



Breathing pattern disorders

This leaflet is for people who have / are suspected of having a breathing pattern disorder. It gives advice on what breathing pattern disorders are and information to help you manage your symptoms. If you have any queries, please ask your respiratory physiotherapist.

Introduction

A breathing pattern disorder refers to an abnormal pattern of breathing, where the depth and/or rate of breath are more than the body actually needs. There are many reasons why our breathing's natural rhythm can be altered, resulting in an array of different symptoms, often different for each individual.

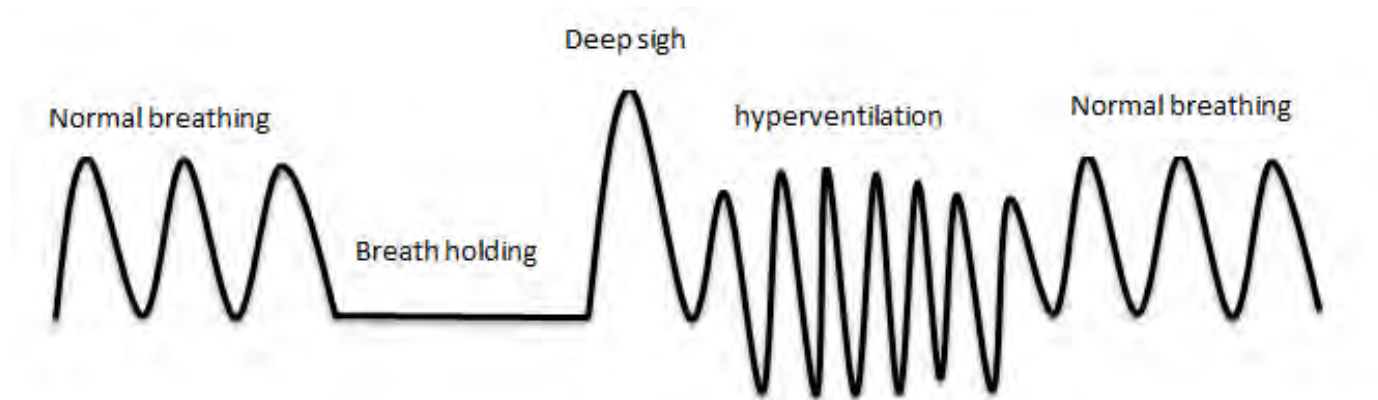
Types of breathing pattern disorders

Hyperventilation / Over-breathing

- Over-breathing is a natural reaction to any stressful situation, but normally our breathing returns back to a normal rate of 8-12 breaths per minute once the situation passes. You may experience symptoms such as a racing heart, tingling in your fingers and breathlessness. Sometimes, following a period of prolonged stress or when you experience a physical trigger, a pattern of over-breathing may develop that does not return to normal, even when the original trigger has resolved. This results in the body being on constant alert.

Dysfunctional breathing

- Dysfunctional breathing can occur with physical exertion, strong smells, cold weather, stress or other triggers. People who experience dysfunctional breathing tend to breathe rapidly through the mouth, hold tension in their shoulders and breathe using the upper half of their chest. This can cause breath holding followed by hyperventilation, which can cause symptoms of chest and throat tightness, chest pain around the breastbone and breathlessness.



Understand what happens when you breathe

We breathe in air containing a mixture of oxygen (O₂) and carbon dioxide (CO₂). When we breathe out, the air contains less oxygen and more carbon dioxide. Carbon dioxide is a waste product but also has a vital role in maintaining our body's natural process and homeostasis (the process to maintain stability and function, despite changes in external conditions).

When we over-breathe, our breathing becomes faster and/or deeper, which results in a large quantity of carbon dioxide being lost with every breath with less availability for the body to use. Over-breathing is perfectly normal in any stressful situation as it prepares the body for action, with lower levels of carbon dioxide promoting hormones such as adrenaline to stimulate the body and increase the heart and breathing rate. This can be helpful when appropriate but if this over-breathing becomes permanent, the brain recognises this lower level of carbon dioxide and accepts it as being normal, resulting in the body being on constant alert.

