washing up detergent and left to dry on the draining board.

Tablets for breathing problems

Prednisolone is a steroid tablet which helps to reduce breathlessness by reducing the inflammation in the lungs. There are a number of potential side-effects from Prednisolone which are listed in the table above. This is why you will usually only be prescribed a short course of this type of medication. Occasionally, if somebody can't manage without these tablets, then the benefits of taking it outweigh the potential side-effects and they are prescribed a low dose long term. If you are prescribed Prednisolone (corticosteroid) it is best to take these tablets in the morning after food as they can upset your stomach.

Antibiotics are used to treat bacterial chest infections. They do not have any effect on viruses such as colds or flu, so they are not appropriate for this type of illness. Different types of antibiotic treat different types of bacteria which is why there are a number of different types available.

If you are prescribed antibiotics make sure that you complete the course, even if you start to feel better. If you have standby antibiotics at home it is very important to contact the Knowsley Respiratory Service before taking them. If you take them without doing so

you may not be prescribed standby medications in the future. Some people who get frequent infections, may be prescribed a long term antibiotic which is normally taken three times per week.

Theophylline and Aminophylline are oral bronchodilators, which means that they help to open up the airways. This can reduce breathlessness. If you are on these tablets you may need regular blood tests. Smoking can affect the level of medication in your blood and it is important you are monitored.

Mucodyne or Carbocisteine can help to make sputum thinner and easier to cough up. These need to be taken regularly to be effective. It normally takes a few weeks for the medication to build up in your system and start to be effective.

Pirfenidone and Nintedanib are tablets for some people who have pulmonary fibrosis. They reduce the activity of the immune system and can help to slow the progression of scarring in the lungs. It is only available for people with certain types of lung fibrosis whose lung function tests are between certain values.

Montelukast is a tablet for people with asthma. It can help to prevent asthma attacks.

Azithromycin is a special antibiotic that can have anti-inflammatory effects in the lungs. It can reduce how often some people get 'flare ups' of their lung disease. It can be very effective but also has quite a number of potentially serious side-effects and so is only suitable for some people with lung disease.

Nebulisers

Most people can take their medications via an inhaler but sometimes you may need a nebuliser for short or long term use. The Knowsley Community Respiratory Service will arrange this for you if it will be of benefit. A nebuliser is a machine that pushes air through a liquid medication to turn it into a mist that you inhale. Common medications that go in a nebuliser are Salbutamol or Atrovent/Ipatropium.

If you are not benefitting from your medication then contact the Knowsley Community Respiratory Service, your GP, practice nurse or community matron as soon as possible. There are usually other drugs or devices that you can try.

Oxygen

If your oxygen levels drop below a certain level you may be prescribed oxygen therapy. Different types of oxygen therapy are available:

Long term oxygen therapy (LTOT): This means using oxygen for at least 16 hours per day, this is usually a long term prescription that will continue so long as your oxygen levels are low.

Ambulatory oxygen therapy: This is prescribed if your oxygen levels drop below a certain level when you walk or move around. Some people only need to be on this type of oxygen as their oxygen levels at rest are fine.

Short burst oxygen therapy: This is infrequently prescribed, as use of a handheld fan has been shown to be just as helpful. It means the use of oxygen therapy for a few minutes just when you are feeling breathless.



Oxygen must not be used near any naked flames as this is very dangerous. If you are prescribed oxygen you will be given safety information to follow.

Oxygen therapy needs to be used as prescribed as it is dangerous for some people with breathing problems to have too high a level of oxygen therapy. Your oxygen needs will be carefully assessed by the Knowsley Respiratory Service and a safe level of oxygen prescribed that meets your individual needs.

Smoking and breathing problems

How would stopping smoking benefit me?

- It slows down the progression of some breathing problems such as COPD. It is the most effective thing that you can do to help this condition.
- It prevents further lung damage from the chronic inflammation that occurs as a result of tobacco smoke.
- It helps to prevent heart diseases such as angina, high blood pressure and heart attacks or strokes
- Smoking has been linked to lung, throat, tongue and other cancers which can also spread so stopping will reduce this risk
- Improved environmental health for you and your family
- Improve sense of taste and smell

What am I breathing into my body if I still smoke?

