

Outstanding Care,
Compassionate People,
Healthier Communities



Sherwood Forest Hospitals
NHS Foundation Trust

Paediatrics

Dysfunctional breathing

Information for patients, parents, guardians and carers



What happens when we breathe?

When we are resting we take between 12-16 gentle and relaxed breaths each minute.

We breathe air in through our nose. This air travels into our lungs where we use the oxygen in the air to help fuel our body. This process creates carbon-dioxide.

When we breathe out, the air and carbon-dioxide travels up out of our lungs and back out our noses.

A big muscle in our chest called the diaphragm helps us breathe. It flattens when we breathe in, letting our lungs suck air in, and it relaxes when we breathe out, letting the air go back out of our lungs.

When we are working our body harder, for example when we run, we need to breathe deeper and quicker to keep up with our bodies need for more fuel (oxygen).

Breathing through our mouth and using other muscles in our chests help us to take a bigger breath in and can also help us to force the air out quicker.

When we have finished working harder our breathing will slowly return back to being gentle and relaxed.

Dysfunctional breathing

We use the term 'dysfunctional breathing' when the way someone breathes is different to the normal process of breathing. It is not 'functioning' normally.

There are many different ways that breathing can be altered. Some only effect people when they have to work hard or feel stressed, others may cause people to struggle most of the time.

Common changes are:

- **Breathing through the mouth.**
- **Breathing using muscles around our shoulders instead of our lower chest.**
- **Taking quicker and more shallow breaths than normal.**

Some people also struggle with their upper airway as their vocal cords misbehave. This makes it hard for the body to coordinate breathing between the upper and lower airway.

Any of these changes mean that the body won't be working as efficiently as it could be.

As a result breathing can feel hard or unpleasant. This can also cause other symptoms elsewhere in our body.

These are some of the typical symptoms we associate with dysfunctional breathing – you may recognise some that you have:

Breathlessness, even after minor exercise

Irritability or hyper vigilance

Blurred vision

Difficulty co-ordinating breathing and talking and/or eating

Pins and needles in the hands/arm/around mouth

Chest pain

Anxiety

Tight chest

Muscle aches and tension around neck/shoulders/jaw

Bloated stomach

Headaches

Dry throat /cough

Air hunger – frequent sighing/yawning

Difficulty concentrating

Cold hands or feet

Breathlessness when you're anxious/upset

Palpations (noticeable heart beats)

Panic attacks

Dizziness/fainting

Fatigue

What causes dysfunctional breathing?

Lots of different things can cause the way we breathe to change.
For example:

- **Stressful events i.e. school exams/loss of someone close to you.**
- **Having a blocked nose for a long time.**
- **Previous illness.**

Sometimes chest conditions such as asthma can cause changes to our breathing which over time may lead to a dysfunctional breathing pattern.

For some the cause can be clear, whereas for others it may be less obvious. It may be one thing or a few things working together to cause the changes.



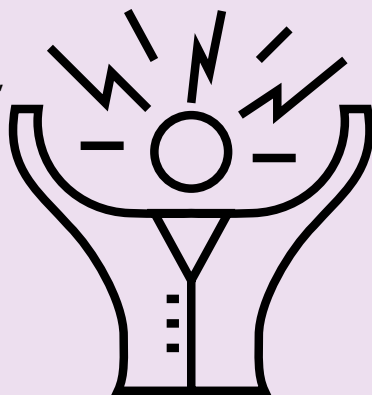
Over time we can get caught in a cycle, with one thing triggering another.

This can cause symptoms to worsen and/or for it to take less to trigger them as they get reinforced with each cycle.



Whenever the body feels stressed or threatened it triggers the **stress response**, you may know this as **‘fight-or-flight’**. Our body releases chemicals to help us respond to danger.

This can be really helpful but if the stress response gets triggered too often our body can quickly adapt to thinking this higher level of stress is normal, meaning even little things can make us feel even more stressed.



Treating dysfunctional breathing

Step 1 - try to understand what is happening:

- Understanding what and why something is happening is really important for us to feel like we can control and change it.

Step 2 - recognise how you breathe:

- It's important to know what we are doing now, so we know what we need to change.
- It can also help us to recognise when our breathing is starting to get worse, so we know when we need to do something to calm it down.
- Writing a diary/keeping track of your symptoms can be really helpful.

Step 3: practice breathing control:

- First we need to master the basics, then we can work up to controlling our breathing during exercise.
- Always use your breathing pattern checklist.

Step 4: relaxation:

- This is a big one as it can help to lower our background levels of stress.

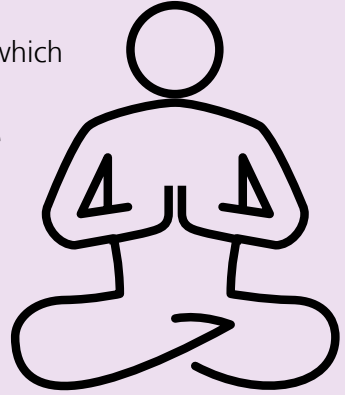
Step 5 - consider anything else that may help:

- Staying hydrated
- Keeping fit and active
- Nasal clearance techniques
- Pacing activities.

