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## **Breathing Problems Advice Booklet**

## **Introduction**

This booklet has been developed to help people who either have problems with their breathing (bronchiectasis, asthma or COPD); or for people who suffer with problems which may improve with breathing re-education and advice (breathing pattern disorders, hyperventilation syndrome, vestibular/balance disorders or anxiety problems).

How you breathe can make a big difference to how you feel. It is surprising how many people are breathing incorrectly without realising it. Breathing incorrectly can cause many different symptoms such as shortness of breath, dizziness and cough.

There are other medical conditions that can cause some of these symptoms and these should have been ruled out by your Doctor before presuming that they are caused by a breathing pattern disorder.

## **How our lungs work**

The main function of our lungs is to draw in oxygen (O<sub>2</sub>) and get rid of carbon dioxide (CO<sub>2</sub>).

## **The diaphragm**

The diaphragm is the most important muscle of breathing (see diagram below) It is a dome shaped muscle that is attached to the under surface of the lungs.

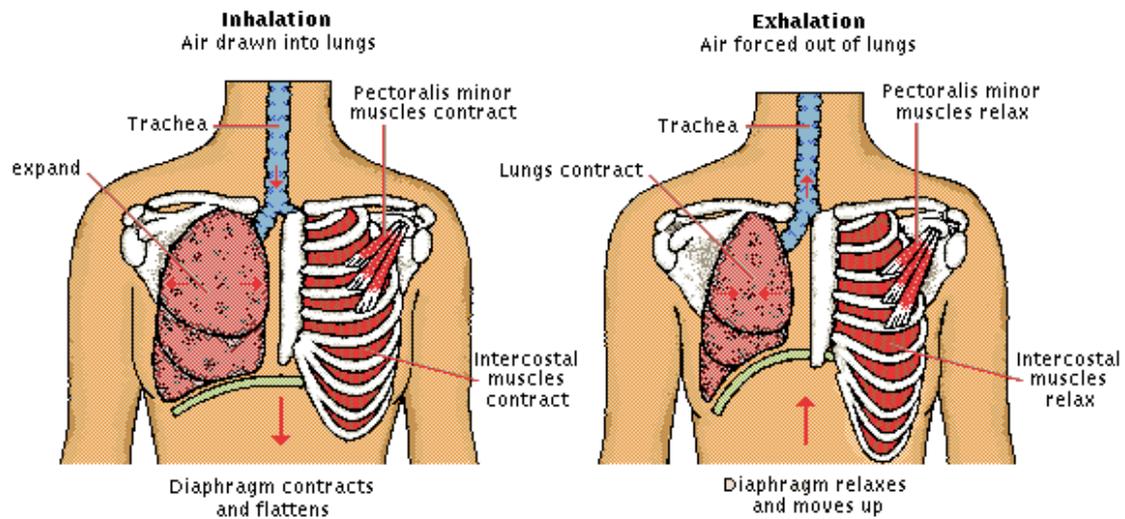
## **Breathing in:**

As the diaphragm contracts, it pulls the lungs downwards towards the abdominal cavity. The diaphragm flattens down from its “dome” shape to a “saucer” like shape. If the lungs expand fully (which is not actually required for normal relaxed breathing) the chest and ribs will also expand.

Anything that makes it harder for the diaphragm to expand the lungs (like tight clothing, excess weight around the midriff or loss of elasticity of the lungs) can increase the “work” or “effort” of breathing and can make you feel more breathless.

## **Breathing out:**

When the diaphragm finishes contracting, it relaxes and returns to its dome shaped position. Air is expelled from the lungs as the diaphragm relaxes. During activity the abdominal muscles contract to help push air out of the lungs. It is important for the air to escape from the lungs to allow fresh air to be breathed in.



### **Signs of abnormal breathing**

- Belly drawing in as you breathe in, ie pulling your abdominal muscles in as you breathe in
- Mouth breathing
- Noisy breathing
- Excessive upper chest movement as you breathe
- Breathing too quickly
- Shoulders rising and falling

### **Things that can make your breathing worse**

- Stress or anxiety
- Being overweight
- Poor posture (slouching in a chair)
- Holding your stomach in too much (bracing)
- Sucking your belly in as you breathe in

- “Weak” tummy muscles
- Inner ear problems (vestibular disorders)

### **Symptoms of abnormal breathing**

- Breathlessness
- Chest pains
- Pins and needles
- Palpitations
- Undue awareness of your breathing
- Dizziness

There are other medical conditions that can cause some of these symptoms and your Doctor should have excluded these before presuming that they are caused by a breathing pattern disorder.

### **Hyperventilation Syndrome**

Some of the symptoms above (chest pains, pins & needles and dizziness) can be caused by a lack of carbon dioxide. Carbon dioxide (CO<sub>2</sub>) is contained in the breath we exhale. When we breathe too heavily or too quickly we can breathe out **too much** CO<sub>2</sub> which can cause the blood vessels to constrict and lead to some of the above mentioned symptoms.