There are nearly 4000 chemicals in a cigarette, including nicotine. At least 43 of the ingredients are carcinogenic (cancer causing), including:

Tar: a mixture of dangerous chemicals that forms a sticky brown residue on teeth, fingers and lungs

Arsenic: used in preservatives, poison (causes cancer and damages the heart and its blood vessels)

Polonium 210: a highly radioactive element which, when deposited inside the airways, delivers radiation directly to surrounding cells (smoking 1½ packs a day delivers the same amount of radiation as having 300 chest x-rays a year)

Hydrogen cyanide: used as an industrial pesticide (causes DNA damage similar to the damage seen in lung cancer patients, also stops cells from repairing DNA damage and kills the hairs that normally clean the airways)

Carbon monoxide: found in car exhausts and used in chemicals manufacturing (reduces the body's ability to transport oxygen, therefore, depriving the tissues/organs of oxygen).

Smoking also affects the amount of breathing medication absorbed in the blood, therefore affecting how well they work to help your breathing.

Why can it be so challenging to give up smoking?

In 2000, the Royal College of Physicians concluded that cigarettes are highly efficient nicotine delivery devices and are as addictive as heroin or cocaine. Nicotine has been shown to have similar effects on the brain systems to those of drugs such as heroin and cocaine. Nicotine is the primary reason that tobacco is so addictive

The addictive effect of nicotine is linked to its capacity to trigger the release of dopamine, a chemical in the brain that is associated with feelings of pleasure. However, research suggests that in the long term nicotine depresses the ability of the brain to experience pleasure, thus people who smoke need greater amounts of the drug to achieve the same levels of satisfaction.

I would like to stop smoking, what is the best way for me to quit?

Going cold turkey is not recommended for most people. The best option is to obtain support from a smoking cessation service and gain specialist advice, as well as nicotine replacement therapy. Nicotine replacement therapy helps with the symptoms caused by nicotine withdrawal and makes it much more likely that your quit attempt will be successful. Stopping smoking is the best possible thing that you can do to help your lungs.

For support to quit contact:

Knowsley Stop Smoking Service on 0800 3247111 or text KNOWSLEY to 61825 (normal network charges apply)

How to Eat Well When You Have a Breathing Problem

(The following information is taken from www.a lung conditioneducation.org.uk
Sponsored by an educational grant from Nutricia Ltd and supported by the Respiratory Dietitians Network)



It is important to eat well and keep as healthy as possible.

Your diet and nutritional intake are very important when you have a breathing problem.



A breathing problem can have an effect on your whole body. It is, therefore, important to eat a balanced and varied diet to help maintain your strength and fitness, as well as help your body fight infections.

When you are feeling well and strong, healthy eating can keep you feeling this way.

It is important to think about your weight. If you are very overweight your heart and lungs have to work harder to supply oxygen to your body. Likewise, if you are too thin you are more at risk from infections.

Check what your Body Mass Index (BMI) is by using the chart on the next page. All you need is your height and weight. If your BMI is between 20 and 30, that is a healthy weight for someone with a lung condition:

If you find you are struggling to eat well and find that you are losing weight, it is a good idea to mention this to a health professional.

Diet and breathing

If you become breathless when eating you may find it easier to eat three smaller meals and have snacks in between meals, however, it is important not to reduce your overall food intake.

Eating and smoking

Giving up smoking is a fantastic step to increasing your health and fitness but you may find your weight increases slightly. Don't be too concerned about this. The most important thing is to keep off cigarettes.

Eating and exercise

If you are living with a breathing problem it is very important to keep as active as possible, this helps your lungs and also the rest of your body to stay strong.

Try and gently increase the amount of activity you are doing yourself, and ask about local activity programmes.

