

Further sources of information

NHS Choices: www.nhs.uk/conditions

Our website: www.sfh-tr.nhs.uk

Patient Experience Team (PET)

PET is available to help with any of your compliments, concerns or complaints, and will ensure a prompt and efficient service.

King's Mill Hospital: 01623 672222

Newark Hospital: 01636 685692

Email: sfh-tr.PET@nhs.net

If you would like this information in an alternative format, for example large print or easy read, or if you need help with communicating with us, for example because you use British Sign Language, please let us know. You can call the Patient Experience Team on 01623 672222 or email sfh-tr.PET@nhs.net.

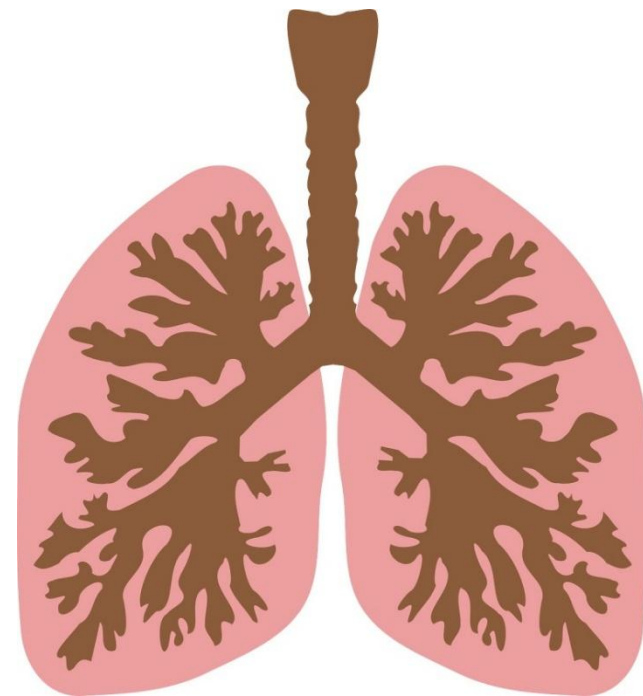
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If you require a full list of references (if relevant) for this leaflet, please email sfh-tr.patientinformation@nhs.net or telephone 01623 622515, extension 6927.

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INFORMATION FOR PATIENTS

Breathing pattern disorders



What happens when we breathe?

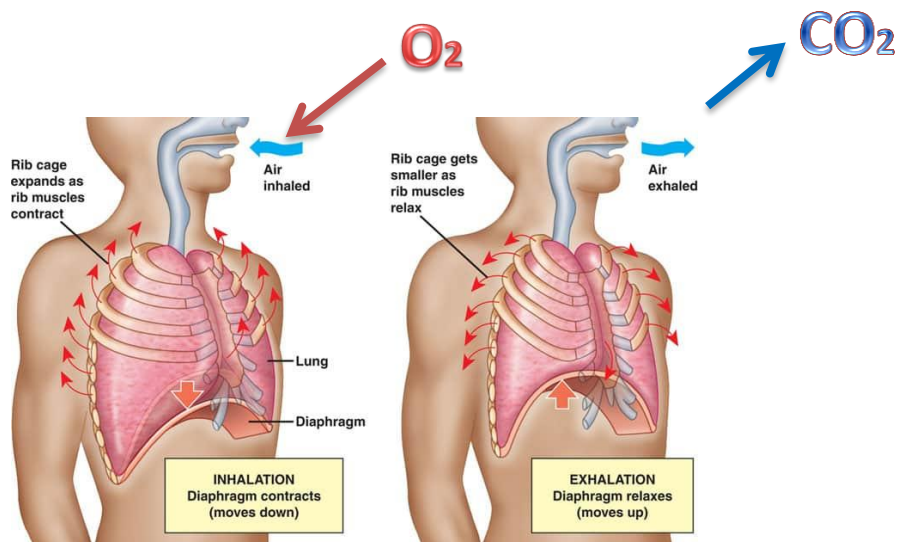
At rest we breathe approximately 12-16 times per minute through our nose, using our diaphragm (a muscle below our ribcage) to gently control the movements.