Low levels of CO<sub>2</sub> can adversely affect the circulation of blood and O<sub>2</sub> around the body. Hyperventilation and breathing pattern disorders are often associated with low levels of CO<sub>2</sub>.

### **What is the best way to breathe?**

The correct and most efficient way to breathe is slowly and gently through the nose with the mouth closed. Taking big breaths is rarely helpful.

### **Advice for good breathing**

- Aim to keep your breathing slow, gentle and under control.
- If you can still breathe with the mouth closed you are still in control.
- Mouth breathing suggests losing control of your breathing- especially at rest.
- Keep your breathing quiet.
- Relax the upper chest, and allow the belly to swell slightly as you breathe in and flatten down as you breathe out- if you are able to.
- Spend slightly longer breathing out than breathing in.

- Try to pause momentarily after you exhale, before you inhale again. This helps to slow the breathing down.
- Keep your mouth closed and breathe in gently through the nose.
- If you are very breathless, it may help to blow out gently through the mouth (rescue breathing). Still try to breathe in through the nose.

Deeper breathing is only required during vigorous activity.

Your chest should remain fairly still when breathing at rest, with only the upper abdominal/lower chest area expanding slightly as you breathe in and sinking down as you breathe out.

### **Breathing re education**

It is usually easier to retrain your breathing pattern by practising breathing exercises lying down to begin with.

If you find lying down difficult, then start off in sitting.

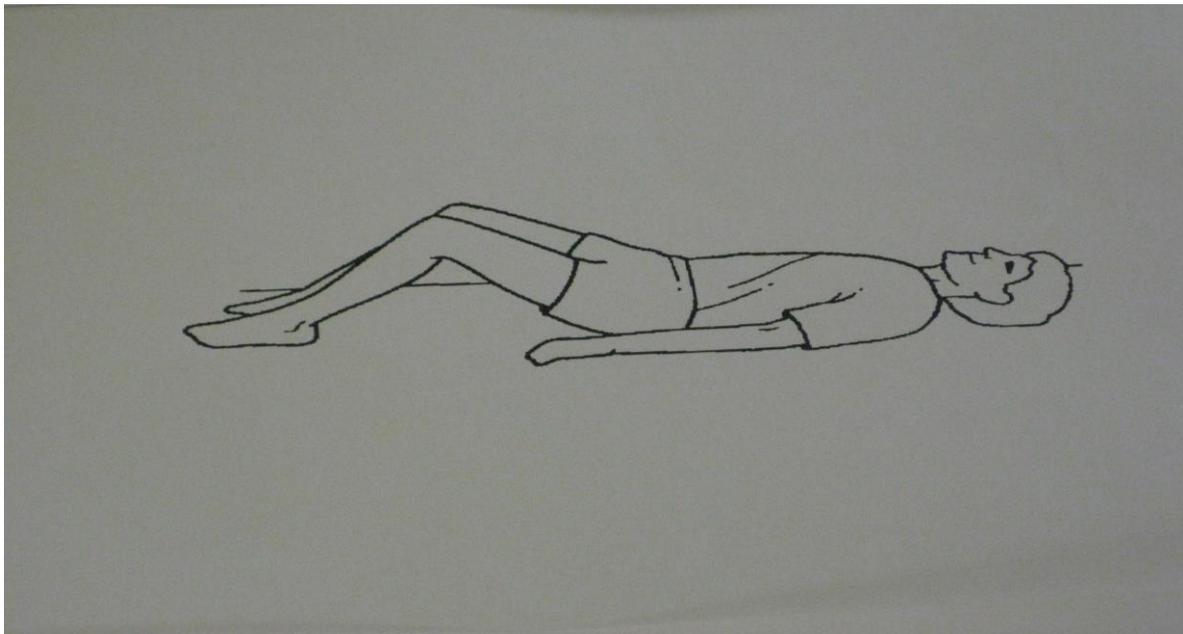
Once you have mastered the breathing exercises lying down, progress to sitting, forward lean stand (standing with your elbows on the kitchen worktop) and then to standing.

Standing leaning back against a wall may be easier than to try before trying unsupported standing.

## Lying

Lie with one or two pillows under your head, as well as one under your knees; or have your knees bent with the feet flat on the floor/bed.

Put one hand on your tummy and 1 on your chest. Ideally you should feel your tummy gently rise and fall as you breathe in and out, rather than your chest moving.



### Advanced method 1

Emphasise the exhale breathe by gently drawing the navel back towards your spine as you blow out through the lips. Make sure you allow your tummy muscles to relax before you breathe in again. This will ensure that your tummy moves gently as you breathe in.

### Advanced method 2

This time try to gently draw your navel back towards your spine as you breathe out through the nose. Make sure you relax your tummy muscles again before you breathe in again to ensure your tummy moves gently as you breathe in.

## Sitting

Sit in an upright chair, with your bottom pushed well back.