Body Mass Index (BMI) chart



Once you have determined what your needs are regarding your weight, please refer to the most appropriate section in the following pages. The sections are:

- 1) Advice for people who need to maintain the same weight or lose weight
- 2) Advice for people who are eating well but need to gain some weight
- 3) Advice for people who are struggling to eat well and need to gain some weight

Advice for people who need to maintain the same weight or lose weight

Fruit and vegetables

- •For essential vitamins and minerals to boost your immune system
- We should include plenty of fruit and vegetables in our diets - aim to try and get five portions a day
- Your fruit and vegetables can be fresh, frozen, canned - they all count



Dairy foods

- For strong bones
- People with breathing problem can have weaker bones. This can be a result of your medication or because you are less active
- Dairy foods include: cheese, milk, yoghurt, cream, fromage frais include a helping or portion of dairy food in your diet three times per day



High energy foods

- •High energy foods are the ones to think about if you are trying to reduce your weight. They tend to contain a lot of calories but don't provide many of the important nutrients for your body try to cut back on these foods.
- •High energy foods are those that are high in fat (e.g. chips, fried foods, meat pies), high in sugar (e.g. fizzy drinks, sweets), or high in both sugar and fat (e.g.chocolate, cream cakes).

Protein foods

- •For healthy strong muscles (including those that help with breathing)
- Try to take a portion of a protein food with at least 2 meals during the day, e.g. lunch and dinner
- Foods that provide us with protein include: meat, fish, eggs, dairy products (cheese, yogurt, milk), tofu, beans, and lentils



Carbohydrate foods

For energy

- Starchy foods include: potatoes, bread, pasta, rice, cereals always include a starchy food at each meal
- Sugary foods include: cakes, biscuits, sweets, fizzy drinks try to take in the diet occasionally.

If you are struggling to lose weight and need support with this please ask a member of the Pulmonary Rehabilitation team to refer you to a dietician.

Advice for those who need to increase their weight, who are eating a good amount of food

Improving your nutrition

Your diet and nutritional intake are very important when you have a breathing problem as it can have an effect on your whole body. It is, therefore, important to eat a balanced and varied diet to help maintain your strength and fitness, as well as help your body fight infections.

If you are finding it a struggle to eat enough or are losing weight (e.g. your clothes and jewellery or watch are feeling looser), or you notice that you are losing strength in your muscles and your body shape is changing, this is the time you need to think differently about the foods you are eating. Following the advice in this leaflet will help you to regain the strength and weight you have lost. If you continue to lose weight, speak to your doctor or nurse.

Protein foods



- For healthy strong muscles including those that help with breathing.
- Try to take a portion of a protein food with at least 2 meals during the day, e.g. lunch and dinner
- Foods that provide us with protein include: meat, fish, eggs, dairy products (cheese, yogurt, milk), tofu, beans, and lentils.

Carbohydrate foods

- For energy always include a starchy food at each meal
- Starchy foods include: potatoes, bread, pasta, rice, cereals
- Sugary foods include: cakes, biscuits, sweets, fizzy drinks.

Fruit and vegetables

- •For essential vitamins and minerals to boost your immune system
- •We should include plenty of fruit and vegetables in our diets aim to try and get five portions a day.
- •Your fruit and vegetables can be fresh, frozen, canned they all count.



Dairy foods

- For strong bones
- •People with breathing problems can have weaker bones. This can be a result of your medication or because you are less active
- •Dairy foods include: cheese, milk, yoghurt, cream, fromage frais include a helping or portion of dairy food in your diet three times per day don't chose low fat options.



High energy foods

- •High energy foods are the most helpful types of food to help you gain weight.
- •High energy foods are those that are high in fat (e.g. chips, fried foods, meat pies),
- •high in sugar (e.g. fizzy drinks, sweets), or high in both sugar and fat (e.g. chocolate, cream cakes) Include in your diet as often as possible.

Diet and breathing

- •If you find you are eating less because you are short of breath you may find it easier to eat three smaller meals and have snacks in between meals.
- •Aim to eat something or have a milky drink six times per day.