When we take a breath, we breathe in air (inhale) which contains a mixture of oxygen and carbon-dioxide.

When we breathe out (exhale) the air contains less oxygen (O_2) and more carbon-dioxide (CO_2).

This is because our body uses oxygen for energy and produces carbon-dioxide.

Carbon-dioxide is not just a waste product; it has a vital role in our body's processes.

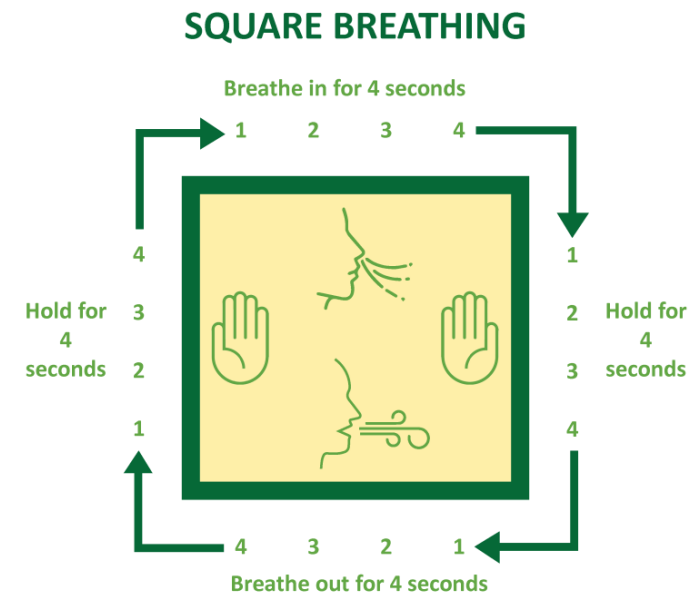


Relaxation

Practising relaxation is an important part of managing breathing pattern disorders. If we learn how our body feels when it is relaxed, we can recognise the first signs of stress.

Relaxation comes in many forms, and it is important to find what works for you. Examples can include reading a book, going for a walk, listening to music or practising yoga. It's good to try to find time to rest both the body and the mind to let go of tension.

Over time relaxation can lower the body's background tension, reduce anxiety and improve your quality of life.



Try to recognise activities or stressful situations which bring on over-breathing.

Spending a few minutes calming your breathing beforehand, then concentrating on keeping a steady rhythm until the task is over can help prevent or reduce over-breathing.

Consider whether it is possible to change or avoid situations which cause stress in your life.

Some people find their sleep is affected by their breathing. Increasing breathing control throughout the day can improve sleep at night.

Following a relaxing routine before bed, avoiding caffeine later in the day and avoiding daytime napping can also improve sleep.

Diet can affect symptoms due to variations in blood sugar levels.

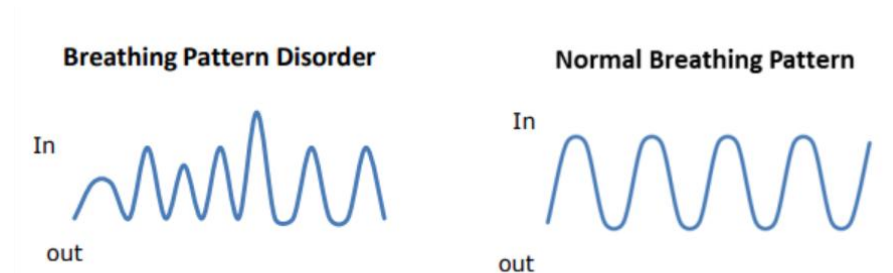
Avoiding large meals, especially at night-time, eating regularly and having healthy snacks between meals can help to manage this.

What are breathing pattern disorders?

Breathing pattern disorders occur when our breathing loses its natural rhythm and we over-breathe.