Symptoms of breathing pattern disorders:

- Shortness of breath at rest or with non-strenuous tasks
- Breath holding
- Frequent sighing and yawning
- Air hunger (sense of not getting enough air in)
- Pins and needles in hands, feet or around the mouth
- Chronic hyperventilation (fast or heavy breathing)
- Difficulty co-ordinating breathing and talking and/or eating
- Throat tightness
- Dizziness
- General fatigue
- Forced abdominal expiration (where you forcefully contract your abdominal muscles to rapidly push air out of your lungs)
- Coughing or hiccupping

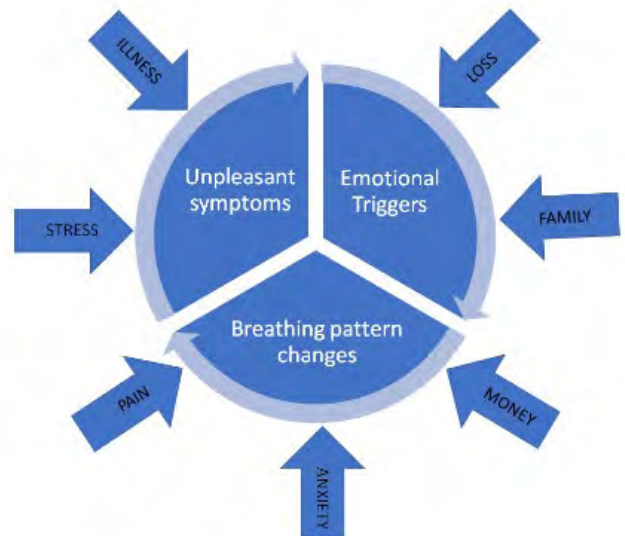
Why do we develop breathing pattern disorders?

There are many reasons why we feel breathless or experience symptoms. It may be due to a variety of different health conditions but sometimes there is no evidence of disease being responsible, which can be frustrating and can make symptoms worse. Approximately 6-12% (3 in every 50 up to 3 in every 25) of the population experience chronic breathing pattern disorders; some are more affected than others. Long-term changes in your breathing pattern can be very subtle and may happen over a long period of time.

Triggers

You may be aware of a particular event or experience that triggers your symptoms, although this is not always the case. Possible triggers include bereavement, anxieties at work or at home, altered breathing due to respiratory complaints or following an operation. Some example of triggers include:

- **Physical:** Anaemia, respiratory conditions, cardiovascular (heart and blood vessel) conditions, pain
- **Psychological:** Depression, anxiety, high stress levels
- **Medicinal:** Recreational drugs, hormonal drugs such as progesterone, inhaled medication, alcohol, caffeine, nicotine
- **Other:** High altitude, fever, hormones, exercise



What is the treatment for breathing pattern disorders?

The most effective approach relies on targeted respiratory physiotherapy, daily breathing control exercises, posture correction, and lifestyle adjustments to manage underlying stress triggers.

Aims of treatment

- **Short term aim:** to control your symptoms
- **Long term aim:** to maintain the correct pattern of breathing

Treatment

In order to change the way you breathe, it is important to first understand how your current breathing pattern works so that you can adjust your techniques.

Identifying your normal breathing technique:

1. Lie in a comfortable position with a pillow under your head and knees. Place one hand on your chest and one on top of your stomach (just below your ribcage).
2. Watch and feel which of your hands move the most as you breathe in and out. This will help you to understand which part of your lungs you use the most.
3. It may also be worth discussing with close friends and family to see if they have noticed any habits such as frequent yawning, coughing or sighing, which can be associated with a breathing pattern disorder.

Re-education of the breathing pattern

1. Lie comfortably with a pillow under your head and knees and with your back fully supported
2. Place one hand on your stomach as this helps to improve sensory awareness. Closing your eyes also helps to focus on your breathing without external distraction.
3. Gently close your mouth, lips together with your jaw relaxed. Breathe in through your nose as it warms, filters and humidifies the air. Feel your stomach rise as if you were filling up a kettle, filling from the bottom not the top. This should be unforced and silent while keeping your upper chest and shoulders relaxed.
4. Breathe out through your nose as gently as possible, without pushing and keep your stomach relaxed. This breath out should be longer than the breath in. Make sure you

remain relaxed and take a pause after each breath.