Eating and exercise

- •If you are living with a breathing problem it is very important to keep as active as possible, this helps your lungs and also the rest of your body to stay strong.
- •Continue to try and gently increase the amount of activity you are doing yourself but make sure you have a high energy snack after each exercise.
- •Ask your doctor or nurse about local activity programmes.

Tips for improving your intake

- •When you are unable to get enough energy and nutrients into your diet to maintain your weight and strength, the following tips will help you increase your energy intake:
- •Choose full fat or high energy options e.g. (whole milk) and avoid the lower fat varieties.
- •Add grated or cream cheese to mashed potato, soups, sauces, scrambled eggs, baked beans.
- •Add cream to sauces, scrambled eggs, soups, mashed potatoes, desserts, cereals and porridge.
- •Use mayonnaise or dressing in sandwiches and on salads.



- •Add extra butter or margarine to vegetables, potatoes, scrambled eggs and bread.
- •Make fortified milk whisk 2-4 tablespoons of milk powder to one pint of milk; add this to drinks, puddings, cereals, soups and sauce. •Add extra honey, syrup and jams.

- •Try to take nourishing drinks like smoothies, soups, fruit juice, milkshakes, hot chocolate, energy drinks.
- •Don't feel that you need to stick to three meals a day, try to take small meals and snacks or nourishing drinks between meals.



•Use convenience foods when you do not feel up to preparing foods from scratch. Have some standbys in the freezer or cupboard. Good store cupboard ideas: long life milk, savoury snacks, biscuits, rice puddings, corned beef, baked beans, macaroni cheese, soups, tinned puddings and custard.

Monitor your weight

- •It is a good idea to keep an eye on your weight as it is a good indicator of what is happening in your body. If you can, weigh yourself monthly.
- •If you are unable to weigh yourself, be aware of visual signs of your weight dropping, for example jewellery and clothes becoming looser.
- •If you continue to lose weight seek advice from your doctor or nurse.

Advice for people who need to gain weight, whose food intake is reduced

- Your diet and nutritional intake are very important when you have a breathing problem.
- This is the time to increase your energy and protein intake to help you regain weight, feel better and stronger.
- Follow the advice in this leaflet, but if you continue to struggle with your diet and lose weight, speak to your doctor or nurse for further help.

Diet and breathing

- •It is common that it becomes difficult to eat and swallow when you are very short of breath.
- •Some people find it easier to chew and swallow softer, wetter foods at these times, e.g. casseroles, milky puddings, ice creams.



- If you find you are eating less because you are short of breath you may find it easier to eat three smaller meals, and have snacks in between meals.
- Aim to eat something, or have a milky drink, six times per day.

High energy foods

- High energy foods are the most helpful types of food to help you gain weight.
- High energy foods are those that are high in fat (e.g. chips, fried foods, meat pies), high in sugar (e.g. fizzy drinks, sweets), or high in both sugar and fat (e.g. chocolate, cream cakes).
- Include in your diet as often as possible.

Tips for improving your intake

When you are unable to get enough energy and nutrients into your diet to maintain your weight and strength, the following tips will help you increase your energy intake:

- Choose full fat or high energy options e.g. (whole milk) and avoid the lower fat varieties.
- Add grated or cream cheese to mashed potato, soups, sauces, scrambled eggs, baked beans.
- Add cream to sauces, scrambled eggs, soups, mashed potatoes, desserts, cereals and porridge.
- Use mayonnaise or dressing in sandwiches and on salads.
- Add extra butter or margarine to vegetables, potatoes, scrambled eggs and bread.



- Add extra honey, syrup and jams.
- Make fortified milk whisk 2-4 tablespoons of milk powder to one pint of milk; add this to drinks, puddings, cereals, soups and sauces.
- •Try to take nourishing drinks like smoothies, soups, fruit juice, milkshakes, hot chocolate, energy drinks.
- Do not feel that you need to stick to three meals a day, try to take small meals and snacks or nourishing drinks between meals.
- Use convenience foods when you do not feel up to preparing foods from scratch, have some standbys in the freezer or cupboard. Good store cupboard ideas: long life milk, savoury snacks, biscuits, rice puddings, corned beef, baked beans, macaroni cheese, soups, tinned puddings and custard.
- Don't fill up on drinks before or during your meal.
- Eat more of the type of foods that you feel like, when you are not feeling great and do not worry about having the perfect diet.
- Try not to miss meals as you will feel even worse.