Whenever the body feels relaxed it triggers the **relaxation response**; it releases chemicals which reverses the stress response.

What one person finds relaxing may not be the same for the next person, so it's important to find what works for you:

- **Music** • **Sport/walking**
- **Guided relaxation** • **Visualisation**
- **Breathing control.**



The more you practice relaxing the better you will get at it.

Over time we can learn to trigger the relaxation response to help us recover from/prevent the stress response.

Breathing scale

On a scale of 0-10	How are you feeling?	Breathing pattern	Level of exercise
0	Completely relaxed	Nose breathing in and out	Warm up Exercise such as walking
0.5	Still relaxed	Breathing in for 2 counts, out for 3 or 4 counts	
1	Very, very light breathing		
2	Very light breathing		
3	Light breathing		
4	'Not bad' – beginning to feel a bit puffed and slightly sweaty	Nose breathing at the start, this might change to breathing in through nose, out through mouth	Main exercise During sport, find ways to quickly reduce your breathing levels down
5	Breathing is starting to become hard	Your breathing will begin to get faster breathing in for 1, out for 2	
6	Breathing is difficult, but not yet speechless		
7	Feeling tired and breathing has become increasingly difficult		
8	Feeling more tired and breathing is now extremely difficult	Try to sniff in, then breath out through pursed lips (like you're blowing candles out on a cake)	Sprints or high burst of energy Which are manageable for short periods only.
9	Now feeling exhausted and out of breath		
10	Using all your effort, feeling exhausted and struggling to speak	Avoid getting to this point. Work on recovering quickly.	

Breathing pattern checklist

Learn this checklist as you can use it for all of your exercises, either when you are practising or when you are struggling with your symptoms.

1. Posture:

- Make sure you are not slouched.

2. Nose breathing:

- Close your mouth.

3. Quiet breathing:

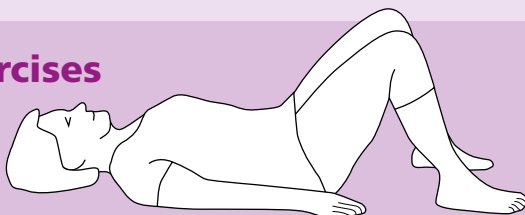
- Someone sat near you should not be able to hear your breathing.

4. Breathe to your 'gills':

- Make sure when you breathe in that the air goes down to the bottom of your ribs.

Breathing control exercises

1. Lay on your back with your knees bent up and your feet flat on the floor.



Place one hand on the bottom of your ribs slightly to one side and the other on your upper chest.

Breathe in slowly through your nose, letting the air fill your lungs right down to your 'gills'. Keep your shoulders relaxed.

You should feel the hand on your lower ribs gently moving. The hand on your upper chest should only move a little.

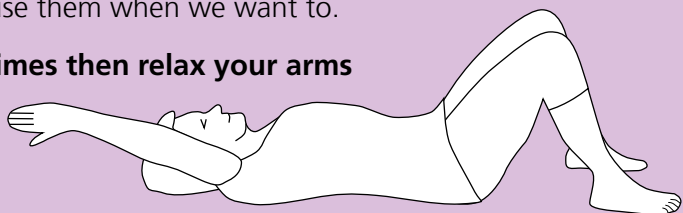
Pause for a few seconds before breathing out through your nose, letting the air up and out of your lungs.

Aim to practice your breathing control for at least 5 minutes a few times a day.

If you struggle to get your ribs to move:

- Put your hands together above your head so that your palms are touching and press your hands together.
- This helps to wake up some of the muscles used when we breathe, making it easier to use them when we want to.

Practice this a few times then relax your arms back on your ribs and upper chest.



2. Sit upright, either on a chair or with your legs crossed on the floor.

Place one hand on the bottom of your ribs to the side and above your belly button, and the other on your upper chest.

Breathe in slowly through your nose, letting the air fill your lungs right down to your 'gills'. Keep your shoulders relaxed.

You should feel the hand on your lower ribs gently moving. The hand on your upper chest should only move a little.

Pause for a few seconds before breathing out through your nose, letting the air up and out of your lungs.

Aim to practice your breathing control for at least 5 minutes a few times a day.



Sitting in front of a mirror and watching where your body moves can help you to learn how you are breathing.

If you struggle to get your ribs to move:

- You can place your hands above your head, pressing your hands together, the same way as you did when you were laying down.

In summary, we should always remember these key points:

- You are in control of your breathing, there is not anything wrong with your body, it's just picked up a bad habit.
- Changes do happen but they don't happen overnight.
- The more time you can put into practising, the more your body will adapt to the controlled way of breathing and it will start to become more natural.
- Changing a habit takes time and dedication. Setting small achievable goals can help to keep you on track.

My goals

1 _____

2 _____

3 _____

Notes

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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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