Relax back in the chair, and place your feet flat on the floor.

Feel your tummy swell softly and gradually as you breathe in and sink down again as you breathe out.

The hand that is on your chest is to monitor the amount of chest movement. Hopefully this should get less and less as you improve your breathing pattern.

After you breathe in gently, pause for a second.

Pause again after you exhale for slightly longer if you can.

### Advanced method 1

Repeat as per lying

### Advanced method 2

Repeat as per lying



Try this in all these different positions if you can;

- Lying
- Sitting
- On all fours
- Standing
- Leaning forward in standing, elbows on the kitchen worktop.



## Nasal problems

Breathing through the nose with the mouth closed is best, but from time to time the nose can become blocked which makes this difficult. Take all steps possible to keep your nose clear.

## Things that may help clear your nose

- Over the counter steroid nasal sprays (speak to your pharmacist)
- GP prescribed nasal sprays (if your problem is more severe)
- Over the counter or GP prescribed anti histamine sprays.
- Allergy avoidance (consider whether certain food or drink causes you to have nasal symptoms, runny nose, blocked nose or sneezing). Take action if this applies to you.
- Keep your home well-ventilated and free from dust. Too much clutter in the home can be a dust trap.

**The following exercises may be practised more frequently for a persistently blocked nose. Seek medical advice if you have an ear, nose or throat infection.**

## Cough problems

If you have a persistent cough with little or no mucus then your cough problem may be related to a combination of mouth breathing and habitual coughing.

Coughing is a bit like scratching; it feels good at the time, but can actually make things worse. Sometimes the more you cough the more you want to cough!

## Anti Cough/stop cough Technique

- At the 1<sup>st</sup> sign of a tickle, put your hand over your mouth and swallow.
- Keep your hand over your mouth throughout.
- Take a small breath in and out, pinch your nose.
- Hold your breath for 5-10 counts.
- Release the nose but leave the hand over the mouth.
- Breathe small, careful breaths through the nose for 30secs.
- **All the time resist the urge to cough.**
- Take a slow steady breath in and out of the nose.

Repeat twice more, or until the tickle has subsided.

**Swallow, Smother, Stop, Small is a good way to remember the stop cough sequence.**

## Exercise and keeping fit



## Walking

- Walking is an excellent form of exercise and is to be encouraged whenever possible.
- Start off walking for just a few minutes at a time, or even less if this is all you can manage. Try to go for a walk, at least every other day. Build up your stamina.
- Walk until you feel **moderately breathless**. Stop if you need to, get your breath back and start again. It is okay to get breathless as this is normal whilst exercising, just so long as you stay in control.
- You will improve if you push yourself a little.
- Keep control of your breathing by breathing through the nose (mouth closed). Nose breathing warms and filters the air, causing less irritation to the lungs. It is also more difficult to

hyperventilate with the mouth closed. It may take practise to breathe through the nose. Persevere wherever possible.



- If you lose control of your breathing or are walking particularly quickly, you can gently blow out through the lips (do not force) as you exhale; as long as you inhale back in through the nose.
- Try not to talk when you are walking- especially if you are trying to control your breathlessness.
- If the weather is bad, wrap up, or drive to a shopping centre and do your walking there.
- Invest in a stopwatch or a pedometer to keep track of your progress.

### **Relaxation**

- Practise your breathing control to help you relax.
- Practise either in lying or in sitting.
- Working from your toes upwards, spend some time thinking about all the different parts of the body. How do all your muscles and joints feel? This technique works by switching off certain parts of the brain, helping you to relax in the process.
- Close your eyes and visualise a special place. E.G. by the seaside, a meadow or beside a lake.
- Think of a place that is magical for you. Imagine a slow walk to your special place. Hear all the sounds, smell the smells and see the colours.



- Really work on slowing your breathing down by lengthening the pause after you breathe out.
- Let your breathing become quiet and slow. You should feel like you are hardly breathing at all.

- Have some quiet music in the background if you like.

## **Diet**

These are general guidelines only: your dietician is your best source of information on diet.

- Aim to be the correct weight for your height. This is often called your Body Mass Index (BMI).
- If you are overweight, you are more likely to have problems with your breathing.
- If you are underweight, you may be more prone to infections.
- Eat a balanced diet. Choose foods from the basic food groups such as; fruit and vegetables, dairy, cereals and grains and proteins such as meat/fish/quorn etc.
- Limit your salt intake. Too much salt can cause water retention, which may interfere with your breathing.
- Limit your intake of caffeinated drinks. Caffeine can interfere with some of your medications and may make anxiety worse. Choose decaffeinated options if possible.

- You may find it helps to eat 6 small meals, rather than 3 large ones. Too much food or air in your stomach can make you more breathless.
- Eat in a relaxed atmosphere and make your meals enjoyable and attractive wherever possible.
- Discuss other dietary needs such as weight loss/weight gain/digestive problems with your doctor or dietician.