

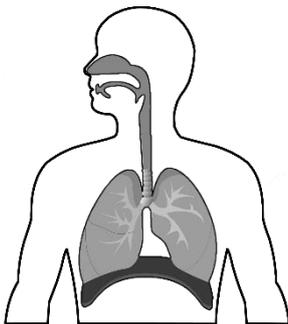
Breathlessness Management

Breathlessness can be a distressing symptom and can be difficult to manage. This leaflet aims to help you with the management of the symptom of breathlessness by giving advice on breathing techniques, exercise, relaxation and nutrition. It also gives some information on your lungs and how they work. This leaflet is designed to complement your attendance at the Breathlessness Clinic where advice will be tailored to your individual needs and can also be accompanied by the 'Living with breathlessness and fatigue' and 'Anxiety management' leaflets.

How the lungs work

Where are they?

There are two lungs, one right and one left; these sit inside the chest wall on either side of the heart. They are protected by the rib cage. The right lung is bigger than the left. The left lung has to accommodate the heart.



The left lung is made up of two lobes, and the right lung three lobes. There are a mass of fine tubes, called airways, which become progressively smaller the further down the lung they sit. The larger ones are called bronchi, the smaller ones bronchioles. These

then end in tiny air sacs called alveoli; there are millions of these alveoli.

There are two thin layers of tissue (the pleura) lining each lung. These allow the lungs to expand and contract smoothly as we breathe in and out. Inside the bronchi are fine hairs (cilia) and mucus that help keep airways clean, well lubricated and protected from dust and other irritants.

What happens when we breathe?

When you breathe in, air is sucked into the lungs via your nose and/or mouth.

Breathing in through the nose allows air to be filtered and warmed, removing dust particles etc., and ensuring the air which reaches the lungs is not too cold.

Air then passes into the windpipe (trachea), before dividing into either lung and continues to travel down until it reaches the alveoli.

Inside the alveoli, oxygen moves into the bloodstream where it is picked up by haemoglobin in the red blood cells and carried around the body. Once it has been used up, the blood is pumped to the lungs so that waste products such as carbon dioxide can be transported back into the alveoli and exhaled. More oxygen is then inhaled.

What makes us breathe?

Breathing is controlled by the brain – it is continually receiving signals from the body as to how much oxygen we require. We normally breathe at a rate of 12 to 16 breaths a minute. If you are moving, your muscles will need more oxygen and so you will breathe faster in order to get enough oxygen into the body. Your heart rate also increases so that the heart can pump oxygenated blood more

quickly. This is why it is perfectly normal to be breathless when you exercise.

The muscles involved

The diaphragm is a thick dome-shaped muscle which separates the lungs from the abdominal cavity. To breathe in, the diaphragm contracts and flattens and moves down towards the abdominal contents. This causes air to be sucked into the lungs allowing them to expand. At the same time the intercostal muscles also pull the rib cage up and out. Breathing out is a more passive action than breathing in. The diaphragm and intercostal muscles relax as the air is exhaled.

Relaxed abdominal breathing technique

The aim of this technique is to help you keep control of your breathing, firstly at rest and then during activity.

1. Lie or sit in a comfortable position ensuring you are as relaxed as possible; relax your neck and shoulders before you start.
2. Place your hand on your stomach; watch and feel your hand move as you breathe in and out.
3. Breathe in through your nose and out through your mouth if possible.
4. Send the air south to your hand, gently filling your lungs up from the bottom upwards.
5. You should feel your stomach rise under your hand as you breathe in.
6. Ensure that your breath size or breathing rate does not increase during the exercise.
7. You may find that it takes a few minutes to settle into the style of breathing, you may even feel like yawning or a little breathless; this is normal.
8. Practice this technique for five to ten minutes three times a day when you are relaxed and not breathless.
9. When you feel ready try the technique as soon as you feel breathless.

Positions of ease

These are positions which can help reduce your work of breathing.

High side lying up

Use pillows to support your body and head as you allow your body to relax into the support.



Supported forward lean

Use pillows on top of a table to lean into and relax your upper limbs and shoulders.