Over breathing is a normal reaction to any stressful situation or some illness. Generally, when this has passed, breathing will return to a normal rate. However, sometimes this pattern does not return to normal, even when the original trigger has resolved. A pattern of over breathing may then develop.

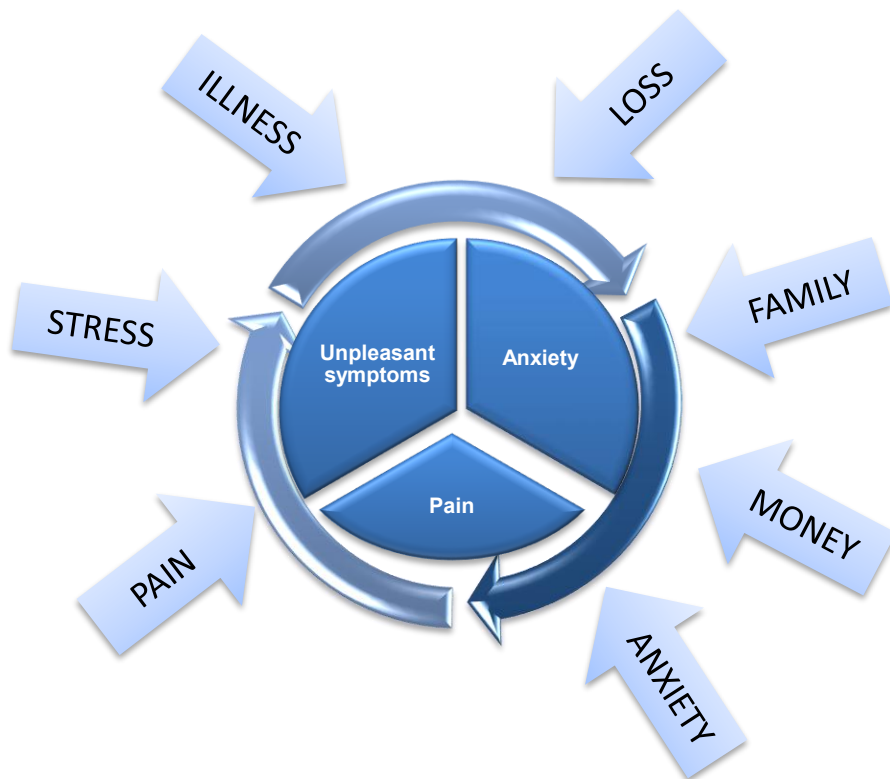
This over breathing or changes to our breathing can be very subtle and may happen over a prolonged period. It can include simple upper chest breathing, where we use the wrong muscles to breathe, to hyperventilation where we breathe too fast.



What causes breathing pattern disorders?

Not everyone is aware of what triggered the changes in their breathing, however, often the start of breathing problems can be traced back to a stressful event such as a bereavement, anxieties at work or at home, and following injury or surgery.

Some chest conditions (such as COPD or asthma) can also cause changes to breathing patterns.