5. When you breathe in, your upper chest should be relaxed and not moving. From time to time, place your hand on your upper chest to check this. If you have too much upper chest movement, place both hands behind your head.
6. As you repeat this sequence, be aware of any areas of tension in your body and concentrate on 'letting go', particularly jaw, neck shoulders and hands. If you feel you need to take a deep breath, try swallowing. If this doesn't work, try sighing or taking a slow controlled deep breath. This can then be followed by holding the breath after breathing out (known as a breath hold) for a count of 5 or 6 – this acts as a compensation mechanism.
7. Practice as often as you can. Try little and often, i.e. few minutes every hour. Progress to doing this exercise while sitting, then standing and then walking. Your body will adapt to this natural way of breathing. You will find it requires less time and energy.

Remember, the more time put into practising, the sooner you will feel back in control.

Intermittent breath holds

These should be practiced throughout the day. This should not just be after a deep breath but anywhere during the breathing cycle. Stop and hold your breath for the count of 2 or 3, providing it does not make you take a larger breath in afterwards. It is helpful to link breath holds during everyday activities so they become a conditioned reflex (habit).

You need to practice as often as you can. Try little and often, e.g. a couple of minutes every hour. As your body adapts to this new way of breathing, you will find it requires less time and energy and is more relaxing.

Top tips for controlling your breathing

Remember your breathing will change according to your activity level. Try to maintain a good posture and try to focus on the previous steps.

When resting

- Breathe in and out through your nose.
- Keep your breathing quiet.
- Keep your breathing regular, between 10-16 breaths per minute.
- AVOID taking big breaths, sighing, yawning, coughing or clearing your throat.

When talking

- Breathe in through your nose – speak slowly as you breathe out.
- Keep your upper chest relaxed.
- Keep your sentences short to maintain control.
- AVOID taking a big breath in.

Good posture tips

Improving your posture involves changing daily habits, moving regularly, and strengthening core and back muscles.

- **Sit correctly:** Sit back in your chair, keep your feet flat on the floor, and use the chair to support your back. Ensure your screen is at eye level to avoid slouching.

- **Stand tall:** Distribute your weight evenly on both feet, keep your knees soft (not locked), tuck your chin slightly, and imagine a string pulling the top of your head toward the ceiling.
- **Exercise and stretch:** Engage in activities that strengthen your core, like pilates or yoga. Focus on exercises like shoulder blade squeezes and gentle neck stretches.
- **Change positions:** Avoid sitting in one static position for too long. The NHS recommends getting up, moving around, and stretching every 30 to 60 minutes.

Lifestyle changes

It is important to set realistic goals to save energy, having short breaks between activities in order to let go of unnecessary tension and allow time to breathe slowly and gently.

Remember that breathlessness is not harmful, but merely **a signal to slow down or stop**, recover and check your breathing before continuing. It's important not to avoid activities that make you breathless as this can lead to increased fear / anxiety and loss of fitness / independence.

Try to recognise the situations that bring on over-breathing, for example stressful meetings or phone calls. Spend a few minutes calming your breathing down before the situation, concentrating on keeping a steady rhythm.

Sleeping

Some people find their sleep is disturbed because of their breathing. If you can control your breathing during the day, this can be carried over into the night and improve your overall quality of sleep. The following tips may also help improve your sleep:

- Follow a relaxing routine before going to bed, e.g. having a bath or reading.
- Replace caffeinated tea and coffee and hot chocolate with decaffeinated options, herbal teas or water-based drinks.
- Try to reduce your daily stress levels so that you are not worried or anxious when you go to bed in the evening.

When exercising or exerting yourself

- Maintain nose breathing for as long as you are able.
- Maintain lower chest breathing; imagine breathing into the sides of your lower ribs.
- Keep your upper chest, jaw, neck and shoulders relaxed for as long as possible.
- Pace your breathing during exertion. Breathe in for 2 steps followed by breathing out for the 2 while maintaining a slow stepping pattern.

Other tips

It can take weeks to months for some people to eventually change their breathing as it may have become habitual for you. Do not worry, this is normal. You need to allow yourself time and be patient.

Contacting us

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To find out more about our Trust visit www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

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