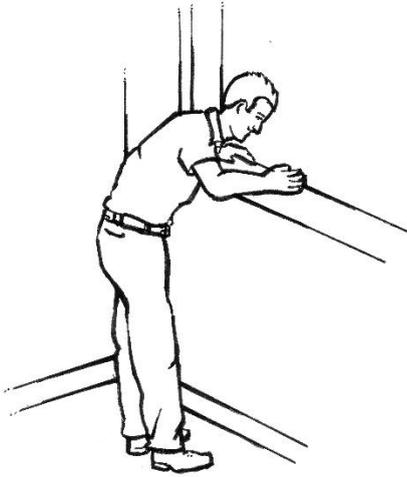
Seated forward lean

Seated on a supportive chair, leaning elbows to wrists on knees and relaxing shoulder blades.



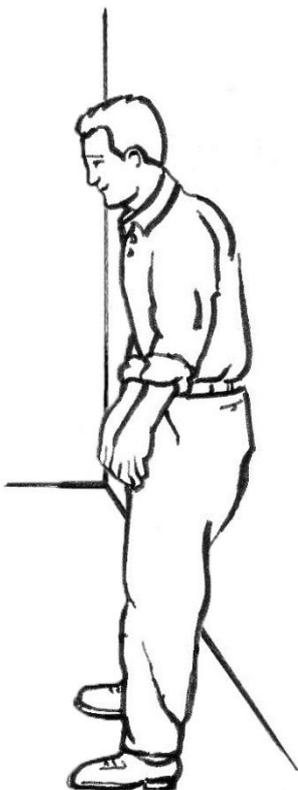
Standing forward lean

Using wall, window sill or banister, supporting upper limbs but relaxing shoulder blades.



Standing backwards lean

Using a wall or window sill, have feet hip width apart and a step or two in front of you, lean your bottom back into the wall. You can also support your upper limbs by leaning on a walking stick or aid.



Breathing control during activity

It is important that you learn to maintain breathing control whilst performing activities. Here are a few recommended methods to try and maximise your air intake and maintain relaxed abdominal breathing. These help to avoid unnecessary effort whilst exercising and enable you to remain calm and in control.

Pursed lip breathing:

- During activity some people find it helpful to narrow their mouth slightly, as if blowing through a straw. This is pursed lip breathing.
- It helps to create back pressure into your lungs that supports and splints open the airways.
- When practicing this technique, experiment with your mouth shape until you find your breathing becomes a little easier, and try to breathe in through your nose.

General advice:

- Avoid holding your breath during activities such as bending or climbing the stairs.
- Try 'blow as you go' to help you avoid breath holding. Breathe out on activity such as reaching or bending, hence 'blowing as you go'.
- Avoid rushing, people who experience breathlessness often rush as they feel the need to reach their goal as quickly as possible - this does not avoid breathlessness.

Climbing the stairs:

- Try a paced breathing technique i.e. breathe in and out gently on each step as you climb. It can be helpful to breathe out as you lift the leg up and breathe in as you step on to the step to recover.
- You can use this technique to climb the stairs one at a time or space the breaths further apart by climbing two steps as you breathe out and breathe in on the third.
- Experiment to find the method that best suits you.

- Remember to try and keep your shoulders relaxed and maintain that feeling of relaxed abdominal breathing.
- Stop at any time you become breathless and recover before resuming climbing the stairs.
- Discuss this technique with your physiotherapist as needed.

Walking on the flat:

- It may be helpful to coordinate your breathing to your walking when on the flat. For example, try taking two steps whilst breathing out, to one step whilst breathing in.
- Stop before you become uncomfortably breathless.
- Try the relaxed abdominal breathing technique to recover

General exercise:

Remember it is not harmful to become breathless on exerting more energy or effort. The effects of gentle, manageable exercise are beneficial to your general health, it:

- Improves muscle strength and functioning of the body
- Improves the function of the heart, lungs and circulation
- Improves levels of red blood cells which supply the muscles (along with other organs) with oxygen
- Reduces blood pressure and risk of having a stroke
- Improves cholesterol levels
- Reduces excess weight
- Improves overall wellbeing and mood (feel-good hormones)
- Improves quality of life

It is wise to avoid exercise when you have:

- A high fever
- Dizziness or sensation changes
- Uncontrolled or undiagnosed pain
- Uncontrolled breathlessness that does not resolve at rest or with recovery techniques
- Severe nausea/sickness
- Anaemia