Coping with a dry mouth

You may find that you have a dry mouth from time-to-time. Using oxygen, nebulisers or inhalers can sometimes cause this. It can make it difficult to chew and swallow foods, and sometimes it can lead to taste changes.

Tips to help:

- Choose softer foods or moist foods, e.g. minced beef in shepherd's pie rather than individual pieces of meat.
- Suck fruit sweets, ice cubes made with fruit juice or squash, chew sugar-free gum.
- Your doctor may prescribe some pastilles or saliva sprays if the problem continues.
- If you are finding it difficult to swallow or are frequently coughing during meals, mention it to your doctor or nurse, they will be able to give you advice.

Coping with taste changes

If your taste changes you can lose your appetite and may not feel like eating your normal foods.

Tips to help:

- If you are using a steroid inhaler always rinse your mouth and gargle with water after use to prevent oral thrush.
- Look after your mouth, regularly clean your teeth/dentures, use a mouthwash if that helps, and try and floss too.
- Focus on the foods you enjoy but do not be afraid to try new foods.



- Try sharp or spicy foods, as they have a stronger taste.
- Experiment with different seasonings and sauces etc.
- If you have gone off a particular food, try it again after a couple of weeks as your taste may have changed again.

Nutritional support

- If you are struggling to eat enough you may also be given a nutritional supplement to try.
- These ready-made products provide you with energy, protein, vitamins and minerals.
- They are designed to boost your intake in between meals; they are not designed to replace your meals.
- There are a range of products that you may be offered, which come in a variety of styles (e.g. milk tasting, juice tasting) and flavours.
- You will be advised on how many drinks to take during the day.

Monitor your weight

- It is a good idea to keep an eye on your weight as it is a good indicator of what is happening in your body. If you can, weigh yourself monthly.
- If you are unable to weigh yourself be aware of visual signs of your weight dropping, for example jewellery and clothes becoming looser.
- If you continue to lose weight seek advice from your doctor or nurse.

Eating and exercise

- If you are living with a lung condition it is very important to keep as active as possible, this helps your lungs and also the rest of your body to stay strong.
- Make sure you regularly have high energy snacks throughout the day if you are increasing your activity
- Ask a member of the Pulmonary Rehabilitation team if you would like advice about exercise.

British Lung Foundation

The British Lung Foundation (BLF) is the only charity working for everyone affected by lung disease.



The need:

- 1 in 7 people have a lung condition
- 8 million people in the UK
- Respiratory disease kills 1 in 4 people in the UK
- The most common illness responsible for emergency admission to hospital
- Costs NHS more than any other disease area

Aims:

The BLF aims to fund research, to campaign and bring about positive change in lung health, and to improve treatment, care and support for people affected by respiratory conditions.

To provide support for people affected by lung disease, as well as their families, carers and other health professionals. This involves the provision of nationwide self- help groups for people living with lung disease. The aim is to encourage mutual support, friendship and information sharing and raise awareness of lung disease.

Breathe Easy Knowsley

This is a local support group for anyone living with a lung condition including carers, friends and family. It is held at Prescot Town Hall on the last Wednesday of each month, 13.30pm – 15.30pm, ring Anita on 0151 449 1705.

Help and information

Information and support is available on a wide variety of subjects, through:

- Leaflets and information sheets
- BLF membership: Breathing Space magazine
- BLF nurses, based across the UK who play a key role improving the quality of care for patients through treatment, education and self-management.
- Pen pal scheme, enabling people to be in touch with others

The British Lung Foundation helpline team is able to provide advice, information and support on a wide variety of issues including the treatment and management of lung conditions, welfare benefits, going on holiday etc. This service is available to anyone affected by breathing problems including people with a diagnosed condition, parents of children with breathing problems, carers, family and friends and health professionals.