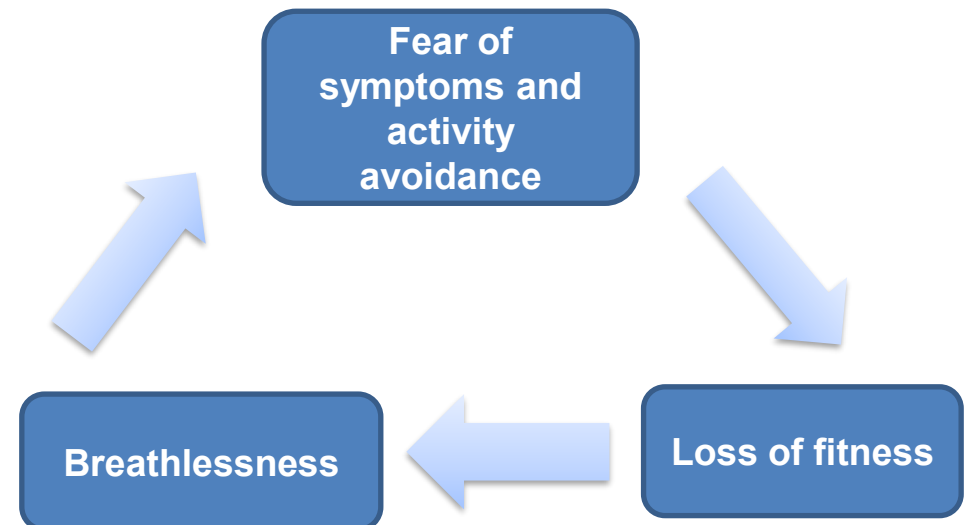
Exercise and lifestyle

It's important not to avoid activities that make you breathless as this can lead to a loss of fitness.

Breathlessness is not harmful, just start with what you can manage and slowly build up the amount you're doing as your symptoms improve.

Pacing your activities through the day can help with managing your symptoms.

Allowing time between tasks to let go of unnecessary tension and to breathe slowly and gently can help you to regain a feeling of control. You can try the breathing exercises given by your physiotherapist.



Breathing exercises



Place one hand on your upper chest and one hand on your diaphragm (under your ribs). Take a slow deep breath:

1. IN through your nose for seconds.
2. HOLD your breath in for seconds.
3. OUT through your mouth for seconds.
4. REST for seconds before your next breath.

These 4 steps above = 1 breath

Position	Repetition and sets	How many seconds	How long
Lying down			
Sitting			
Standing			
Standing with distraction			
Moving from A-B			

What are the symptoms of breathing pattern disorders?

Everyone will experience different signs and symptoms as everyone is different. These are some potential symptoms:

- ☐ Breathlessness, even after minor exercise.
- ☐ Air hunger - frequent sighing/yawning.
- ☐ Tight chest.
- ☐ Dizziness/fainting.
- ☐ Breathless when anxious or upset.
- ☐ Difficulty co-ordinating breathing and talking and/or eating.
- ☐ Pins and needles in the hands/arm/around mouth.
- ☐ Cold hands or feet.
- ☐ Dry throat/cough.
- ☐ Anxiety.
- ☐ Panic attacks.
- ☐ Irritability or hypervigilance.
- ☐ Headaches.
- ☐ Blurred vision.
- ☐ Palpitations (noticeable heartbeats).
- ☐ Chest pain.
- ☐ Fatigue and difficulty concentrating.
- ☐ Muscle aches and tension around the neck/shoulders/jaw.
- ☐ Bloating feeling in the stomach.



What happens during over-breathing?

When we breathe more than the body needs (over-breathing/hyperventilation) we exhale more carbon-dioxide from the lungs.

Unlike other breathing pattern disorders, this causes a chemical imbalance as there is less carbon-dioxide throughout the body.

As a result, the body releases hormones, such as adrenaline, which increases our heart and breathing rate.

This can be useful as it prepares our body for action in stressful situations - the 'fight or flight' response. Once the situation has passed breathing should return to normal.

However, if over-breathing becomes more permanent from prolonged stress or repeated triggers, the brain starts to recognise the lower level of carbon-dioxide as normal. Consequently, the body is in a constant state of alert and breathing does not return to normal.

Treatment

Your physiotherapist will teach you breathing exercises and techniques which you can use to help retrain your breathing pattern, such as:

- Recognising how you breathe.
- Learning to nose breathe.
- Resisting yawning or sighing.
- Practising breath holding.
- Breathing gently using the abdomen, avoiding excessive upper chest movement.
- Being aware of your posture.

It is necessary to be aware and correct your breathing as often as you can, try little and often. Additionally, your physiotherapist will provide exercises that are important to complete two to three times per day to see an improvement in your symptoms.

The more time you put into practising, the more your body will adapt to this way of breathing, and it will become more natural.

Changing a habit takes time and dedication. Your physiotherapist will support you by working with you to set realistic goals.