Summary:

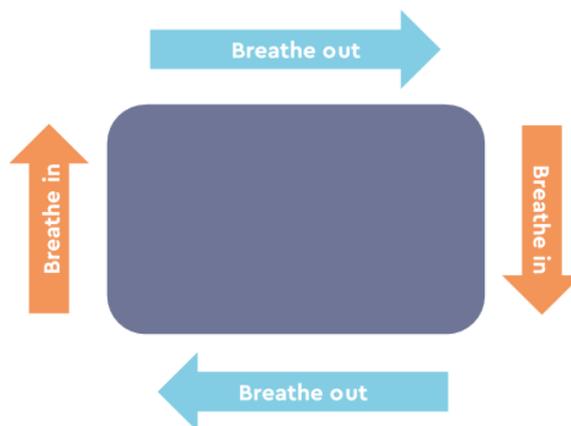
Physical exercise has numerous benefits for your body and your mind. For example, improved lung and heart function, reduced anxiety, and improved mood and self-esteem.

Any new activity should be entered into slowly and gradually built up.

See the 'Living with breathlessness and fatigue' leaflet for advice on the principles of planning, pacing and prioritising.

The breathing rectangle

Find a rectangle in your room or when you are out and about – this could be a picture, mobile phone, a window or a door frame for example.



1. Breathe out slowly through your mouth - you can purse your lips or sigh out gently through a relaxed mouth.
2. Focus on the shortest side (on a corner) and breathe in gently through your nose (if possible) as your eyes follow the line to the next corner.
3. Now gently breathe out through your mouth as your eyes follow along the longest side to the next corner.
4. Breathe in through your nose as your eyes follow along the shortest side to the last corner and then gently out through your mouth as you follow along the longest side.
5. Repeat this cycle until you feel calmer.

How to make bending tasks easier

Bending can be more difficult with breathlessness due to the compression of the chest and abdominal area making the diaphragmatic movement in breathing more difficult.

A technique to try to ease this:

- Take the movement slowly
- Breathe out as you bend forward and then in as you come back up.

You can also consider a handy helper pick up stick.

Relaxation in breathlessness management

In the management of breathlessness it is helpful to learn how to relax. We hold tension in the muscles of our bodies which uses up valuable energy and contributes to fatigue and breathlessness.

A helpful exercise is Progressive Muscle Relaxation or PMR which involves voluntarily relaxing certain muscles and can be done as a pleasant relaxation exercise and is taught at the breathlessness clinics (see also the 'Anxiety Management' leaflet).

Using a hand held fan for breathlessness management

Acquiring a hand held fan can be a useful tool for breathlessness management. The feeling of airflow created by the fan can calm your breathing down by triggering nerves in your face around your mouth and cheek area.

How to use fan therapy correctly

- Hold the fan about 12 – 18 inches from your face and allow it to blow gently towards your face.
- Slowly rotate the fan from one side of your face to the other or from left to right moving around you face – this can be demonstrated in the breathlessness clinic.

- You can also place the fan on a table as some fans can be self-standing but not all.

Breathlessness and maintaining nutritional intake

Problems with the symptom of breathlessness can also lead to problems maintaining adequate nutritional intake of both food and drink.

Some people who are constantly breathless find it very difficult to obtain the recommended amount of energy needed to maintain a reasonable body weight. Illness can have an effect on appetite and the effort of eating and drinking while breathless may be difficult. Eating and drinking may lose its pleasurable aspect.

What can you do to maximise your oral intake?

It may help to try some of the following suggestions:

- Try to sit upright and relax whilst eating your meals.
- Eat slowly - take your time and concentrate on enjoying your food or drink.
- Try to have small, frequent meals - ideally you should aim for three main smaller meals and three snacks each day.
- Add high energy foods to your meals that will not necessarily add volume, for example butter, cream and cheese.
- Try to eat foods that are energy dense and that you like, for example cream based soups, cheesy pasta dishes or high fat puddings.
- Always keep ready meals handy - these can be heated quickly thus saving you time and energy.
- Try and have soft, moist foods which are easy to eat and use less energy to consume.
- Have a good rest before and after meals.
- Ask your doctor about the use of a special medication called a BRONCHODILATOR