What does the service consist of?

Spirometry/Diagnostic service

Lung function tests are performed at local clinics to help diagnose and determine the severity of breathing problems. This enables the team to provide the most appropriate treatment for you.

Consultant-led Multidisciplinary Team clinic

Respiratory consultants lead local clinics where people with breathing problems can be reviewed and appropriate treatments prescribed. You will be reviewed by either a consultant, advanced practitioner or respiratory nurse. This service is currently only available for people with COPD or bronchiectasis.

• Rapid Response Service

Rapid response is an advice line which you can ring to get help and advice when you are concerned about your breathing. You may be given telephone advice or you may be provided with a clinic appointment or home visit. This service is currently only available for people with COPD or bronchiectasis.

Pulmonary Rehabilitation

Pulmonary Rehabilitation is one of the most effective treatments for breathing problems. It consists of exercise and useful information to help you live with your breathing problem more easily.

Oxygen Service

If you have low oxygen levels at rest these will be assessed by one of our oxygen nurses. If needed, they will suggest and prescribe oxygen therapy to keep your oxygen at an appropriate level.

Ambulatory Oxygen Service

If you have low oxygen levels when walking or exercising, you will be assessed to determine whether oxygen therapy is helpful. If it is felt necessary, then this can be prescribed for you.

Counselling

Our respiratory counsellors support people who are feeling low, anxious or going through difficult times. They see people in local clinics and can also do home visits when needed.

Early supported discharge

This part of the service enables people to come out of hospital more quickly. We provide visits to support people in their own homes.

Administration

When you contact our service you will first speak to our administration staff, they will direct your query to the most appropriate member of our team.

Contact Numbers

Knowsley Community Respiratory Service Tel: 0800 073 0236

> Rapid Response Service Tel: 0800 073 0236

> Pulmonary Rehabilitation Tel: 0151 600 1844

Support Services:

Knowsley IKAN team Tel: 0800 694 0270

The IKAN team can provide information about a range of services available to you. Call them for a chat about any problems you may have- for example questions regarding your pension or benefits, jobs around the home that require a handyman, or to find out about activities or clubs near you. They will be able to organise the right person to help you.

Knowsley Access Team, Occupational Therapy Tel: 0151 443 2600 Occupational therapists can assess your home and make adaptations and provide specialised equipment to assist you in your home. If you require rails, ramps or equipment such as shower chairs or walking frames contact the Knowsley Access Team to arrange a visit.

British Lung Foundation Tel: 08458 5050 20

Mon to Fri 10.00- 18.00

Breathe Easy Knowsley Tel: Anita on 0151 449 1705.

Local support group for anyone living with a lung condition, including carers, friends and family. Held at Prescot Town Hall on the last Wednesday of each month, 13.30pm – 15.30pm.

Knowsley Stop Smoking Service Tel: 0800 324 7111 or text KNOWSLEY to 61825 (normal network charges apply).

Walks for Health (Community Walks) Tel: 0151 285 4975

Pedal Away (Community Bike Rides) Tel: 0151 443 2148

Activities for Life (Leisure Centres)

Exercise referral scheme for a free 12 week activity programme at a local leisure centre – ask a member of staff from Pulmonary Rehabilitation to refer you.

Breathlessness Management Groups, Willowbrook or Woodlands Hospice These services teach you a number of different ways that you can help to manage your breathlessness. Ask a member of staff from Pulmonary Rehabilitation or the Knowsley Community Respiratory Service to refer you.

Knowsley Carers Centre Tel: 0151 549 1412

Information, advice and support for carers, includes Knowsley Carers Emergency Card (A free card that carers can carry in their purse or wallet. If they were to be involved in an incident, accident or emergency then this card could be used to make sure the person that they care for is safe and well)

BORG SCORE

- 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

(You can use this scale to measure and monitor your breathlessness)